

**NUCLEAR REGULATORY COMMISSION
ISSUANCES**

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

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PREFACE

This is the fifty-third volume of issuances (1 – 572) 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, 2001, to June 30, 2001.

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.

Beginning in 1969, the Atomic Energy Commission 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 to the Nuclear Regulatory Commission by the Energy Reorganization Act of 1974. Appeal Boards represent the final level in the administrative adjudicatory process to which parties may appeal. Parties, however, are permitted to seek discretionary Commission review of certain board rulings. The Commission also may 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. In the future, the Commission itself will review 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.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
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 10, 2001

The Commission denies the State of Utah's request for interlocutory review of the Atomic Safety and Licensing Board's ruling refusing to admit late-filed contentions Utah LL-OO. LBP-00-28, 52 NRC 226 (2000).

COMMISSION PROCEEDINGS: APPELLATE REVIEW

When a petition for review is filed with the Commission at the same time as a motion for reconsideration is filed with the Board, the Commission will delay considering the petition for review until after the Board has ruled. *See International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-97-9, 46 NRC 23, 24-25 (1997).

RULES OF PRACTICE: INTERLOCUTORY REVIEW

Commission practice generally disfavors interlocutory review, recognizing an exception where the disputed ruling threatens the aggrieved party with serious, immediate, and irreparable harm or where it will have a "pervasive or unusual" effect on the proceedings below. *See* 10 C.F.R. § 2.786(g); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-2, 51 NRC 77

(2000); *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-94-2, 39 NRC 91, 93 (1994).

RULES OF PRACTICE: INTERLOCUTORY REVIEW

Refusal to admit a contention, where the intervenor's other contentions remain in litigation, does not constitute a pervasive effect on the litigation calling for interlocutory review. *See, e.g., Private Fuel Storage*, CLI-00-2, 51 NRC at 79-80.

RULES OF PRACTICE: INTERLOCUTORY REVIEW

The possibility that an interlocutory ruling may be wrong does not in itself justify interlocutory review. *See Sequoyah Fuels Corp.* (Gore, Oklahoma Site), CLI-94-11, 40 NRC 55, 61 (1994).

RULES OF PRACTICE: INTERLOCUTORY REVIEW

Incorrect interlocutory rulings may be reviewed, if necessary, on appeals from partial initial decisions or other final appealable orders. *See Private Fuel Storage*, CLI-00-2, 51 NRC at 80.

OPERATING LICENSE PROCEEDINGS: ENVIRONMENTAL AND SAFETY ISSUES

The right of interested persons to intervene as a party in a licensing proceeding stems from the Atomic Energy Act, not from NEPA. *See* AEA § 189, 42 U.S.C. § 2239(a)(1)(A).

RULES OF PRACTICE: CONTENTIONS (UNTIMELY FILING)

Failure to meet the standards for admitting late-filed contentions does not, under NRC rules, leave the Board free to impose an array of sanctions of varying severity. On the contrary, the rules specify that impermissibly late contentions "will not be entertained." *See* 10 C.F.R. § 2.714(a)(1).

LICENSING BOARDS: DISCRETION IN MANAGING PROCEEDINGS (SANCTIONS)

Licensing Boards have broad discretion to sanction willful, prejudicial, and bad-faith behavior. 10 C.F.R. § 2.707; *see, e.g., Long Island Lighting Co.*

(Shoreham Nuclear Power Station, Unit 1), ALAB-902, 28 NRC 423 (1988), *review denied*, CLI-88-11, 28 NRC 603 (1988).

MEMORANDUM AND ORDER

Utah has petitioned the Commission for partial interlocutory review of LBP-00-28, 52 NRC 226 (2000) which denied the State's request to admit late-filed contentions Utah LL through Utah OO.¹ All the disputed contentions deal with alleged shortcomings of the NRC Staff's June 2000 Draft Environmental Impact Statement (DEIS).

Contemporaneously with filing its petition for review, Utah filed a Motion for Reconsideration with the Atomic Safety and Licensing Board. When a petition for review is filed with the Commission at the same time as a motion for reconsideration is filed with the Board, the Commission will delay considering the petition for review until after the Board has ruled. *See International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-97-9, 46 NRC 23, 24-25 (1997). The Board denied reconsideration on November 28, 2000, in LBP-00-31, 52 NRC 340. The petition for Commission review is therefore ripe for our consideration. *See* 10 C.F.R. § 2.786(b).

I. BACKGROUND

In 1998, the Board established a case-specific time line that required Utah to submit any late contentions concerning the DEIS within 30 days after the Staff provided the State with a copy. *See* Memorandum and Order, June 28, 1998 (unpublished). The Board also ordered the Staff to give Utah 15 days' prior notice of the DEIS's release so the State could have its experts ready to review the document and formulate any contentions thereon. The Board reminded the parties of these deadlines in March of 2000 — less than 4 months before the Staff released the DEIS. *See* LBP-00-7, 51 NRC 139, 143 n.1 (2000).

The NRC Staff notified Utah on June 9, 2000, that it was about to issue the DEIS and provided the State with a copy on June 19, 2000. Utah submitted a request to admit late-filed Contention KK on July 27.² Utah submitted its request to admit Contentions Utah LL through OO on August 2, 2000. Utah's

¹ Utah titles its pleading a "Partial Interlocutory Appeal." Our rules, however, provide for no such appeals as of right, and we therefore consider Utah's submission as a petition for interlocutory Commission review.

² The Board determined that KK was filed within the time period described by its order, but denied the request after considering the other late-filing criteria found at 10 C.F.R. § 2.714(a)(1). *See* LBP-00-27, 52 NRC 216 (2000).

August 2 contentions concerned the DEIS's discussion of transportation-related environmental effects of the proposed PFS facility.

The Board found that, because its order gave Utah 15 days' notice to arrange for an expert's review, the 30-day period began to run 15 days after the Staff notified Utah of the DEIS's imminent release. The Board determined the deadline expired on July 27, 2000 — 39 days after the State was given a copy. Because Utah's August 2 filing missed the deadline by 6 days, the Board concluded that the State did not have "good cause," as that term is used in NRC regulations, for filing the contentions late. *See* 10 C.F.R. § 2.714(a)(1)(i). It rejected Utah's arguments that the State was not aware that the 30-day time period was intended to be a "hard and fast" deadline, and that the State's other litigation burdens associated with this case (including the hearing that was taking place at the time when the clock started ticking) kept it from meeting that deadline. The Board then considered the remaining four factors that NRC regulations provide must be considered in deciding whether to admit late-filed contentions. *See* 10 C.F.R. § 2.714(a)(1)(ii)-(iv). The Board found that, although the other factors favored accepting the late contentions, they were not sufficiently "compelling" to overcome the lack of good cause. The Board also indicated that if it were to consider the substantive admissibility of the proffered contentions, it would deny all but one subpart of Utah's proposed Contention MM. *See* LBP-00-28, 52 NRC at 239 n.3.³

II. DISCUSSION

Utah has asked the Commission to review the Board's ruling rejecting as impermissibly late Contentions LL, MM, and parts of Contention Utah NN.⁴ Utah argues that the Board's ruling rejected the State's DEIS-related contentions not on their merits, but because they were submitted 6 days late. Utah claims that the Board's ruling will have a "pervasive or unusual" effect on the proceedings below because it essentially destroys the State's right to question the central environmental document in this proceeding. *See* 10 C.F.R. § 2.786(g) (Commission will entertain interlocutory appeals of Board orders that affect the "basic structure" of the proceeding in a "pervasive or unusual manner"). Utah

³ That subpart, Utah MM, subpart 3, claimed that "the DEIS underestimates the radiological consequences of a Severity Category 6 accident by underestimating the release fraction for [Chalk River Unidentified Deposits (CRUD)]."

⁴ The State of Utah's Motion for Partial Reconsideration of LBP-00-28, the substance of which was incorporated by reference in its request for partial interlocutory review, sought reversal only with respect to Contentions LL, MM, and parts of Contentions Utah NN. The Board's decision stated that the economic concerns expressed in Contentions NN and OO could have been raised when PFS submitted its Environmental Review in 1997, and therefore these concerns were more than 2 years too late. LBP-00-28, 52 NRC at 234. Utah has apparently decided not to pursue review of the Board's ruling that the economic concerns in NN and OO were not admissible contentions.

argues that by refusing to admit for hearing these environmental contentions, the Board has done violence to the State's rights under the National Environmental Policy Act to participate in this proceeding.

Utah also advances two additional arguments under the rubric of a "pervasive or unusual" effect. Utah argues that the ruling incorrectly interprets relevant Commission guidance as requiring the Board to impose the "strongest possible sanctions" for a missed deadline "without regard to the harm caused by the infraction, the offending party's conduct in the past, or the context" of the missed deadline. *See* State of Utah's Partial Interlocutory Appeal of LBP-00-28, at 2, referring to *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 19 (1998). Finally, Utah claims that the Board's decision "casts the State as a party that scoffs at or cavalierly ignores Board deadlines and therefore deserves the sternest punishment." Utah fears that the Board's ruling will have a pervasive effect on the proceedings if, in the future, the Board holds this missed deadline against the State as evidence of dilatory behavior or bad faith.

A. Standards for Interlocutory Review

Commission practice generally disfavors interlocutory review, recognizing an exception where the disputed ruling threatens the aggrieved party with serious, immediate, and irreparable harm or where it will have a "pervasive or unusual" effect on the proceedings below. *See* 10 C.F.R. § 2.786(g); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-2, 51 NRC 77 (2000); *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-94-2, 39 NRC 91, 93 (1994).

Review under the second criterion of section 2.786(g), where there is a pervasive or unusual effect, is granted only in extraordinary circumstances. We have repeatedly held that refusal to admit a contention, where the intervenor's other contentions remain in litigation, does not constitute a pervasive effect on the litigation calling for interlocutory review. *See, e.g., Private Fuel Storage*, CLI-00-2, 51 NRC at 79-80. The possibility that an interlocutory ruling may be wrong does not in itself justify interlocutory review. *See Sequoyah Fuels Corp.* (Gore, Oklahoma Site), CLI-94-11, 40 NRC 55, 61 (1994). Incorrect interlocutory rulings may be reviewed, if necessary, on appeals from partial initial decisions or other final appealable orders. *See Private Fuel Storage*, CLI-00-2, 51 NRC at 80. In this instance, however, the Board's ruling ostensibly sweeps away an entire class of contentions, not on their merits, but because of the Intervenor's untimely filing. We will, therefore, examine more closely Utah's arguments that the ruling will have a pervasive or unusual effect on this litigation.

B. Pervasive or Unusual Effect

1. National Environmental Policy Act

Utah argues that the denial of its contentions on the DEIS impairs its rights under NEPA, constituting a pervasive or unusual effect on the proceedings below. We do not agree that the Board's ruling impairs the State's rights under NEPA. The right of interested persons to intervene as a party in a licensing proceeding stems from the Atomic Energy Act, not from NEPA. *See* AEA § 189, 42 U.S.C. § 2239(a)(1)(A). Commission regulations promulgated under NEPA give the State such rights as the opportunity to participate in the scoping process for the environmental impact statement, and to receive copies of and to comment on the DEIS. *See* 10 C.F.R. §§ 51.28, 51.73, 51.74; *see generally* 10 C.F.R. Part 51. Utah has not shown how these participatory rights were impaired by the Board's refusal to admit the DEIS-related contentions. Moreover, at the outset of this case, the Board admitted a number of Utah's NEPA contentions (based on the Applicant's environmental report) and these remain available for litigation. *See* LBP-98-7, 47 NRC 142, 199-206 (1998).

2. Interpretation of Policy on Conduct of Adjudicatory Proceedings

Utah argues that the Board misinterpreted our directive in our *Statement of Policy on the Conduct of Adjudicatory Proceedings* regarding setting schedules and the parties' obligations to meet those schedules. *See* 48 NRC at 20-21. The Board summarized this policy as showing that the Commission expects that the "presiding officer[will] set schedules, that parties will adhere to those schedules, and that presiding officers will enforce compliance with those schedules." *See* LBP-00-28, 52 NRC at 237.

Utah complains that the Board interpreted this policy as calling for the harshest sanction — rejection of the late-filed contention — as a means to enforce the deadlines. The State claims that this interpretation ignores longstanding agency practice (outlined in an earlier policy statement) that, in deciding what sanction to impose, the Board should consider

the relative importance of the unmet obligation, its potential for harm to other parties or the orderly conduct of the proceeding, whether its occurrence is an isolated incident or a part of a pattern of behavior, the importance of the safety or environmental concerns raised by the party, and all of the circumstances.

See Statement of Policy on Conduct of Licensing Proceedings, CLI-81-8, 13 NRC 452, 454 (1981).

It is true that nothing in our 1998 *Statement of Policy* overrides the 1981 *Statement of Policy* with respect to assessing sanctions against a recalcitrant party.

However, the Board's order did not impose the harshest conceivable sanction (which would be dismissal of the offending party for procedural defaults), nor did it deny the contention merely on the basis of the missed deadline. Rather, after determining that there was no good cause for missing the deadline, the Board weighed the other factors and found that, on the balance, admission was not favored. Failure to meet the late-filed standards does not, under NRC rules, leave the Board free to impose an array of sanctions of varying severity. On the contrary, the rules specify that impermissibly late contentions "will not be entertained." See 10 C.F.R. § 2.714(a)(1).

Further, even if the Board did misconstrue the 1998 *Statement of Policy*, Utah has not shown that its interpretation is so unusual as to potentially reshape the remainder of the proceedings.

3. Characterizing State as a Bad-Faith Actor

Utah is also concerned that the Board's ruling will have a pervasive effect on the proceedings by characterizing the State as a bad-faith litigant. Licensing boards have broad discretion to sanction willful, prejudicial, and bad-faith behavior. 10 C.F.R. § 2.707; see, e.g., *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-902, 28 NRC 423 (1988), *review denied*, CLI-88-11, 28 NRC 603 (1988). If Utah were found to be a party that willfully disregards deadlines to the prejudice of opposing parties, that finding could result in the Board dealing more strictly with the State in the future.

We do not agree, however, that the Board's ruling with respect to the DEIS-related contentions characterizes Utah "as a party that scoffs at or cavalierly ignores" deadlines. In fact, the Board readily acknowledged that the State has "on a continuing basis . . . put forth [its] best efforts to meet the timing and other resource challenges involved." See LBP-00-28, 52 NRC at 237. Although the Board found that Utah had not shown an "appropriate concern" for this particular deadline, nothing in LBP-00-28 indicates that the Board generally regards the State as a dilatory litigant or that the State's failure to meet the deadlines with respect to the DEIS will be used to justify harsh sanctions against the State in the future.

III. CONCLUSION

We conclude that Utah has not shown that the ruling below will have a pervasive or unusual effect on the remainder of the litigation. Therefore, Utah's request does not meet our standards for interlocutory review, and we deny its petition for interlocutory Commission review.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 10th day of January 2001.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
Edward McGaffigan, Jr.
Jeffrey S. Merrifield

In the Matter of

Docket No. 40-8027-MLA-4

SEQUOYAH FUELS CORPORATION
(Gore, Oklahoma Site
Decommissioning)

January 17, 2001

The Commission affirms the Presiding Officer's decision to grant the State of Oklahoma a hearing with respect to Sequoyah Fuels Corporation's proposed site decommissioning plan for its Gore, Oklahoma uranium conversion facility, and declines to consider Sequoyah's interlocutory appeal of issues that do not pertain to whether the hearing request should have been denied in its entirety.

RULES OF PRACTICE: STANDING (REDRESSABILITY)

An applicant's claimed inability to pay for decommissioning as desired by the intervenor does not mean the intervenor's alleged injuries are not redressable, so as to defeat the intervenor's standing to contest the applicant's proposed decommissioning plan.

RULES OF PRACTICE: STANDING (REDRESSABILITY)

The redressability element of standing requires a party to show that its claimed actual or threatened injury could be cured by some action of the tribunal.

RULES OF PRACTICE: STANDING

The presiding officer's judgment that a party has standing is entitled to substantial deference unless there has been a clear misapplication of facts or law. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 324 (1999).

RULES OF PRACTICE: STANDING

The ultimate merits of the case have no bearing on the threshold question of standing.

RULES OF PRACTICE: STANDING

To demonstrate standing in materials licensing cases under Subpart L, a petitioner must allege (1) an actual or threatened, concrete and particularized injury, that (2) is fairly traceable to the challenged action, (3) falls among the general interests protected by the Atomic Energy Act (or other applicable statute, such as the National Environmental Policy Act), and (4) is likely to be redressed by a favorable decision. *See Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 5-6 (1998). Subpart L specifically requires the Presiding Officer to consider the petitioner's right under the Atomic Energy Act to be made party to the proceeding, the nature of its interests potentially affected by the proceeding, and the possible effect on the intervenor of any order that may be entered in the proceeding. *See* 10 C.F.R. § 2.1205(h). An intervenor must also explain in detail the issues on which it wants to be heard: in Subpart L's terminology, an "area of concern" that is "germane" to the proceeding. *See* 10 C.F.R. § 2.1205(h).

RULES OF PRACTICE: PLEADING (SPECIFICITY)

Under Subpart L, the intervenor's pleading burden is modest. The intervenor must only state his areas of concern with enough specificity so that the Presiding Officer may determine whether the concerns are truly relevant — i.e., "germane" — to the license amendment at issue.

RULES OF PRACTICE: INTERLOCUTORY REVIEW

Although the Commission's regulations generally discourage interlocutory appellate review, 10 C.F.R. § 2.1205(o) allows immediate appeal where the licensee contends the hearing request should have been denied in its entirety.

RULES OF PRACTICE: INTERLOCUTORY REVIEW (SCOPE OF REVIEW)

Under 10 C.F.R. § 2.1205(o) (allowing immediate interlocutory appeal where a party opposing hearing contends that the request for a hearing should have been “denied in its entirety”), a party opposing is not entitled to appeal issues that may narrow the scope of, but not eliminate the need for, a hearing.

RULES OF PRACTICE: INTERLOCUTORY REVIEW (SCOPE OF REVIEW)

Once the Commission finds that intervenor has established standing and presented one germane area of concern, intervenor is entitled to a hearing, and review of applicant’s additional points of error is not available under 10 C.F.R. § 2.1205(o).

RULES OF PRACTICE: INTERLOCUTORY REVIEW

Where applicant did not show that intervenor’s request for a hearing should have been denied in its entirety, remaining points of error would have to meet the Commission’s standard for interlocutory review; that is, appellant must show that it will suffer serious immediate and irreparable harm or that the adverse ruling will have a pervasive and unusual effect on the hearing below.

RULES OF PRACTICE: INTERLOCUTORY REVIEW

Neither the presiding officer’s inappropriate admission of an area of concern, nor the use of an inappropriate legal standard, meets the standard for interlocutory review in a Subpart L proceeding. *See, e.g., Pennsylvania Power & Light Co.* (Susquehanna Steam Electric Station, Units 1 and 2), ALAB-641, 13 NRC 550 (1981).

RULES OF PRACTICE: INTERLOCUTORY REVIEW

Just as an intervenor cannot use interlocutory appeal to expand the scope of a hearing to include rejected areas of concern, the applicant cannot use interlocutory appeal to narrow the hearing’s scope.

**RULES OF PRACTICE: INTERLOCUTORY REVIEW
(EXERCISE OF “PENDENT” JURISDICTION OVER OTHERWISE
NONAPPEALABLE ISSUES)**

When considering whether to exercise “pendent” discretionary review over otherwise nonappealable issues, the Commission will favor review where the otherwise unappealable issues are “inextricably intertwined” with appealable issues, such that consideration of all issues is necessary to ensure meaningful review.

**RULES OF PRACTICE: INTERLOCUTORY REVIEW
(EXERCISE OF “PENDENT” JURISDICTION OVER OTHERWISE
NONAPPEALABLE ISSUES)**

When the Commission considers whether to exercise “pendent” discretionary review over otherwise nonappealable issues, factors weighing against review include a lack of an adequate record; the possibility that the issue could be altered or mooted by further proceedings below; and whether complex issues considered under pendent review would predominate over relatively insignificant, but final and appealable, issues.

MEMORANDUM AND ORDER

I. INTRODUCTION

Sequoyah Fuels Corporation has appealed the Presiding Officer’s December 16, 1999 order, LBP-99-46, 50 NRC 386, which granted Oklahoma’s request for a hearing with respect to Sequoyah’s proposed site decommissioning plan for its Gore, Oklahoma uranium conversion facility. Sequoyah claims, pursuant to 10 C.F.R. § 2.1205(o), that the request for hearing should have been denied in its entirety. We agree with the Presiding Officer that Oklahoma has standing and has met its burden under 10 C.F.R. Part 2, Subpart L, to detail its areas of concern. *See* 10 C.F.R. § 2.1205(o). We decline, however, to consider Sequoyah’s remaining points of error, which we find are not properly the subject of interlocutory review.

II. BACKGROUND

Sequoyah operated a uranium processing facility at its Gore site between 1970 and 1993. The facility produced uranium hexafluoride and converted depleted uranium hexafluoride to uranium tetrafluoride. The soil and groundwater are

contaminated with uranium and uranium decay products, as well as nitrates, which are nonradioactive pollutants not regulated by the NRC.

In dispute is Sequoyah's Second Revised Site Decommissioning Plan, which it submitted on March 26, 1999. Sequoyah's plan would decommission the facility for restricted release using an onsite, aboveground disposal cell for the permanent disposal of radioactive waste, pursuant to 10 C.F.R. § 20.1403. Sequoyah's current source materials license requires that the site be decommissioned for unrestricted use.

Oklahoma submitted a timely request for a hearing. After the NRC Staff and Sequoyah opposed the request, Oklahoma, with the Presiding Officer's permission, supplemented its pleading to provide additional detail with respect to its affected interests and areas of concern. The Presiding Officer granted a hearing on the basis of Oklahoma's supplemental hearing request. The Presiding Officer found Oklahoma had met its burden to establish standing because of potential radiation injury to the State's citizens and pollution of its land, water, and air. He rejected an argument that Oklahoma had an interest in establishing appropriate decommissioning standards, which might have precedential effect with respect to other NRC-licensed sites within Oklahoma. He also found several asserted areas of concern to be germane to the proceeding.

Although our regulations generally discourage interlocutory appellate review, Sequoyah appeals under a special provision, 10 C.F.R. § 2.1205(o), which allows immediate appeal where the licensee contends the hearing request should have been denied "in its entirety." Sequoyah argues on appeal that Oklahoma has failed to meet the redressability element of standing and that it has failed to state any of its areas of concern with specificity. In addition, Sequoyah's appeal raises four claims of error on issues relating to some, but not all, of Oklahoma's areas of concern.

Oklahoma and the NRC Staff support the Presiding Officer's rulings and oppose Sequoyah's appeal.

III. STANDING

To demonstrate standing in materials licensing cases under Subpart L, a petitioner must allege (1) an actual or threatened, concrete and particularized injury, that (2) is fairly traceable to the challenged action, (3) falls among the general interests protected by the Atomic Energy Act (or other applicable statute, such as the National Environmental Policy Act), and (4) is likely to be redressed by a favorable decision. See *Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 5-6 (1998). Subpart L specifically requires the Presiding Officer to consider the petitioner's right under the Atomic Energy Act to be made party to the proceeding, the nature of its interests potentially

affected by the proceeding, and the possible effect on the intervenor of any order that may be entered in the proceeding. *See* 10 C.F.R. § 2.1205(h). An intervenor must also explain in detail the issues on which it wants to be heard: in Subpart L's terminology, an "area of concern" that is "germane" to the proceeding. *See* 10 C.F.R. § 2.1205(h).

Sequoyah contends that Oklahoma has failed to meet the Commission's standing requirement because it has failed to show that its injuries are likely to be redressed by a favorable decision. Redressability requires the intervenor to show that its actual or threatened injuries can be cured by some action of the tribunal. Sequoyah argues that Oklahoma's complaints about the proposed decommissioning plan could only be remedied by an order that the site be decommissioned to an unrestricted-use standard, which would require decontamination in a manner that is not cost-effective and is beyond Sequoyah's financial resources. Because Sequoyah cannot afford to clean the site to unrestricted use, the Presiding Officer cannot order it to do so, Sequoyah reasons. Therefore, Sequoyah concludes, Oklahoma cannot show that its injuries are redressable.

The Commission rejects Sequoyah's redressability argument for a number of reasons. First, the Presiding Officer's judgment that a party has standing is entitled to substantial deference unless there has been a clear misapplication of facts or law. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 324 (1999). Here, the Presiding Officer carefully considered Oklahoma's redressability concern and found, reasonably, that a hearing could lead to a "substantial modification" or disapproval of Sequoyah's decommissioning plan — "both potential results completely in accord with what Oklahoma seeks in this proceeding." *See* LBP-99-46, 50 NRC at 395.

Second, under judicial concepts of standing, which the Commission follows to the extent feasible,¹ Oklahoma clearly would meet the standing doctrine's redressability requirement. Sequoyah's argument is akin to saying, in a civil lawsuit, that a plaintiff's standing requires proof that the defendant can pay the damages sought. The United States Court of Appeals for the District of Columbia Circuit recently rejected this argument, finding that "[t]he redressability element [of standing] does not depend on the defendant's financial ability to pay a judgment against it. Courts do not deny a plaintiff his day in court simply because the defendant may be unable to pay all or part of a potential judgment against it." *America's Community Bankers v. Federal Deposit Insurance Corp.*, 200 F.3d 822, 828 (D.C. Cir. 2000). The same is true here. Sequoyah's asserted inability

¹ *See Private Fuel Storage*, CLI-99-10, 49 NRC at 322-23. This is not to say that the Commission must follow judicial standing concepts or that it does so in all cases. *See Envirocare of Utah v. NRC*, 194 F.3d 72, 75 (D.C. Cir. 1999).

to finance Oklahoma's preferred remedy does not defeat Oklahoma's standing to contest Sequoyah's proposed decommissioning plan at a hearing.

Third, it has not yet been established that the proposed plan is the only possible one within Sequoyah's financial abilities. It would be improper for the Presiding Officer to dismiss Oklahoma's hearing request on Sequoyah's bald assertions that it cannot pay for any form of decommissioning that deviates from the plan it has itself proposed. Standing is a threshold legal question, which does not require the Presiding Officer to conduct a full-blown factual inquiry concerning the licensee's ability to finance various decommissioning plans. "[W]e must bear in mind the often-repeated admonition to avoid the familiar trap of confusing the standing determination with the assessment of petitioner's case on the merits." *Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-5, 39 NRC 54, 68 (1994), *aff'd*, CLI-94-12, 40 NRC 64 (1994) (internal quotation marks and citation omitted). We follow "the fundamental principle that the ultimate merits of the case have no bearing on the threshold question of standing." *Campbell v. Minneapolis Public Housing Authority*, 168 F.3d 1069, 1074 (8th Cir. 1999).

Sequoyah has not shown that none of Oklahoma's areas of concern could be alleviated without decommissioning to unrestricted release. Although the State apparently would like the entire site decommissioned to unrestricted use, it is still possible that some of the State's concerns could be eliminated or mitigated through modifications of the restricted-use plan. For example, the State complains that the proposed disposal cell lacks a liner and leachate collection system. *See* State of Oklahoma's Supplemental Request for Hearing at 39-41. That area of concern could be satisfied by requiring a liner and leachate collection system, if appropriate, while still approving a plan that allowed for onsite disposal and restricted-use decommissioning.

Sequoyah argues that Oklahoma has not proposed an alternative of its own, other than the "patently unrealistic" option of unrestricted release, that would alleviate the State's complaints. We reject that argument, as it would not be appropriate to require the State to propose a fully fleshed out, alternative decommissioning plan in order to obtain standing for a hearing on appropriate areas of concern.

In short, Sequoyah's claim that the Presiding Officer cannot redress Oklahoma's injury suggests that the Presiding Officer is powerless to decline or modify Sequoyah's current application. The Presiding Officer was understandably unwilling to make such a ruling at this threshold stage of the proceeding. We see no basis for upsetting the Presiding Officer's view of his potential remedial powers.

We therefore find that the Presiding Officer did not err in determining that Oklahoma has standing in this case.

IV. SPECIFICITY

Sequoyah argues that Oklahoma failed to meet the Subpart L requirement that it state its areas of concern “in detail.” *See* 10 C.F.R. § 2.1205(e)(3). Sequoyah claims that Oklahoma’s hearing request is so vague and so broad as to potentially cover all questions under review by the NRC Staff. As a result, Sequoyah claims, the Presiding Officer could not have made a proper determination that these areas of concern were actually germane.

In support of this argument, Sequoyah points to the Presiding Officer’s statement that the parties must identify “issues for litigation” prior to the hearing. *See* LBP-99-46, 50 NRC at 406. The Presiding Officer, while finding several broad areas of concern to be germane, also stated that “specific issues” may be further “particularized” prior to the hearing. *See, e.g.*, 50 NRC at 398-401, 403, 406. Sequoyah reasons that if it is necessary for Oklahoma to narrow its concerns prior to the hearing, they must not be specific enough to trigger a hearing.

We defer to the Presiding Officer’s view that Oklahoma has presented a number of “germane” areas of concern. Notably, the Presiding Officer examined each of Oklahoma’s concerns carefully, accepting some and rejecting others. *See* LBP-99-46, 50 NRC at 395-406. He rightly did not insist on comprehensive pleading or extrinsic support, for Subpart L itself does not. *Compare* 10 C.F.R. § 2.1205(e)(3) *with* 10 C.F.R. § 2.714(b)(2) (Subpart G). Under Subpart L, the intervenor’s pleading burden is modest. The would-be intervenor must only state his areas of concern with enough specificity so that the Presiding Officer may determine whether the concerns are truly relevant — i.e., “germane” — to the license amendment at issue. *See, e.g., Babcock and Wilcox Co.* (Pennsylvania Nuclear Services Operations, Parks Township, Pennsylvania), LBP-94-4, 39 NRC 47, 52 (1994); *International Uranium (USA) Corp.* (Receipt of Material from Tonawanda, New York), LBP-98-21, 48 NRC 137, 142-43 (1998).

In addition, the intervenor cannot be expected to substantiate its concerns exhaustively before it has access to the hearing file:

It would not be equitable to require an intervenor to file its written presentation setting forth all its concerns without access to the hearing file. Of course, the intervenor is required to identify the areas of concern it wishes to raise in the proceeding, which will provide the presiding officer with the minimal information needed to ensure the intervenor desires to litigate issues germane to the licensing proceeding

Statement of Consideration, “Informal Hearing Procedures for Materials Licensing Adjudication,” 54 Fed. Reg. 8,272 (Feb. 28, 1989). Here, the hearing file is not complete because the Staff has not completed its environmental impact statement and safety evaluation report for the site. These documents may not be ready for another 2 years. *See Sequoyah Fuels Corp.* (Gore, Oklahoma Site

Decommissioning), Memorandum and Order (Scheduling Conference), March 23, 2000, at 2.

We reject Sequoyah's argument that the Presiding Officer improperly deferred the requirement for Oklahoma to further specify its areas of concern until the prehearing conference. The applicable regulations authorize the Presiding Officer to order the parties to narrow the issues prior to the hearing. *See* 10 C.F.R. § 2.1209(c). As this is specifically authorized in the regulations, it does not amount to a concession that Oklahoma's original concerns were stated with insufficient specificity. Further, the Presiding Officer here carefully considered each area of concern and found sufficient detail for each concern that was determined to be germane. For example, Oklahoma claims that Sequoyah has not offered adequate financial assurances because it has not budgeted sufficiently for maintenance of physical controls at the site. Oklahoma's hearing request listed fifteen items, such as repair and replacement of the disposal cell cap and groundwater monitoring, for which it claims Sequoyah has not budgeted. *See* Supplemental Hearing Request at 37-38. It is hard to see how the area of concern could be more specific, unless Oklahoma were to provide actual budget figures for these items (a requirement that would be clearly in excess of our standards in a Subpart L proceeding).² We therefore find little basis for Sequoyah's charge that Oklahoma has stated its area of concern "in such broad terms that they envelop virtually the full scope of the NRC Staff's review of the application."

We therefore reject Sequoyah's claim that Oklahoma failed to state any concerns with the particularity necessary to determine whether they are germane to the pending licensing decision. The Presiding Officer properly permitted Oklahoma to move forward with its case.

V. REVIEW OF REMAINING POINTS OF ERROR

Under 10 C.F.R. § 2.1205, parties in Subpart L proceedings generally may not take interlocutory appeals. Commission regulations make an exception where the petition to intervene has been wholly denied or where the applicant contends the petition should have been wholly denied. *See* 10 C.F.R. § 2.1205(o). It is under this exception that Sequoyah appeals, arguing that Oklahoma is not entitled to a hearing at all. Our holding that Oklahoma has standing and has presented one or more legitimate areas of concern ends Oklahoma's section 2.1205(o) appeal.

²The Presiding Officer found that seven items were germane because they represented either required or reasonably anticipated expenses. Other cost items were rejected because Oklahoma had not shown that they were reasonably likely to be incurred. In addition to the cost-based area of concern, the Presiding Officer admitted obviously germane areas of concern involving, among other matters, dose limits, groundwater remediation, and disposal cell design. It is hard to see how issues like these would not be germane to a decommissioning plan approval, particularly where, as here, the NRC Staff is examining the very same issues in connection with its ongoing review.

Sequoyah also asks us to address four particular grievances related to various admitted areas of concern. We decline this invitation by Sequoyah to fine-tune the Presiding Officer's decision.

Much of Sequoyah's appeal does not relate to the issue of whether the hearing request should have been denied in its entirety. If we had ruled in Sequoyah's favor on either the standing or specificity arguments, Oklahoma's hearing request would be denied. In contrast, even if we were to rule in Sequoyah's favor with respect to all four of its remaining points of error, the hearing must still take place, albeit with a narrower scope.

Sequoyah first asks the Commission to rule that 10 C.F.R. Part 40, Appendix A has no applicability to its site.³ Next, it asks the Commission to rule that no hearing may be held on Oklahoma's area of concern relating to nitrate contamination of the groundwater.⁴ Third, Sequoyah wants the Commission to rule that radiation doses that may occur more than 1000 years after decommissioning are outside the scope of the hearing.⁵ Finally, Sequoyah asks the Commission to rule that it is not required to identify the long-term custodian who will enforce institutional controls at the site.⁶ We are not prepared to rule on these questions with the case in its current posture.

We have held that in a Subpart L hearing, a party may seek an interlocutory appeal only where the decision will cause the adversely affected party to suffer serious, immediate, and irreparable harm or will have a "pervasive and unusual" effect on the proceedings below. *See, e.g., Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-8, 47 NRC 314, 320 (1998) (incorporating into a Subpart L proceeding the standard for interlocutory review found at 10 C.F.R. § 2.786(g)). Sequoyah does not contend that any of these four allegedly erroneous rulings will cause it irreparable serious harm or have a pervasive effect on the structure of the hearing below. The admission of an area of concern, or use of an inappropriate legal standard, while possibly resulting

³ Although Part 40, Appendix A applies to uranium milling facilities, not uranium conversion facilities like the one being considered, the Staff has said that certain design criteria in Appendix A provide relevant guidance as to the safe design of Sequoyah's proposed waste disposal cell. We also note that no area of concern claims a "violation" of Appendix A *per se*; therefore, no area of concern "depends" entirely on the applicability of Appendix A, as Sequoyah argues.

⁴ Although NRC does not regulate nitrates, the Staff contends that its responsibilities under the National Environmental Policy Act require it to consider the environmental impact of approving a decommissioning plan that does not address nitrate contamination that was directly caused by NRC-licensed activity.

⁵ The regulations require the licensee to calculate doses only for the first 1000 years after decommissioning. *See* 10 C.F.R. § 20.1401(d). The Staff, however, has said that, due to the long-lived radionuclides that Sequoyah proposes to dispose of on site, peak radiation doses will occur long after the first 1000 years. The Staff contends that this is a reasonably foreseeable effect of the decommissioning that it must consider under NEPA. *See* "NRC Staff's Answer to Sequoyah Fuels Corporation's Appeal from the Presiding Officer's Decision to Grant a Hearing," at 21-22.

⁶ Although our regulations require that a site decommissioned for restricted release must have in place legally enforceable institutional controls (*see* 10 C.F.R. § 20.1403(b)), Sequoyah argues that it need not identify who will take on the responsibility of ensuring enforcement of these controls. Oklahoma maintains that the identity of the custodian is necessary to determine whether the custodian is willing and able to undertake this responsibility. *See* State of Oklahoma's Counterstatement in Opposition to Sequoyah Fuels Corporation's Appeal at 41-42.

in unnecessary litigation, does not meet this standard for interlocutory review. *See, e.g., Pennsylvania Power & Light Co.* (Susquehanna Steam Electric Station, Units 1 and 2), ALAB-641, 13 NRC 550 (1981) (denial of partial summary disposition of contention did not meet interlocutory review standard). Just as an intervenor cannot use interlocutory appeal to expand the scope of a hearing to include rejected areas of concern, the applicant cannot use interlocutory appeal to narrow the hearing's scope.

Our standards for interlocutory appeal do not instruct us what to do when, as here, the appellant has legitimately invoked our appellate jurisdiction for some aspects of the case, but has also raised issues that do not go to the question whether the hearing request should have been denied altogether. The Commission has not previously considered the question whether we should consider such issues as a matter of "pendent" appellate jurisdiction. The now-defunct Appeal Board did at least twice consider the question whether 10 C.F.R. § 2.714a(c) (which parallels the language of section 2.1205(o)) required the Appeal Board to limit its inquiry after finding one contention properly admitted. In *Mississippi Power and Light Co.* (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 426 n.9 (1973), the Appeal Board found that once one contention was shown to be admissible, there was no need to consider the admissibility of a second contention because the petitioner was entitled to the requested hearing. In *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-869, 26 NRC 13, 25-27 (1987), however, the Appeal Board concluded that, after finding one contention properly admitted, in the interest of judicial economy, it would consider whether two additional contentions were properly admitted. Reading *Vermont Yankee* and *Grand Gulf* together suggests that the Commission has the option, but not the obligation, to consider the merits of those of Sequoyah's points of error that address specific areas of concern rather than simply the question whether the hearing should have been wholly denied.

Because the Commission's appellate function is analogous in some respects to that of a federal appeals court, we may look to judicial reasoning for guidance in deciding whether to review those points of error that would not dispose of the entire case. The U.S. Court of Appeals for the District of Columbia Circuit has held that it will exercise pendent appellate jurisdiction where otherwise unappealable issues are "inextricably intertwined" with appealable issues, such that consideration of all issues is necessary to ensure meaningful review. *See Gilda Marx, Inc. v. Wildwood Exercise, Inc.*, 85 F.3d 675, 679 (D.C. Cir. 1996). That court also found that pendent review of the otherwise unappealable issues is appropriate where such review could dispose of the entire litigation. *See id.* The Court indicated that it disfavored pendent review where there is a lack of an adequate record; where the issue involved in the pendent review could be altered or mooted by further proceedings below; or where complex, multi-issue

pendent review would predominate over a relatively insignificant, but final and appealable order. *Id.*

Neither of the two factors favoring review discussed in *Gilda Marx* is applicable to Sequoyah's four remaining points of error. None of the four is "inextricably intertwined" with the two issues that are immediately appealable, i.e., Oklahoma's standing and whether it stated any concerns with adequate specificity. Further, as discussed above, a review of the pendent issues cannot dispose of the entire litigation. If there were any potential to dispose of the entire litigation, the appeal would come under the exception at section 2.1205(o), permitting appeals of an order granting a hearing.

On the other hand, several of the factors discussed in *Gilda Marx* weighing against pendent appellate review are present here. The record is as yet undeveloped. Arguments and evidence as to the appropriateness of using Appendix A as guidance, the need to address groundwater nitrates in the decommissioning plan, the need to identify the custodian, and the effect of doses beyond 1000 years have not yet been heard. Rather, Sequoyah in this appeal is attempting to save itself the trouble of substantively addressing these issues at the upcoming hearing. In addition, the issues may be mooted or changed by further proceedings below. For example, Sequoyah may be able to show that its proposed disposal cell design is superior to the impoundments described in Appendix A, or that its proposed solution to groundwater nitrate contamination (natural attenuation) is the best method.

Finally, Sequoyah's redressability and specificity arguments — which are appealable under NRC rules — may well be overshadowed by Sequoyah's other (unappealable) claims, were we to entertain them.⁷ In discussing the appropriateness of pendent appellate jurisdiction, the U.S. Supreme Court has cautioned that "a rule loosely allowing pendent appellate jurisdiction would encourage parties to parlay [final collateral] orders into multi-issue interlocutory appeal tickets." See *Swint v. Chambers County Commission*, 514 U.S. 35, 49-50 (1995). Because we do not want to encourage interlocutory appeals "riding on the coattails" of appealable issues, we decline to take review of the pendent issues here.⁸

The Presiding Officer did not err in granting Oklahoma's hearing request. For the foregoing reasons, we decline to exercise our discretion to examine the additional issues raised by Sequoyah's appeal.

⁷ Eleven pages of Sequoyah's 25-page brief deal with the pendent issues.

⁸ Unlike a federal appeals court, of course, the Commission sometimes exercises general supervisory jurisdiction over unappealable orders where they present "novel issues that could benefit from early Commission review." *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 23 (1998). See, e.g., *Hydro Resources Inc.*, CLI-98-16, 48 NRC 119 (1998). Here, though, none of Sequoyah's "pendent" issues is sufficiently developed in the record to warrant immediate decision by the Commission.

IT IS SO ORDERED.

For the Commission⁹

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 17th day of January 2001.

⁹ Chairman Meserve did not participate in this matter.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
Edward McGaffigan, Jr.
Jeffrey S. Merrifield

In the Matter of

Docket No. 50-423-LA-3
(ASLBP No. 00-771-01-LA)
(Facility Operating
License NPF-49)

NORTHEAST NUCLEAR ENERGY
COMPANY
(Millstone Nuclear Power Station,
Unit 3)

January 17, 2001

In this 10 C.F.R. Part 2, Subpart K spent fuel pool expansion proceeding, the Commission denies the petition for review of the Intervenor's factual contention and grants review regarding the recurring legal question whether GDC 62 permits a licensee to take credit in criticality calculations for fuel enrichment, burnup, and decay time limits. Carolina Power & Light Company and the Board of Commissioners of Orange County, North Carolina, are invited to submit *amicus curiae* briefs. In CLI-00-25, the Commission remanded the Intervenor's motion to reopen to the Licensing Board. The Intervenor's motion to stay appellate proceedings pending remand is denied.

**RULES OF PRACTICE: HEARING PROCEDURES FOR SPENT
FUEL POOL EXPANSION PROCEEDINGS; HEARING ON
CONTENTIONS**

A two-part test is used to determine whether a full evidentiary hearing is warranted on a contention in a 10 C.F.R. Part 2, Subpart K proceeding: (1)

There must be a genuine and substantial dispute of fact which can only be resolved with sufficient accuracy by the introduction of evidence in an adjudicatory hearing; and (2) the decision of the Commission is likely to depend in whole or in part on the resolution of that dispute. *See* 10 C.F.R. § 2.1115(b).

RULES OF PRACTICE: HEARING PROCEDURES FOR SPENT FUEL POOL EXPANSION PROCEEDINGS; HEARING ON CONTENTIONS

The criteria of 10 C.F.R. § 2.1115(b) for determining whether a full evidentiary hearing is warranted are strict and are designed to ensure that the hearing is focused exclusively on real issues. They are similar to the standards for determining whether summary disposition is warranted. They go further in requiring a finding that adjudication is necessary to resolution of the dispute and in placing the burden of demonstrating the existence of a genuine and substantial dispute of material fact on the party requesting adjudication. *See* “Final Rule, Hybrid Hearing Procedures for Expansion of Spent Nuclear Fuel Storage Capacity at Civilian Nuclear Power Reactors,” 50 Fed. Reg. 41,662, 41,667 (Oct. 15, 1985).

RULES OF PRACTICE: BURDEN OF GOING FORWARD

In a 10 C.F.R. Part 2, Subpart K proceeding, general allegations are insufficient to trigger an evidentiary hearing. Factual allegations must be supported by experts or documents to demonstrate that an evidentiary hearing is warranted. The applicant cannot be required to prove that uncertain future events could never happen. Although the ultimate burden of persuasion is on the license applicant, the proponent of a contention has the initial burden of coming forward with factual issues, not merely conclusory statements and vague allegations.

APPELLATE REVIEW

RULES OF PRACTICE: COMMISSION REVIEW OF APPEAL BOARD DECISIONS

The Commission will grant a petition for review if the petition raises a “substantial question” whether a finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding. *See* 10 C.F.R. § 2.786(b)(4)(i). The general reviewability standards set out in 10 C.F.R. § 2.786 apply to Subpart K by virtue of 10 C.F.R. § 2.1117, which makes the general Subpart G rules applicable “except where inconsistent” with Subpart K. Subpart K has no reviewability rules of its own.

APPELLATE REVIEW

RULES OF PRACTICE: COMMISSION REVIEW OF LICENSING BOARD DECISIONS

The Commission has discretionary authority to review a Licensing Board decision when a necessary legal conclusion is without governing precedent. *See* 10 C.F.R. § 2.786(b)(4)(ii).

REGULATIONS: INTERPRETATION (GDC 62)

The Commission takes review of the recurring legal question whether GDC 62 permits a licensee to take credit in criticality calculations for enrichment, burnup, and decay time limits.

RULES OF PRACTICE: MOTIONS TO STAY; MOTIONS TO REOPEN RECORD; STAY OF PROCEEDINGS

The Commission declines to stay this appellate proceeding after remanding to the Licensing Board the Intervenor's motion to reopen an unrelated portion of the proceeding.

MEMORANDUM AND ORDER

Northeast Nuclear Energy Company ("NNECO") is seeking a license amendment to increase the storage capacity of its spent fuel pool from 756 assemblies to 1860 assemblies. The Connecticut Coalition Against Millstone ("CCAM") and the Long Island Coalition Against Millstone ("CAM") (collectively, "CCAM/CAM") oppose the requested amendment. CCAM and CAM were granted standing as Intervenor and three of their contentions were admitted in a proceeding under 10 C.F.R. Part 2, Subpart K (10 C.F.R. §§ 2.1101-2.1117).¹ On October 26, 2000, the Licensing Board issued a Memorandum and Order that adopted an agreed-upon license condition, denied the request for an evidentiary hearing on other issues, and terminated the proceeding. *See* LBP-00-26, 52 NRC 181.

The Board ruled that there was no genuine dispute of fact or law meriting an evidentiary hearing regarding CCAM/CAM's Contention 4, relating to the

¹ *See Northeast Nuclear Energy Co. (Millstone Nuclear Power Station, Unit 3), LBP-00-2, 51 NRC 25 (2000).* The Board admitted Contentions 4, 5, and 6 — all dealing with criticality questions — and rejected eight other contentions.

risk of criticality accidents. The Board also denied an evidentiary hearing as to Contention 6, a legal question relating to the use of administrative controls to prevent criticality in the spent fuel pool. CCAM/CAM have filed a joint petition for Commission review of LBP-00-26 concerning Contentions 4 and 6. They do not seek review of the Board's decision, stemming from the third admitted contention, to adopt an agreed-upon license condition.² Both NNECO and the NRC Staff oppose the petition for review.

After careful review of the petition, the responses, and the record, the Commission has decided to deny review regarding Contention 4, which presents factual issues, and to grant review regarding Contention 6, which presents solely a legal question. Recently, we directed the Licensing Board to decide CCAM/CAM's newly filed motion to reopen Contention 4. *See* CLI-00-25, 52 NRC 355 (2000). This motion relies on reports of alleged mishandling of two spent fuel rods at Millstone Unit 1. Our refusal today to review the Board's original ruling on Contention 4 is without prejudice to our consideration of Contention 4 issues in the context of the pending motion to reopen. In view of our remand of the motion to reopen, we see no basis for staying appellate proceedings, as requested by CCAM/CAM, and thus we decline to do so.

I. PETITION FOR REVIEW REGARDING CONTENTION 4

CCAM/CAM Contention 4 is as follows:

Undue and Unnecessary Risk to Worker and Public Health and Safety.

The new set of administrative controls trades reliance on physical protection for administrative controls to an extent that poses an undue and unnecessary risk of a criticality accident, particularly due to the fact that the licensee has a history of not being able to adhere to administrative controls with respect, *inter alia*, to spent fuel pool configuration.

See LBP-00-26, 52 NRC at 190.

More specifically, this contention alleges that NNECO's proposed reliance on fuel enrichment, burnup, and decay considerations, which CCAM/CAM consider to be administrative controls, could lead to a criticality accident. CCAM/CAM assert that the probability of a criticality accident in the Millstone spent fuel pool would significantly increase because of the interaction of the following five factors: (1) NNECO will rely on administrative controls of increased complexity; (2) failure of administrative controls can lead to a criticality accident, and such failure is more likely if the controls are more complex; (3)

²The agreed-upon license condition provides that soluble boron concentration in the spent fuel pool be maintained at greater than or equal to 800 ppm whenever fuel assemblies are present. In addition, verification of the boron concentration is required every 7 days. *See* LBP-00-26, 52 NRC at 201.

criticality calculations can contain errors, and reliance on increasingly complex administrative controls will increase the potential that those errors will lead to a criticality accident; (4) administrative controls on fuel positioning are likely to fail, and failure is more likely if the controls are more complex; and (5) there is a significant probability that the concentration of soluble boron in the pool water will be insufficient to prevent a criticality accident in the event of a fuel mispositioning.³ CCAM/CAM also allege that human factors issues will further increase the risk.⁴

A two-part test set out in 10 C.F.R. § 2.1115(b) is used to determine whether a full evidentiary hearing is warranted on a contention in a Subpart K proceeding: (1) There must be a genuine and substantial dispute of fact which can only be resolved with sufficient accuracy by the introduction of evidence in an adjudicatory hearing; and (2) the decision of the Commission is likely to depend in whole or in part on the resolution of that dispute.⁵ The Board concluded that Contention 4 fails the first part of the test. Specifically, the Board stated:

We find that NNECO has demonstrated that it can adhere to administrative controls, with adequate safety margin and defense-in-depth, without posing an undue or unnecessary risk to plant workers or the public. The conservatively estimated error rate of fuel assembly misplacement of 1 in 3000 moves (or once every 9 years) is not high enough to characterize such an event as likely. Safety margins are maintained by the regulatory requirement that rack reactivity be less than 0.95, while the use of soluble boron adds defense-in-depth against an accidental criticality. Criticality calculations have used conservative assumptions, thereby introducing additional margin. We find, therefore, that, relative to Contention 4, there is no genuine and substantial dispute of fact or law that can only be resolved with sufficient accuracy by the introduction of evidence in an evidentiary hearing.

See LBP-00-26, 52 NRC at 200.

The Board's fact finding on Contention 4 appears well grounded in the extensive original record. (That record may be supplemented, of course, should CCAM/CAM's motion to reopen prove successful.) We decline further review of Contention 4 at this time because the petition for review raises no substantial

³ *See* CCAM/CAM Petition for Review, dated Nov. 13, 2000, at 4.

⁴ *See id.*

⁵ In promulgating section 2.1115(b) of Subpart K, we used the same test described in the Nuclear Waste Policy Act of 1983 at 42 U.S.C. § 10154(b)(1). We noted that

the statutory criteria are quite strict and are designed to ensure that the hearing is focused exclusively on real issues. They are similar to the standards under the Commission's existing rule for determining whether summary disposition is warranted. They go further, however, in requiring a finding that adjudication is necessary to resolution of the dispute and in placing the burden of demonstrating the existence of a genuine and substantial dispute of material fact on the party requesting adjudication.

See Final Rule, "Hybrid Hearing Procedures for Expansion of Spent Nuclear Fuel Storage Capacity at Civilian Nuclear Power Reactors," 50 Fed. Reg. 41,662, 41,667 (Oct. 15, 1985).

question whether the Board's finding of fact is clearly erroneous.⁶ Indeed, CCAM/CAM have provided no probative evidence regarding human factors and has expressly accepted NNECO's criticality calculations, which indicate that criticality will not occur in the spent fuel pool even with concurrent misplacements of several fuel assemblies and substantial dilution of the soluble boron.⁷ Thus, there are no factual issues remaining to be resolved on the original record.

In response to specific facts presented by NNECO, CCAM/CAM have made only general allegations regarding criticality accidents and environmental harm; these, however, are insufficient to trigger an evidentiary hearing under Subpart K, which provides for the hearing of specific factual controversies. *See* note 5. Factual allegations must be supported by experts or documents to demonstrate that an evidentiary hearing is warranted. The Applicant cannot be required to prove that uncertain future events could never happen. Although the ultimate burden of persuasion is on the license applicant, the proponent of the contention has the initial burden of coming forward with factual issues, not merely conclusory statements and vague allegations regarding the fears of its members. *See id.* CCAM/CAM have not met their threshold burden, inasmuch as they have not raised any specific, genuine, substantial, and material factual issues that are relevant to NNECO's request for a license amendment and that create a basis for calling on the Applicant to satisfy the ultimate burden of proof.

II. PETITION FOR REVIEW REGARDING CONTENTION 6

In Contention 6, CCAM/CAM alleged that proposed criticality control measures would violate NRC regulations. Petitioners refer specifically to Criterion 62 of the General Design Criteria of 10 C.F.R. Part 50, Appendix A ("GDC 62"), which states, "Criticality in the fuel storage and handling system shall be prevented by physical systems or processes, preferably by use of geometrically safe configurations." CCAM/CAM contend that NNECO proposes to violate GDC 62 by using measures that CCAM/CAM characterize as "administrative" rather than "physical" to prevent criticality at Millstone 3. Credits for soluble boron in the pool water and for fuel enrichment, burnup, and decay time limits are the disputed "administrative" methods of criticality control, considered by

⁶ *See* 10 C.F.R. § 2.786(b)(4)(i). The Commission will grant a petition for review if, *inter alia*, the petition raises a "substantial question" whether a finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding. The general reviewability standards set out in section 2.786 apply to Subpart K by virtue of 10 C.F.R. § 2.1117, which makes our general Subpart G rules applicable "except where inconsistent" with Subpart K. Subpart K has no reviewability rules of its own.

⁷ *See* LBP-00-26, 52 NRC at 199, *citing* transcript of hearing at 348. When asked at the hearing whether there were errors in the criticality calculations, CCAM/CAM's attorney stated, "we are assuming, for purposes of this hearing, at this stage, that the calculations are correct." *See Official Transcript of Proceedings*, U.S. Nuclear Regulatory Commission, Millstone 3 License Amendment Proceeding at 348 (July 19, 2000).

CCAM/CAM to be precluded by GDC 62.⁸ The Board rephrased Contention 6 as a question of law: “Does GDC 62 permit a licensee to take credit in criticality calculations for enrichment, burnup, and decay time limits, limits that will ultimately be enforced by administrative controls?” See LBP-00-2, 51 NRC at 41. The Board analyzed the parties’ arguments and answered the question in the affirmative. See LBP-00-26, 52 NRC at 212-13.

Although GDC 62 goes to the heart of spent fuel storage, the Commission has not directly addressed the interpretation of GDC 62.⁹ In the ongoing *Shearon Harris* proceeding, the licensing board, in an interlocutory order, reached the same conclusion as the Board in the instant case. See note 9, *supra*. The Board of Commissioners of Orange County, North Carolina, the intervenor in *Shearon Harris*, petitioned for Commission review of the interlocutory order. The Commission rejected the petition, without prejudice, as premature. See *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-00-11, 51 NRC 297 (2000). In the instant case, the issue is ripe for consideration and involves a question of law that has been raised before and has the potential to be raised again in *Shearon Harris* and other proceedings. Accordingly, we find that one of our criteria for discretionary review in 10 C.F.R. § 2.786(b)(4)(ii) (a necessary legal conclusion is without governing precedent) is met and we grant the petition to review LBP-00-26 as it relates to CCAM/CAM’s Contention 6.¹⁰

The Commission sets the following briefing schedule:

- (1) CCAM/CAM shall file their brief within 21 days of the date of this Order. The brief shall be no longer than twenty-five pages.
- (2) NNECO and the NRC Staff shall file their responsive briefs within 21 days after their receipt of CCAM/CAM’s brief. Their briefs shall each be no longer than twenty-five pages.
- (3) CCAM/CAM may file a reply brief within 10 days of receiving the briefs of NNECO and the NRC Staff. The reply brief shall be no longer than ten pages.

In addition to the arguments the parties choose to present, the Commission directs all parties to address the question whether GDC 62 permits a licensee to take credit in criticality calculations for fuel enrichment, burnup, and decay time limits.

⁸ See CCAM/CAM’s Supplemental Petition to Intervene, dated Nov. 15, 1999, at 19-21.

⁹ One licensing board has explicitly interpreted GDC 62 as it relates to the issues in this proceeding. See *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-00-12, 51 NRC 247, 255-60 (2000). GDC 62 has also been implicitly interpreted to permit controls other than geometric configuration. See, e.g., *Consumers Power Co.* (Big Rock Point Nuclear Plant), ALAB-725, 17 NRC 562, 571 (1983).

¹⁰ We recognize that Contentions 4 and 6 are interrelated, as they both deal with the use of limits on fuel enrichment, burnup, and decay time. But Contention 4 raises factual issues which were properly disposed of by the Board and do not require Commission attention. Contention 6, on the other hand, raises a recurring legal issue. A decision in favor of CCAM/CAM on the merits of Contention 6 would merely render Contention 4 moot, as the criticality controls at issue would be disallowed. A decision against CCAM/CAM on the merits of Contention 6 would not disturb the Board’s ruling on the factual issues raised in Contention 4.

We will permit the parties in the *Shearon Harris* proceeding (Carolina Power & Light Company and Intervenor, the Board of Commissioners of Orange County, North Carolina) to file *amicus curiae* briefs, not to exceed twenty pages, should they choose to do so. These entities must file their *amicus* briefs no later than the filing date of the opening briefs of the parties whose position they support. *See* 10 C.F.R. § 2.715(d). The *amici* will not be permitted to file reply briefs.

All briefs shall be filed and served in a manner that ensures their receipt on their due date. Electronic or facsimile submissions are acceptable, but shall be followed by hard copies within a reasonable time. Briefs in excess of ten pages must contain a table of contents, with page references, and a table of cases (alphabetically arranged), statutes, regulations, and other authorities cited. Page limitations on briefs are exclusive of pages containing a table of contents or tables of authorities.

III. CCAM/CAM'S MOTION TO REOPEN AND MOTION TO STAY

One final point requires Commission attention. As we noted above, on December 18, 2000, CCAM/CAM filed a motion to stay appellate proceedings and a motion to reopen the record, based on recent reports of two fuel rods allegedly missing at NNECO's Millstone Unit No. 1 and alleged discovery violations by NNECO. We decline to stay appellate proceedings, for we see no reason to delay further consideration of the GDC 62 issue, a pure legal matter unrelated to new factual developments. Our decision today to deny review regarding Contention 4 rests on the record as it existed before the Board at the time CCAM/CAM filed their petition for Commission review. Nothing in this Order should be understood to preclude CCAM/CAM from pursuing their motion to reopen the proceedings as to Contention 4 based on the new information. We expressly remanded the motion to reopen to the Board for its consideration in the first instance, notwithstanding the Board's termination of proceedings before it.

IV. CONCLUSION

For the foregoing reasons, the Commission (a) *denies* the petition for review challenging LBP-00-26 as to CCAM/CAM's Contention 4; (b) *grants* the petition as to CCAM/CAM's Contention 6; (c) *directs* the parties to file briefs regarding whether GDC 62 permits a licensee to take credit in criticality calculations for fuel enrichment, burnup, and decay time limits; (d) *invites* Carolina Power & Light Company and the Board of Commissioners of Orange County, North Carolina, to file *amicus curiae* briefs; and (e) *denies* the motion to stay appellate proceedings.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 17th day of January 2001.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
Edward McGaffigan, Jr.
Jeffrey S. Merrifield

In the Matter of

Docket No. 40-8968-ML

HYDRO RESOURCES, INC.

(P.O. Box 15910, Rio Rancho, NM 87174)

January 31, 2001

The Commission grants review of, and reverses, an Atomic Safety and Licensing Board decision in which the Presiding Officer placed the remaining portions of this proceeding in abeyance. The Commission lifts the abeyance order and directs that the proceeding resume within 6 months. The Commission also grants review of, and affirms, an Atomic Safety and Licensing Board decision that addressed National Environmental Policy Act (NEPA) and environmental justice concerns.

ADJUDICATORY PROCEEDINGS: OBJECTIVES

The objectives of our adjudicatory procedures and policies are threefold: to provide a fair hearing process, to avoid unnecessary delays in the NRC's review and hearing processes, and to produce an informed adjudicatory record that supports agency decisionmaking on . . . public health and safety, the common defense and security, and the environment.

LICENSING BOARDS: RESPONSIBILITIES (RESOLUTION OF ISSUES)

A licensee's indecision should not dictate the scope and timing of the hearing process. It is sensible to decide the most time-sensitive issues first, but it is

unacceptable to simply decline to reach other questions about an already-issued license.

NEPA: ENVIRONMENTAL IMPACT STATEMENT

NEPA does not mandate particular results, but simply prescribes the necessary process.

RULES OF PRACTICE: APPELLATE REVIEW

Where the Presiding Officer has reviewed an extensive record in detail, with the assistance of a technical advisor, the Commission is generally disinclined to upset his findings and conclusions, particularly on matters involving fact-specific issues or where the affidavits or submissions of experts must be weighed.

RULES OF PRACTICE: APPELLATE REVIEW

Our page limits on petitions for review and briefs are intended to encourage parties to make their strongest arguments clearly and concisely, and to hold all parties to the same number of pages of argument. The Commission should not be expected to sift unaided through large swaths of earlier briefs filed before the Presiding Officer in order to piece together and discern a party's particular concerns or the grounds for its claims.

NEPA: FINAL ENVIRONMENTAL IMPACT STATEMENT

Not every change requires a supplemental EIS; only those changes that cause effects that are significantly different from those already studied. The new circumstance must reveal a seriously different picture of the environmental impact of the proposed project.

NEPA: FINAL ENVIRONMENTAL IMPACT STATEMENT

In an adjudicatory hearing, to the extent that any environmental findings by the Presiding Officer (or the Commission) differ from those in the FEIS, the FEIS is deemed modified by the decision.

NEPA: FINAL ENVIRONMENTAL IMPACT STATEMENT

For the "no action" alternative, there need not be much discussion. It is most simply viewed as maintaining the status quo.

**NEPA: FINAL ENVIRONMENTAL IMPACT STATEMENT
(ALTERNATIVES)**

Agencies need only discuss those alternatives that are reasonable and will bring about the ends of the proposed action. When the purpose of the action is to accomplish one thing, it makes no sense to consider alternative ways by which another thing might be achieved. When reviewing a discrete license application filed by a private applicant, a federal agency may appropriately accord substantial weight to the preferences of the applicant and/or sponsor in the siting and design of the project. The agency thus may take into account the economic goals of the project's sponsor.

**NEPA: FINAL ENVIRONMENTAL IMPACT STATEMENT
(CUMULATIVE IMPACTS)**

Under NEPA, when several proposals for . . . actions that will have a cumulative or synergistic environmental impact upon a region are pending concurrently before an agency, their environmental consequences must be considered together. The term "synergistic" refers to the *joint* action of different parts — or sites — which, acting together, enhance the effects of one or more individual sites.

NEPA: ENVIRONMENTAL JUSTICE

Environmental justice concepts call for each agency to identify and address, as appropriate, any disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. The NRC integrates environmental justice considerations into its NEPA review process. We expect NRC EISs, and presiding officers in adjudications, to inquire whether a proposed project has disparate impacts on environmental justice communities and whether and how those impacts may be mitigated.

MEMORANDUM AND ORDER

I. INTRODUCTION

Hydro Resources, Inc. ("HRI") is seeking a license for a proposed multiple-site *in situ* leach mining project in New Mexico. The NRC Staff granted the license, but several Intervenors have challenged its validity in an adjudicatory

proceeding initiated under 10 C.F.R. Part 2, Subpart L. Our decision today follows a series of other appellate decisions in this proceeding. *See, e.g., Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-00-8, 51 NRC 227 (2000) (financial qualifications); CLI-00-12, 52 NRC 1 (2000) (groundwater, radioactive air emissions, and technical qualifications). Today we grant review of, and reverse, LBP-99-40, 50 NRC 273 (1999), in which the Presiding Officer placed the remaining portions of this proceeding in abeyance. We lift the abeyance order and direct that the proceeding resume within 6 months, unless HRI decides to limit its license to the already-adjudicated “Church Rock Section 8” site. In addition, we grant review of, and affirm, LBP-99-30, 50 NRC 77 (1999), which addressed National Environmental Policy Act (NEPA) and environmental justice concerns.

II. ABEYANCE ORDER (LBP-99-40)

A. Background

HRI applied for and received an NRC materials license to conduct *in situ* leach mining at four sites in New Mexico: Sections 8 and 17, located in Church Rock, New Mexico, and the Unit 1 and Crownpoint sites, located in Crownpoint, New Mexico. HRI proposed and the license authorizes a phased development of the properties. For example, HRI is to begin uranium recovery operations in Church Rock Section 8, and may not proceed to inject lixiviant at either the Unit 1 or Crownpoint sites without first conducting an acceptable groundwater restoration demonstration at the Church Rock site. *See* SUA-1508 § 10.28. The license, granted on January 5, 1998, is only for a 5-year term, and thus due to expire on January 5, 2003, unless renewed.¹ Intervenors Eastern Navajo Diné Against Uranium Mining (“ENDAUM”), Southwest Research and Information Center (“SRIC”), Marilyn Morris, and Grace Sam challenge the validity of HRI’s license.

The proceeding has proved quite complex, due both to its large number of technical issues and to unprecedented legal questions raised by an unusual procedural format. The unusual procedural format took form soon after the Presiding Officer granted the Intervenors’ requests for hearing. HRI responded by informing the Presiding Officer that “at this time” it only had the intention to mine in Section 8, and had “made no decision to proceed with subsequent sections of the Project.” HRI’s Request for Bifurcation (June 4, 1998) at 2-3. Any such

¹HRI’s leach mining activities are anticipated to occur over a 20-year period. The NRC Staff, however, proposed taking a phased approach to licensing, given that HRI intended to develop the project incrementally, “the project’s potential area of disturbance is vast, and the resource methodologies and interpretations could change during the proposed 20-year license term.” CLI-98-8, 47 NRC 314, 318 (1998).

decision on the other project sites was “potentially years away,” HRI explained. *Id.* at 3. “Therefore,” HRI concluded, “petitioners’ concerns regarding Section 17, Crownpoint, and Unit 1 (which comprise nearly all of the issues raised by petitioners) are not ripe for consideration.” *Id.*

HRI then requested that the Presiding Officer “bifurcate” the proceeding, to resolve only those issues concerning Section 8 and to hold in abeyance all issues relating to the other project sites “unless and until HRI is prepared to proceed with those phases.” *Id.* Because HRI had not yet made any final decision on whether to proceed with Section 17, Unit 1, or Crownpoint, and “probably” would not make a decision for years, HRI argued that it made “little sense” to proceed with a hearing on those sites. *Id.* at 13. Instead, HRI suggested, the Presiding Officer and all parties would benefit by conserving resources now and later holding a hearing on the other sections only “if and when” HRI decided to proceed with them. *Id.* at 14-15. Petitioners would not be deprived of any hearing rights, HRI argued, because they could contest later phases of the project as HRI decided to proceed with them. Bifurcation also would “allow the parties and the Presiding Officer to review the later phases of the project on a more complete and informed record,” HRI contended. *Id.* at 14.

In September 1998, the Presiding Officer granted HRI’s bifurcation request, and thus limited the first phase of the hearing to those issues specific to Section 8 of Church Rock. The Presiding Officer ruled that the Intervenor would be “prohibited, on the ground of ripeness, from making detailed challenges to parts of the project that have been scheduled many years into the future and that will be completed only if conditions in the uranium market permit profitable mining at that time.” Memorandum and Order (Sept. 22, 1998) at 2 (unpublished). Accordingly, those issues involving only Section 17 of Church Rock, the Unit 1 site, or the Crownpoint site were not to be included in this first phase of the hearing. In a concession to the Intervenor, the Presiding Officer did, though, permit immediate litigation (in Phase I) on “any issue that challenged the [overall] validity of the license issued to HRI.” This ambiguous statement apparently led to some confusion over the intended scope of the Phase I hearing.

Intervenor ENDAUM and SRIC sought to have the Presiding Officer’s bifurcation order certified to the Commission for immediate appellate review. According to the Intervenor, bifurcation violated both the AEA, by depriving them of a timely hearing on all material issues, and NEPA, by preventing the project’s environmental effects, cumulative impacts, and reasonable alternatives from being examined as a whole. The Intervenor claimed that the Presiding Officer had illegally segmented into smaller units a project that had been proposed, described, and licensed as a single project and, by addressing Section 8 separately, he would risk taking a distorted view of the rest of the project. *See* ENDAUM and SRIC’s Request for Directed Certification at 3, 7.

HRI and the NRC Staff supported the Presiding Officer's bifurcation decision, arguing that it was merely a scheduling order setting up a logical phased approach to the hearing. "It is reasonable for an inquiry into the acceptability of a project that will proceed in stages to consider component mining areas before considering the cumulative impacts of the entire project," the Staff stated. NRC Staff Response to ENDAUM and SRIC Request for Directed Certification of Bifurcation Order (Oct. 8, 1998) at 8.

The Presiding Officer denied the request for directed certification. He said that the first phase of the hearing therefore would be limited to issues relating "to the invalidity of the entire license or to operations on Church Rock Section 8." Once this first phase of the hearing was completed, the Presiding Officer would then "determine whether to proceed immediately with the remainder of the case or to wait until there is greater confidence that HRI will undertake injection mining at the other sites." Memorandum and Order (Oct. 13, 1998) at 4.

ENDAUM and SRIC petitioned the Commission to grant interlocutory review of the bifurcation order. The Commission denied review. *See* CLI-98-22, 48 NRC 215 (1998). The Commission stated:

The Intervenors' concern that the Presiding Officer's bifurcation order will leave some vital issues unaddressed need not be resolved now. The nature of undecided questions will be clearer, and the Presiding Officer (and ultimately the Commission itself) will be better positioned to assess whether additional issues require immediate adjudication, after the parties submit their initial presentations and the Presiding Officer issues his initial decisions. It would be unproductive and premature for the Commission to consider now whether litigation on some questions can be suspended indefinitely given that the Presiding Officer himself has not yet decided to do so and in a situation where additional developments may shed more light on the question.

48 NRC at 217-18.

The Presiding Officer concluded the first phase of the hearing on August 20, 1999. *See* LBP-99-30, 50 NRC 77 (1999). At that point, he ordered the parties to file a proposed schedule for the remainder of the case. HRI instead filed a motion to place in abeyance all issues concerning Section 17, Unit 1, and Crownpoint. HRI stated that it did not intend to proceed with operations at the other sections "at this time." The Presiding Officer agreed with HRI that it would be wasteful to litigate issues related to the other sections if there was no present intention to mine them. He agreed, therefore, to hold the rest of the proceeding in abeyance. *See* LBP-99-40, 50 NRC 273 (1999). He imposed, however, the condition that HRI give 8-months' advance notice prior to undertaking any mining activity on any of the three sections that had not yet been subject to hearing.

B. Parties' Arguments Before the Commission

In petitions for review filed before the Commission, Intervenors ENDAUM, SRIC, Marilyn Morris, and Grace Sam challenge the Presiding Officer's decision to hold the remainder of this proceeding in abeyance. The Intervenors claim that placing the hearing in abeyance violates the AEA and the Administrative Procedure Act, which require hearings to be conducted within a reasonable time. The Intervenors argue that "[p]ostponing the conclusion of a hearing for an unlimited period, simply to serve the convenience of one of the litigants when a license has been granted and all issues are ready for adjudication," exceeds any legitimate policy rationale for a "phased hearing." ENDAUM and SRIC Petition for Interlocutory Review of Oct. 19, 1999 Order (Nov. 8, 1999) at 7 n.7. *See also* Morris and Sam's Petition for Review of Oct. 19, 1999 Order (Nov. 8, 1999) at 7-10.

The Intervenors also claim that holding the proceeding in abeyance violates NEPA. The gist of the Intervenors' NEPA argument is as follows:

Regardless of whether the Staff's FEIS considered the Crownpoint Project as a whole, the crucial fact remains that the Presiding Officer has not considered the project as a whole in this adjudicatory proceeding. . . . This defeats NRC regulations requiring that the FEIS must "accompany the application . . . through, and be considered in, the Commission's decision making process." Here, the FEIS as a whole has *not* accompanied the Presiding Officer's decision making process, nor is it likely to. . . . Instead, only some pieces of the FEIS have been reviewed by the Presiding Officer, thus guaranteeing that the FEIS will be reviewed by the Commission in piecemeal fashion.

ENDAUM/SRIC Petition at 9, referencing 10 C.F.R. § 51.94. The Intervenors further argue that the abeyance order violates their due process rights under the Fifth Amendment of the U.S. Constitution to a prompt hearing on their health, safety, and environmental concerns. *Id.* at 8 n.8.

In their repeated objections to both the initial "bifurcation" order and to the later order holding the hearing in abeyance, the Intervenors have stressed that these decisions have severely prejudiced them in this proceeding. They state that

[t]he prejudice to the Intervenors is all the more severe in light of the fact that HRI already has the license: HRI now has a tremendous incentive to "wait out" the Intervenors. If, at some point, the Intervenors are unable to maintain their readiness to resume the litigation, HRI will have *carte blanche* to commence mining, without any further hearings.

Id. at 5.

HRI and the NRC Staff oppose Commission review of the abeyance decision. Both claim that because HRI has no immediate plans to mine Section 17, Unit 1, or Crownpoint, it would be premature and wasteful to resume the proceeding. Both reiterate their earlier arguments that the abeyance decision is merely a

scheduling order and reflects a sensible decision to hold off additional litigation until the issues involving the other sites “ripen” sufficiently for hearing. *See* HRI Opposition to Marilyn Morris and Grace Sam Petition for Review (Nov. 23, 1999) at 7; NRC Staff’s Response to ENDAUM and SRIC’s Petition for Interlocutory Review (Nov. 23, 1999) at 6 & n.3.

There is no NEPA violation, HRI and the Staff maintain, because the FEIS assessed the project in its entirety, and thus there already has been a proper NEPA evaluation of the potential impacts at all the proposed sites. “Once an adequate EIS covering an entire project is issued, as is the case here, the project may be completed in stages,” the Staff stresses. NRC Staff’s Response to Morris’s and Sam’s Petition for Commission Review (Nov. 23, 1999). The Staff and HRI argue that the phased development — and concomitant phased adjudicatory review — of the project does not violate NEPA, the AEA, or the APA.

The Commission has reviewed all the parties’ briefs and grants review of LBP-99-40. No further briefing on the bifurcation/abeyance issues is necessary. The extensive record accumulated in this proceeding suffices for the Commission’s review of LBP-99-40. Our careful review of the record leads us to reverse LBP-99-40, both on the ground of expeditious case management and on the ground that the abeyance order imposes an unacceptable prejudicial burden on the Intervenor.

C. Analysis

The Commission has a “long-standing commitment to the expeditious completion of adjudicatory proceedings.” *See Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 24 (1998) (*Policy Statement*). The objectives of our adjudicatory procedures and policies are threefold: “to provide a fair hearing process, to avoid unnecessary delays in the NRC’s review and hearing processes, and to produce an informed adjudicatory record that supports agency decision making on . . . public health and safety, the common defense and security, and the environment.” *Id.* at 19. With these policy goals in mind, we reverse LBP-99-40.

The NRC Staff has granted HRI a single license covering four sites. The Intervenor challenge the license’s validity at all four sites, but thus far our adjudicatory process has considered just one, the “Church Rock Section 8” site. Below we direct resumption of the Subpart L hearing process to consider the Intervenor’s arguments on all sites. The hearing process should resume approximately 6 months from issuance of this decision — unless HRI chooses to accept an amendment limiting its license to the already-litigated Section 8 site. It is neither sensible nor fair to leave HRI’s full license intact while we postpone indefinitely a resolution of the Intervenor’s challenge to it.

1. *Indefinite Delay*

HRI defends the abeyance decision as a resource-saving measure. Yet it is far from clear that NRC time and resources will be saved by keeping this proceeding lingering indefinitely on our docket. This is not a simple case that parties and adjudicators may easily pick up and resume years down the road. The case record is voluminous, the legal and technical arguments multifaceted and difficult. An extensive body of information — both technical and legal — already has entered the record. A lengthy delay in resuming the HRI hearings means that years from now the Commission, the agency Presiding Officers, and the NRC Staff, not to mention HRI itself and the Intervenor, will need to begin again virtually from scratch to acquaint themselves with the disparate details of this case. *See* HRI's Request for Bifurcation (June 4, 1998) at 13 (HRI says it will likely take “years” to decide whether to mine non-Section 8 sites).

The NRC Staff *already* has spent considerable time — spanning some 6 years — reviewing HRI's license application for *in situ* leach mining at all four sites for which a license was requested. Were HRI now to disclaim any intent to proceed beyond Church Rock Section 8, all site-specific issues on the other three sites would become moot. But HRI has not taken the step of requesting that its license be amended to reduce the scope of authorized activities. Mindful of HRI's current — and possibly future — intention of only mining Section 8, the Commission a while ago explicitly offered HRI the option of seeking to reduce the scope of its license. *See* CLI-00-8, 51 NRC at 243. HRI, however, has not indicated any intent to do so. With HRI uncertain about its future intentions, the Commission simply cannot assume that HRI will not seek to mine beyond Section 8.

HRI's indecision should not dictate the scope and timing of the hearing process. HRI holds, in effect, a four-site license, but the adjudication has focused on just one site, Church Rock Section 8, with the remainder placed on hold indefinitely. With the proceeding held in abeyance, not only must the Intervenor “stand at the ready” to resume the hearing, perhaps even a decade or more from now, but so must the Commission. Like the Intervenor, the Commission has no sense of when HRI will decide whether to mine in the other three project sites. Our ability to plan and allocate resources for adjudicatory proceedings is hindered by having a highly complex proceeding lurking on the agency case docket, pending on a timetable to be triggered only by, and thus subject to the exclusive knowledge and control of, the Licensee.

The Presiding Officer's abeyance decision yields the curious scenario in which a hearing on the issued license is unlikely to be resumed, let alone completed, prior to the end of the original license term, which concludes January 2003. This is hardly the result contemplated by our hearing policies which seek “to instill discipline in the hearing process and ensure a prompt yet fair resolution of contested issues in adjudicatory proceedings.” *See Policy Statement*, CLI-98-12,

48 NRC at 19. Nor can it be the result contemplated by our Subpart L hearing procedures, which envisioned more expedient proceedings “involv[ing] less . . . delay for parties and the Commission,” and otherwise sought to further the Commission’s interest in achieving “regulatory finality” — resolution — of materials licensing proceedings. *See* Final Rule, “Informal Hearing Procedures for Materials Licensing Adjudications,” 54 Fed. Reg. 8269, 8271, 8275 (Feb. 28, 1989).

In short, as a matter of sound case management, we cannot abide a situation where a license is issued but contested issues lie fallow without resolution for years. It is sensible to decide the most time-sensitive issues first, as the Presiding Officer did here when he examined Section 8-related issues initially, but it is unacceptable to simply decline to reach other questions about an already-issued license. Contrary to the Presiding Officer’s views in this case, those questions are “ripe” now.²

2. *Fairness to the Parties*

Not only our commitment to expeditious decisionmaking but also our commitment to treat all parties fairly causes us to set aside the Presiding Officer’s abeyance decision. To judge the fairness question, it is helpful to look back at the early portions of the record and to understand how the Intervenors first entered the hearing process and gained admission to the proceeding. Back in 1988, HRI’s original license application was to construct and operate mining facilities only at its Church Rock site in McKinley County, New Mexico. The following year HRI amended its application to include uranium recovery processing at an existing mine facility in Crownpoint, New Mexico. HRI later acquired mineral interests on two lease areas in the Unit 1 and Crownpoint sites. In April and July 1992, respectively, HRI again amended its application to include ISL mining at the Unit 1 and Crownpoint sites.

During these years when the number of sites covered by the application grew, HRI requested that the Staff defer review of the license application. HRI was uncertain about whether to proceed with the proposed project, given a tentative uranium market. In 1992, HRI decided to proceed with its license

²HRI has suggested that all issues pertaining to Section 17, Unit 1, and Crownpoint are not “ripe” for hearing because additional detailed information on these sites will not be known until mining activities have begun. The Commission recognizes that there is a level of technical specificity that cannot be known prior to the commencement of ISL mining activities, and that certain issues may appropriately be left for post-licensing verification, particularly under a performance-based license. Nonetheless, there no doubt remain a number of questions that can be subject to hearing. Intervenors may, for instance, challenge the sufficiency of the information HRI submitted for licensing. *See, e.g.*, CLI-00-8, 51 NRC 227 (2000) (where the Commission found that the requisite financial assurance plan should have been provided with the license application). Particular license conditions also might be subject to challenge. *See, e.g.*, CLI-00-12, 52 NRC at 6 n.4 (where the Commission stated that in subsequent hearing on the other three sites Intervenors may raise their concerns about the secondary groundwater restoration standard for uranium).

application covering the Church Rock, Unit 1, and Crownpoint sites, and the NRC Staff resumed its review of the application. *See* “Draft Environmental Impact Statement,” NUREG-1508 (Oct. 1994) (“DEIS”) at 1-3.

The NRC Staff completed a Draft Environmental Impact Statement (DEIS) in October 1994. The DEIS covered all of the proposed sites: Church Rock, Unit 1, and Crownpoint. Soon after, the NRC Staff published in the *Federal Register* a “Notice of Availability of Draft Environmental Statement and Notice of Opportunity for Hearing.” 59 Fed. Reg. 56,558 (Nov. 14, 1994). The Intervenor reviewed the DEIS and timely submitted requests for hearing. Their understanding was that any hearing that might be granted would include all of the proposed project sites. Accordingly, among their submitted Areas of Concern were numerous issues that pertained essentially to the Crownpoint or Unit 1 sites. There was no indication at the time that HRI did not intend to go forward with all sites. On the contrary, HRI’s pleadings referred to a plan to install and operate the Churchrock, Unit 1, and Crownpoint mines.

Without ruling on the intervention petitions, the Presiding Officer in September 1995 stayed the proceedings pending completion of the Staff’s review of the license application and the Staff’s issuance of the Final Environmental Impact Statement (FEIS). As the Presiding Officer explained, the FEIS and the Staff’s decision whether to grant or deny the license would be significant components of the hearing file. “Because the hearing file forms the basis upon which potential litigants contest the licensing action,” the Presiding Officer decided to wait until the file was complete before going forward with the proceeding. *See* Memorandum and Order (Sept. 13, 1995).

In March 1997, the Staff issued the FEIS, which describes the license application and project as encompassing the Church Rock, Unit 1, and Crownpoint sites. In December 1997, the Staff issued its Safety Evaluation Report (SER) for the license. The SER also specifies that the “three sites” (Church Rock, Unit 1, and Crownpoint) comprise the project. In addition, the SER lists various additional information that HRI provided the Staff after the FEIS was issued — specific, technical information relating to the proposed operations at Unit 1 and Crownpoint.

With the FEIS and SER completed, the hearing process resumed in December 1997. By that time, Intervenor had reviewed the license application, the DEIS, the FEIS, HRI’s Consolidated Operations Plan, Rev. 1 (later revised), and extensive correspondence between the NRC Staff and HRI about the application. They also had retained several expert consultants to aid in the review of these materials. *See, e.g.,* Petitioners ENDAUM and SRIC’s Motion for Leave to Amend Requests for Hearing (Aug. 19, 1997) at 18-22. All these documents referred to a project encompassing the Church Rock, Unit 1, and Crownpoint sites.

The Presiding Officer granted the petition for hearing and admitted the Intervenor on May 13, 1998. In doing so, he explicitly declared that “this

proceeding must examine the HRI application. It therefore includes *all* the sites at which in situ leach mining is to be conducted, including sites on which radioactive wastes may be discharged.” LBP-98-9, 47 NRC 261, 274 (1998) (emphasis in original). He went on to admit many of the Intervenor’s Areas of Concern, most of which were understood to encompass — if not focus upon — the Unit 1 and Crownpoint sites. It was only immediately after the Presiding Officer granted the hearing and admitted the Intervenor that HRI first made its change of plans known to the Presiding Officer and to the parties, and asked to “bifurcate” the case between the “Section 8” site and the other sites.

In all of the time prior to HRI’s request to have the proceeding bifurcated to consider only the site-specific issues involving Section 8, the Intervenor spent considerable effort reviewing documents that went to the entire project, not simply Section 8. Their experts filed detailed affidavits that focused largely upon the Unit 1 and Crownpoint sites. Indeed, the decision to bifurcate the proceeding to focus on Section 8 apparently took the Intervenor by surprise, for they had until then focused the bulk of their review upon the Crownpoint and Unit 1 sites.³ *See, e.g.,* Joint Motion for Reconsideration of Bifurcation Order (Sept. 30, 1998) at 16; NRC Staff Response to Intervenor’s Petition for Review (Oct. 20, 1998) at 9. Yet at no time while the Intervenor were engaged in preparing their voluminous pleadings did HRI intimate that it had no current intention of mining anywhere other than in the Church Rock Section 8 site.

While HRI frequently emphasized that its license outlines a *phased* mining approach, mandating the successful completion of *in situ* leach activities at Section 8 before HRI can move on to the other project sites, HRI’s pleadings still referred to the “proposed ISL mining at the Crownpoint and Unit 1 sites.” HRI’s experts likewise referred to the Section 17, Unit 1, and Crownpoint sites. Indeed, as late as 1 month before the Presiding Officer granted the hearing request and admitted the Intervenor, HRI’s adjudicatory submissions still conveyed the intent to mine all three sites.

We understand that HRI, due to fluctuating market conditions or other economic concerns, is indecisive about whether to pursue earlier plans to mine the other project sections. HRI’s vacillation, however, should not be allowed to prejudice duly admitted Intervenor who seek their opportunity for a timely hearing on a current license. We take no issue with HRI’s clear prerogative to alter its plans as the market dictates. Just as HRI amended its license application to add project sites, HRI certainly has been free all along to amend its application (now license) to reduce the license’s scope. Our concern lies with HRI’s desire to retain a license for mining all of the sites while at the same time putting off indefinitely, likely for years and with no clear resolution in sight, a hearing on the other sites

³ Section 8, as described by HRI, is “the least sensitive area with the fewest potential environmental or health risks.” HRI’s Request for Bifurcation (June 4, 1998) at 14.

encompassed by its already-issued license. HRI cannot both hold an NRC license and refuse to litigate its validity — particularly in the circumstances of this case, where the Intervenor had every reason to believe that the *entire* HRI license was subject to a hearing and invested substantial effort and resources in getting ready for a hearing.

In granting HRI's request for an abeyance order, the Presiding Officer noted that:

To be sure, Intervenor has invested substantial legal and technical resources in this proceeding. Whatever is already in the record will, of course, be available for them to reference should the proceeding be resumed. In addition, they may choose to preserve testimony of their witnesses in affidavit form. These affidavits, if they choose to use them, will be available for use in future proceedings.

LBP-99-40, 50 NRC at 276. HRI, though, informed the Presiding Officer that, most likely, it would not be making a decision on whether to proceed with the other sites “*at least* for the next few years.” Request for Bifurcation (June 4, 1998) at 13 (emphasis added). The Commission does not find unreasonable, then, the Intervenor's concern that its “expert affidavits may grow stale and dated with time,” and that previously retained experts who have filed affidavits or otherwise already have a familiarity with the case may prove unavailable years down the road. *See* Petition for Interlocutory Review of Oct. 19, 1999 Order (Nov. 8, 1999) at 5 n.3.

In addition, the Commission recognizes that the record in this proceeding grew rapidly, is highly technical, and relates to a number of different regulations and statutes, including the AEA, NEPA, the Uranium Mill Tailings Radiation Control Act, the National Historic Preservation Act, the Safe Drinking Water Act, and the codes of the State of New Mexico. Numerous NRC Regulatory Guides and Technical Position Papers also provide information relating to *in situ* leach mining applications and operations. In short, the amount and complexity of information the Intervenor and their experts reviewed before the hearing was bifurcated (and then placed in abeyance) most certainly were formidable. To compel them now to wait years without knowing when or if there will be any further hearing imposes an unacceptable and unfair burden.

The Intervenor responded to a 1994 notice of hearing and were admitted to this proceeding over 2 1/2 years ago. The Commission believes it is time to resume the hearing process and allow the Intervenor to litigate the rest of their concerns. Our decision furthers the Administrative Procedure Act's directive that an agency “within a reasonable time, shall set and complete proceedings required to be conducted . . . and shall make its decision.” 5 U.S.C. § 558(c).

To avoid a hearing on Section 17, Unit 1, and Crownpoint, HRI may, of course, apply for an amendment to reduce the scope of its license. Otherwise, the proceeding shall resume approximately 6 months after the date of this Order. This

gives HRI some time to consider its economic position and gives all of the parties time to plan and prepare for resuming the hearing process. At least 3 months prior to the resumed hearing, HRI must indicate on the record whether it wishes to retain its full license and proceed to hearing, or modify it to cover only the Section 8 site. We direct the Presiding Officer to consult with the parties and to establish a precise schedule for further proceedings.⁴

III. NEPA ORDER (SECOND HALF OF LBP-99-30)

We turn now to Intervenor ENDAUM and SRIC's challenge of the NEPA (and Environmental Justice) findings the Presiding Officer made in the second half of LBP-99-30.⁵ NEPA requires federal agencies to include a detailed statement of environmental consequences, commonly known as an environmental impact statement (EIS), for all proposals that would "significantly affect[] the quality of the human environment." 42 U.S.C. § 4332(2)(C). Preparation of an EIS serves two goals:

It ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of the decision.

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989). NEPA, though, does not require that the agency select any particular options. It "does not mandate particular results, but simply prescribes the necessary process." *Id.* at 350. "Simply by focusing the agency's attention on the environmental consequences of a proposed project, NEPA ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the dice otherwise cast." *Id.* at 349.

In their petition for review, the Intervenor raises a number of legal and factual challenges. NEPA issues often involve complex and important legal considerations, and this lengthy, contentious, and "bifurcated" proceeding certainly does so. The Commission therefore grants review of the Presiding Officer's NEPA/environmental justice decision. Given the comprehensive record already accumulated in this proceeding, the Commission finds it unnecessary to request additional appellate briefs from the parties. The Commission has carefully

⁴ While we agree with the Intervenor that the Presiding Officer's abeyance ruling was wrong from policy and fairness perspectives, our decision today intimates no view on whether the abeyance ruling in any way violated the AEA, NEPA, or other statutes.

⁵ The first half of LBP-99-30 addressed technical, health, and safety groundwater issues pertaining to the Section 8 site. The Commission denied the Intervenor's petition for review of the first half of LBP-99-30. See CLI-00-12, 52 NRC 1 (2000).

reviewed the parties' arguments, the Presiding Officer's findings, and relevant portions of the hearing record. We find no material error in LBP-99-30 and, for the reasons outlined below, we affirm the decision. Before beginning our discussion, however, several overriding points warrant special mention.

First, our decision largely does not revisit fact findings by the Presiding Officer with which we agree or have no strong basis to second-guess. As we stated recently in this proceeding:

[B]ecause the Presiding Officer has reviewed the extensive record in detail, with the assistance of a technical advisor, the Commission is generally disinclined to upset his findings and conclusions, particularly on matters involving fact-specific issues or where the affidavits or submissions of experts must be weighed. While we certainly have discretion to undertake a *de novo* factual review where appropriate, we ordinarily attach significance to the [presiding officer's] evaluation of the evidence and . . . disposition of the issues, and we do not second-guess his or her reasonable findings.

CLI-00-12, 52 NRC at 3 (quotation marks and citations omitted). Many of the Presiding Officer's NEPA findings rest entirely or largely upon his analysis of the parties' fact-specific arguments, submitted by their various experts. Unless otherwise noted in this decision, therefore, the Commission agrees with the results reached by the Presiding Officer.

Indeed, infused throughout the Intervenor's petition for review are claims that the Presiding Officer — and the FEIS — underestimated particular environmental costs of the project. These NEPA claims, though, consist essentially of fact-specific, technical arguments, already rejected by the Presiding Officer and, in many cases, also by the Commission.

A specific example is the Intervenor's claim that the FEIS underestimates the impact of radioactive air emissions and the impacts to groundwater. These claims are rooted directly in specific, technical, health, and safety issues resolved in HRI's favor by earlier Presiding Officer decisions. *See* LBP-99-19, 49 NRC 421 (1999); LBP-99-30, 50 NRC 77 (1999) (first half). The Commission previously considered these earlier decisions on air emissions and groundwater protection and found them to be free of any clear, significant error. *See, e.g.*, CLI-00-12, 52 NRC 1 (2000). At that time, the Commission considered but found unpersuasive all of the Intervenor's specific arguments on radioactive air emissions and groundwater protection. We find no reason now to disturb the Presiding Officer's finding that the FEIS's discussion of the air and groundwater impacts to the Church Rock Section 8 area is adequate. In short, underlying their claim that these impacts have been underestimated in the FEIS are the same fact-specific, technical arguments previously rejected by the Presiding Officer — and later, the Commission — as either incorrect or otherwise unpersuasive.

Similarly, the Intervenor alleges generally that the FEIS underestimates the environmental costs to cultural resources and the costs from liquid waste disposal.

See ENDAUM and SRIC's Petition for Review of LBP-99-18, LBP-99-19, and LBP-99-30 (Sept. 3, 1999) ("Intervenors' Brief") at 43, 49. The Commission, though, already has considered whether the FEIS fairly treats the issues of cultural resources and liquid waste disposal. See CLI-99-22, 50 NRC 3 (1999) (rejecting Intervenors' NEPA and other claims regarding liquid waste disposal and cultural resources).

As we just have emphasized, the Commission is not inclined to second-guess those highly fact-specific conclusions made by the Presiding Officer with the assistance of his technical advisor. Moreover, the Intervenors' petition for review simply raises no new NEPA-centered argument casting doubt on the adequacy of the FEIS's discussion of the various possible impacts to Section 8. We therefore find no basis to revisit LBP-99-30's fact-based conclusions on groundwater, air emissions, liquid waste disposal, cultural resources, and health impacts.⁶

We must note, additionally, that the Intervenors' petition for review is marred by frequent generalized claims followed by citations to lengthy, multipage sections of earlier briefs they filed before the Presiding Officer. This practice runs afoul of our page limits on petitions for review and briefs, which are intended to encourage parties to make their strongest arguments clearly and concisely, and to hold all parties to the same number of pages of argument. Significantly, as the Commission considered the Intervenors' petition for review, we often did not know what specific claims were being alleged. The Commission should not be expected to sift unaided through large swaths of earlier briefs filed before the Presiding Officer in order to piece together and discern the Intervenors' particular concerns or the grounds for their claims. Cf. *Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 and 2)*, CLI-99-4, 49 NRC 185, 194 (1999). The Intervenors, therefore, bear responsibility for any misunderstanding of their claims. The Commission further takes this occasion to place all parties on notice against use of this practice in future submissions.

We come now to the other issues raised by the Intervenors. We note, first, that the Presiding Officer's decision in LBP-99-30 generally must be read within the context of the FEIS. While the Presiding Officer repeatedly references the FEIS, in some places his decision would have benefitted from a fuller discussion of the FEIS's contents. At times, his statements can appear rather cursory. Accordingly, the Commission finds that several issues warrant additional review and comment.

⁶The one technical topic upon which we reserve judgment is the Presiding Officer's statements regarding the adequacy of the 0.44 mg/L secondary groundwater restoration standard for uranium. In CLI-00-12, 52 NRC 1 (2000), the Commission declined to reopen the record to admit new evidence on the adequacy of this standard. We said in that decision that this secondary restoration standard was unlikely ever to be an issue for Church Rock Section 8, but likely could be for the other proposed project sites. The standard has been referred generically to the NRC Staff for reevaluation. "Since the record is not closed concerning those sites, the Petitioners may raise this groundwater issue in the hearing on those sites." *Id.* at 6 n.4.

A. Burden of Proof

In repeated instances, the Intervenors provide only unspecific, conclusory claims, as in their unsupported argument that the Presiding Officer “erred as a matter of law by placing the burden of proof on most NEPA issues on the Intervenors.” *See* ENDAUM and SRIC’s Petition for Review of LBP-99-18, LBP-99-19, and LBP-99-30 (Sept. 3, 1999) at 41. The sole basis for this claim, apparently, was that the Presiding Officer did not always provide express citations to portions of HRI’s or the Staff’s briefs. *See id.* It is clear, nonetheless, from the Presiding Officer’s decision that he drew heavily from the arguments presented by HRI and the Staff and that, generally, throughout the proceeding, he was “convinced by HRI and the Staff, by a preponderance of the evidence.” LBP-99-30, 50 NRC at 110.

B. Project Purpose and Need

The FEIS states that the primary benefit of this *in situ* leach mining project is that it “would provide a domestic source of uranium.” FEIS at 5-1. The FEIS further specifies that while annual imports of uranium increased 300% between 1985 and 1994, the annual domestic uranium production decreased 75% during this time. *Id.* By 1994, for example, uranium imports totaled 35 million pounds annually, compared to less than 5 million pounds of domestic uranium. *Id.* The FEIS thus concludes that “[t]he proposed project, which would produce about 1 million pounds of uranium per year at each of the three project sites, would have the beneficial effect of helping the United States offset this deficit in domestic production.” *Id.*

Concededly, this information appears in the FEIS’s section titled “Costs and Benefits,” rather than the section expressly titled “Purpose of and Need for the Proposed Action.” Nevertheless, the FEIS should be read and understood as a whole. It clearly identifies domestic uranium production as the primary public benefit associated with this project.

The Intervenors claim that this benefit of domestic uranium “does not exist.” *See* Intervenors’ Brief at 42. The gist of this vague claim is that there is no need for an additional domestic source of uranium, given current market conditions. HRI, however, has repeatedly emphasized that if market conditions are unfavorable — taking into account uranium prices and HRI’s costs of operations — it will not go forward with the project. As the Presiding Officer described, only if uranium prices climb and cross HRI’s “break-even” point will HRI choose to enter the market. The Presiding Officer assumed that if the price of uranium rises to a level HRI finds conducive to entering the uranium market, the change in price “would indicate an improvement in the demand/supply ratio.” LBP-99-30, 50 NRC at 113. Such changes in the uranium price would reflect a more “active market for

uranium,” the Presiding Officer reasoned, in which case it may well prove that HRI’s “additional supply would be useful.” *See id.*

The FEIS simply recognizes the general need for domestic uranium production. It does not purport to evaluate who may be the strongest and most viable market participants in the domestic uranium field. Moreover, predictions of demand for uranium are highly speculative and subject to fluctuating factors. Just as market conditions may have changed since HRI first applied for its license, they may significantly change again. The Commission therefore is “not inclined to second-guess . . . findings on supply, demand, and pricing.” *See Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 93 (1998) (“*Claiborne*”). Such findings “reflect not ineluctable truth, but rather a plausible scenario.” *Id.* at 94. The Intervenor has not called into question the general interest in maintaining a domestic uranium production industry or HRI’s possibly significant role as a domestic uranium producer. Regardless of the current market price for uranium or shifting market scenarios speculating upon future uranium supply and demand, it remains in the national interest to maintain a domestic uranium production capability. *See* FEIS at 5-1; *see also* Atomic Energy Act, 42 U.S.C. §§ 2210b, 2296b(3).

C. Cost-Benefit Analysis

1. Secondary Benefits

The Intervenor claims that the Presiding Officer relied “exclusively” on secondary benefits to the local economy to support the project. Indeed, the decision does often focus upon the local economic benefits of the project, a subject of great dispute in this proceeding. The Presiding Officer, however, also explicitly discussed the benefit of domestically produced uranium. As we just noted above, he addressed and rejected the Intervenor’s claim that the FEIS “overstates the need for domestic uranium,” finding instead, that if uranium market prices climb, “there would be an active market for uranium and [] the additional supply [from HRI] would be useful.” LBP-99-30, 50 NRC at 113. In any event, the FEIS clearly provides that additional domestically produced uranium would be the project’s primary public benefit.

If ultimately HRI finds it economically prohibitive to enter the market, then “the project will not go forward” and “there will be none of the adverse effects discussed in the FEIS.” *Id.* The Intervenor, though, argues that HRI’s license “does not prohibit the licensee from commencing operations” even if the market price of uranium does not rise to a level advantageous to HRI, and that HRI may simply “find it expedient to operate the project at a loss.” *See* Intervenor’s Brief at 42-43. The NRC, however, is not in the business of regulating the market strategies of licensees. HRI has provided information on its estimated operating

costs. Admittedly, those costs and the price of uranium are subject to frequent and significant fluctuations. It remains nonetheless within HRI's business discretion to determine whether market conditions warrant commencing mining operations. The NRC looks to whether HRI can conduct operations safely. We leave to HRI the intricate ongoing business decisions that relate to costs and profit. In the end, we cannot but presume that HRI will not seek to go forward with mining operations unless it expects ultimately to have a successful market for its product. Nothing revealed in this proceeding renders such a market so implausible that the goals of the project cannot be achieved.

The Intervenor further challenge FEIS estimates of secondary benefits to the local economy. Benefits such as the number of jobs created by the project and amount of taxes HRI will pay depend upon the quantity of U_3O_8 produced. Uranium production, in turn, hinges upon HRI's costs of production and the market price for uranium. *See* FEIS at 5-2, 5-3.

The FEIS presumes a uranium market price of \$15.70. The Intervenor claim that "[t]he current market [price] is below \$11.00 and is not forecast to rise anywhere near \$15.70 in the next decade." Intervenor's Brief at 42. They therefore emphasize that the secondary benefits listed in the FEIS may "never come to pass." *Id.* at 43. Their point is well taken, but already repeatedly acknowledged in the FEIS and by the Presiding Officer's decision:

The important point relevant to assessing the project's potential benefits to the local community is that the benefits depend on HRI's costs being lower than the future price of U_3O_8 , which has been quite volatile. If the price of U_3O_8 is less than the costs of operation, then operations may be discontinued. If this happens, there would be no economic benefits to the local community.

FEIS at 5-3; *see also* LBP-99-30, 50 NRC at 125 (Staff affidavit incorporated in decision).

Both the Presiding Officer's decision and the FEIS make clear that the number of jobs and the average salary of workers may be lower if U_3O_8 prices prove to be lower than \$15.70 per pound. *See* FEIS at 5-2, 5-3, 4-96, 4-97; *see also* LBP-99-30, 50 NRC at 126. The Presiding Officer recognized that a host of factors may impact and reduce the benefits from employment, royalty income, and taxes, that some potential benefits are not quantified,⁷ and that all figures provided are, at best, approximations. *See* 50 NRC at 118.

The FEIS indeed emphasizes that spot market prices have been "very volatile, fluctuating from a high of over \$16 in 1987 to a low of less than \$8 in 1991," and that "[a]s late as 1995, the price was less than \$10 per pound." FEIS at 5-2. And, as the Commission already has stressed in this opinion, "price projections reflect

⁷Nor must all economic benefits be quantified. NEPA "does not require a particularized assessment of non-environmental impact." *Idaho Conservation League v. Mumma*, 956 F.2d 1508, 1522-23 (9th Cir. 1992); *see also Public Utilities Commission of California v. FERC*, 900 F.2d 269, 282 (D.C. Cir. 1990).

not ineluctable truth, but rather a plausible scenario.” *Claiborne*, 47 NRC at 94. We find no reason to disturb the estimates of secondary benefits drawn in the FEIS. These are only *estimates* of secondary local benefits which the FEIS itself acknowledges conceivably may never materialize. Moreover, while unnecessary, the Presiding Officer even incorporated into his decision some additional — and lower — estimates of secondary benefits, based upon a lower uranium price of \$9 per pound. *See* LBP-99-30, 50 NRC at 127.

In short, the Presiding Officer merely concluded that the secondary benefits would have a “small favorable impact” on the local economy, while the hearing on Section 8 revealed “no serious risks attendant to the project.” *Id.* at 118. The Commission finds no compelling reason to disturb the Presiding Officer’s conclusion.

Of course, there has yet to be a hearing on the safety and environmental impacts of the other three project sites. In many respects, then, the Presiding Officer’s cost-benefit assessment can be said to have been merely partial or preliminary, for he had only examined the various costs — air emissions, groundwater, etc. — associated with Section 8. If the resumed hearing on the other project sites brings to light any significant new finding bearing on the overall project’s costs, the FEIS cost-benefit analysis may need to be modified. It remains to be determined, then, whether the potential costs of one or more of the other project sites may require revision of the FEIS’s cost-benefit conclusions.

2. *Land Use*

We turn next to the Intervenor’s argument on land-use impacts. These impacts, as described in the FEIS, include onsite disturbance of approximately 90% of the Church Rock site, the temporary disruption of livestock grazing at project sites, and the potential relocation of residents. *See* FEIS at 4-93, 4-94. The FEIS recognizes that “[l]ocal residents have expressed concern that this disruption of grazing would adversely affect Navajo who have grazing permits for the land and rely on livestock as an important economic resource.” *Id.* at 4-94.

The Intervenor’s challenge certain statements by the Presiding Officer on land-use impacts. In particular, they challenge the Presiding Officer’s statement that “[t]he loss of the small plot of land in Church Rock Section 8, set as it is in the midst of a vast desert, will not materially affect the ability of people to graze their cattle.” LBP-99-30, 50 NRC at 114; *see also id.* at 118 (“I do not understand how anyone could possibly be prevented from raising livestock because ISL mining will take place on Section 8”). The Intervenor’s argue that the Presiding Officer “ignores the fact that HRI’s proposals for waste disposal involve more than Section 8.” Intervenor’s Brief at 44. They reference an earlier brief, filed before the Presiding Officer on the issue of Liquid Waste Disposal, which indicated that

there is one Church Rock resident of Section 17 who grazes his cattle on Section 16, one of the areas proposed for liquid waste disposal from Section 8.

The FEIS, however, clearly and repeatedly acknowledges that HRI's proposals for disposing liquid wastes from the Church Rock site may involve more than Section 8. *See, e.g.*, FEIS at 4-11, 4-93, 3-55, 2-26. One of the possible liquid waste disposal methods is "land application," in which agricultural irrigation equipment is used to apply wastewater over a relatively large land area. *See id.* at 2-19. If land application ultimately is selected as the waste disposal method for Section 8, there are four possible sites that may be used: Section 17, Section 8, Section 12, and Section 16. *Id.* at 4-11. Up to 640 acres of pastureland from Section 16 might be affected. *Id.* at 4-11, 4-93. That land is owned by the State of New Mexico. *Id.* at 4-11.

The Presiding Officer may have overlooked the one individual who holds a grazing permit for part of Section 16, on which he grazes eighteen to thirty head of cattle, and whose activity may be temporarily impacted by operations on Section 8. It should be noted, however, that this remains only a possibility. There are four different possible methods of liquid waste disposal that HRI ultimately may select: evaporation ponds, land application, surface water discharge, or deep well injection. *See id.* at 4-86. Land application might not be the liquid waste disposal method ultimately chosen for Section 8.

More significantly, HRI's license does not currently authorize waste disposal through land application. For HRI to conduct waste disposal through land application, it must first submit a plan, in the form of a "detailed license amendment" application, and receive approval by the NRC. *See id.* at 4-80, 4-90; *see also* License Condition 11.8; CLI-99-22, 50 NRC at 10. The "NRC would consider any consequences arising from such [an] approval[] at that time." CLI-99-22, 50 NRC at 11. Land application, in short, "would have to be proposed by HRI under a license amendment and [then] would be subject to additional environmental review." *See* FEIS at 2-18, 4-90. Meanwhile, the FEIS does not overlook the general possibility that individuals with grazing permits may be temporarily displaced and should be compensated accordingly. *See, e.g., id.* at 4-118, 4-95.

D. Failure to Supplement FEIS

1. Performance-Based Licensing

The Intervenors claim that the Staff's decision to include performance-based licensing concepts in HRI's license warrants formal supplementation of the FEIS. *See* Intervenors' Brief at 45. We disagree. First, the Commission already has considered and rejected the Intervenors' claims that performance-based licensing (1) violates the AEA and NEPA, (2) accords undue discretion to the licensee, and

(3) deviates sharply from agency regulatory practices and trends. *See* CLI-99-22, 50 NRC at 15-17.

Second, the mere inclusion of performance-based concepts in HRI's license does not warrant FEIS supplementation. Performance-based licensing concepts allow "minor operational modifications, without significant safety or environmental impact." *Id.* at 16. They are based on the notion that requiring a license amendment for any change, "no matter how inconsequential, would burden both licensees and the NRC, to no good end." *Id.*

License Condition 9.4 permits HRI to make certain changes in operations without NRC approval, but "only those changes that are consistent with existing license conditions and applicable regulations," and with the Safety Evaluation Report (SER) and FEIS. *Id.* at 17. If any of these conditions are not met, HRI must seek a license amendment. *See* License Condition 9.4. Any change made pursuant to License Condition 9.4 must be fully documented and reported to the NRC, which will monitor all changes to assure that in fact no license amendment was required.

"Not every change requires a supplemental EIS; only those changes that cause effects which are significantly different from those already studied." *Davis v. Latschar*, 202 F.3d 359, 369 (D.C. Cir. 2000). The new circumstance must reveal a "seriously different picture of the environmental impact of the proposed project." CLI-99-22, 50 NRC at 14 (citing *Sierra Club v. Froehlke*, 816 F.2d 205, 210 (5th Cir. 1987)). Here, "[b]y its own terms, License Condition 9.4 requires HRI to apply for a license amendment if any change, test, or experiment it undertakes is not consistent with the findings in the FEIS." CLI-99-22, 50 NRC at 17. By no means will License Condition 9.4 "affect the quality of the human environment in a significant manner or to a significant extent not already considered." *See Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989).

2. *Alternatives in FEIS*

We similarly reject the Intervenor's claim that new alternatives and proposed mitigation measures provided in the FEIS require a supplemental EIS.⁸ The Intervenor declares that the alternatives in the FEIS represent "significant changes" — to the draft EIS — warranting supplementation. *See* Intervenor's Brief at 45-46. The argument, presented in conclusory and summary form, is unpersuasive. The Commission agrees with the Presiding Officer that the listed alternatives in the FEIS do not reflect a "substantial change in the description of the project," and thus do not warrant further circulation of the FEIS for comment. *See* LBP-99-30, 50 NRC at 116.

⁸ Under NEPA, the FEIS must include a statement on the alternatives to the proposed action. *See* 42 U.S.C. § 4332(2)(C)(iii).

An FEIS typically is issued after comments on the DEIS have been received and reviewed. That the FEIS, in response to comments received, may supplement, refine, or otherwise adapt the project alternatives is not only reasonable but expected. *See* Council on Environmental Quality Regulations (CEQ), 40 C.F.R. § 1503.4. The FEIS, for instance, might typically add “mitigation measures” to an alternative, or might suggest a new alternative that is a variation upon one or more previously proposed alternatives. *See* Forty Most Asked Questions Concerning CEQ’s NEPA Regulations, 46 Fed. Reg. 18,026, #29b (1981).

Here, the alternatives in the final EIS were well within the “spectrum” and “range” of alternatives discussed in the draft EIS. *See Dubois v. U.S. Department of Agriculture*, 102 F.3d 1273, 1292-93 (1st Cir. 1996), *cert. denied*, 521 U.S. 1119 (1997). The primary distinction of the FEIS’s “Alternative 2,” for instance, is that the project might be reduced to only one or two of the proposed sites, instead of necessarily encompassing all of them. FEIS at 2-31. “Alternative 3,” as the Presiding Officer found, simply includes additional NRC-imposed license conditions to “improve safety and reduce risk to the environment.” *See* LBP-99-30, 50 NRC at 116. The Intervenor, moreover, will have full opportunity to challenge the adequacy of these license conditions in the resumed adjudicatory proceeding.

3. Inclusion of Staff Affidavit

Finally, the Presiding Officer’s incorporation into LBP-99-30 of a Staff affidavit on costs and benefits also does not require FEIS supplementation. All of the information in that affidavit was based upon and entirely encompassed by the FEIS. No significantly new picture of environmental or other impacts is presented by the affidavit.

In addition, in an adjudicatory hearing, to the extent that any environmental findings by the Presiding Officer (or the Commission) differ from those in the FEIS, the FEIS is deemed modified by the decision. *See, e.g., Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 706-07 (1985); *Niagara Mohawk Power Corp.* (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347, 371-72 (1975). “The adjudicatory record and Board decision (and, of course, any Commission appellate decisions) become, in effect, part of the FEIS.” *Claiborne*, CLI-98-3, 47 NRC at 89. Indeed, the hearing process itself “allows for additional and . . . more rigorous public scrutiny of the FES than does the usual ‘circulation for comment.’” *Limerick*, 22 NRC at 707.

E. Evaluation of Project Alternatives

The Intervenors challenge the Presiding Officer's discussion of the project alternatives, including the "no action" alternative. Once again, they provide us with no specific challenge to the FEIS, and instead expect the Commission to review portions of an earlier brief before the Presiding Officer to glean their concerns. *See* Intervenors' Brief at 46. While we have no obligation to search for unidentified arguments buried in earlier briefs, we nonetheless have examined the Intervenors' earlier claims, and find no basis to reverse the Presiding Officer's statements on alternatives. We do, however, agree with the Intervenors that the Presiding Officer failed to expressly address some of the claims the Intervenors raised before him. His decision also would have benefitted from a more detailed treatment of the "alternatives" issue. The Commission therefore provides the following additional comments.

I. "No Action" Alternative

Generally, one of the alternatives proposed in an FEIS is the agency alternative of taking "no action." For the "no action" alternative, there need not be much discussion. *See Headwaters, Inc. v. Bureau of Land Management*, 914 F.2d 1174, 1181 (9th Cir. 1990). It is most simply viewed as maintaining the status quo. *See Association of Public Agency Customers v. Bonneville Power Administration*, 126 F.3d 1158, 1188 (9th Cir. 1997) (referencing Council on Environmental Quality Memorandum to Agencies, 46 Fed. Reg. 18,026, 18,027 (Mar. 1, 1981)).

In this case, "no action" would mean denial of the HRI license. It is self-evident from both LBP-99-30 and the FEIS that the "no action" alternative would have the advantage of obviating all of the health and environmental impacts associated with the project, but also would forego "uranium production from Section 8" and the "beneficial socioeconomic impacts discussed in the FEIS." LBP-99-30, 50 NRC at 132-33; *see, e.g., id.* at 133-41; FEIS at 4-63, 4-66, 4-72. While the FEIS could have done a better job articulating final conclusions on the alternative chosen, it is nonetheless implicit in the FEIS that the "no action" alternative was rejected because the impacts of the project were found acceptable, while the ISL mining would yield significant quantities of domestically produced uranium as well as some local socioeconomic benefits. *See, e.g.,* FEIS at 4-120 to 4-127 (finding cumulative impacts either minor or, given license conditions and other mitigative measures, acceptable, for air quality, radiological health, ecology, land use, transportation risk, groundwater, etc.); *see also id.* at 5-1 to 5-5 (on benefits). Similarly, the Presiding Officer's decision ultimately rejects the "no action" alternative because it finds the impacts of the project either "minimal" or "acceptable" and the benefits desirable. *See, e.g.,* 50 NRC at 132-33.

Clearly, the Intervenor preferred the “no action” alternative, but NEPA imposes no obligation to select the most environmentally benign alternative. *See Robertson v. Methow Valley*, 490 U.S. at 350. NEPA “does not dictate agency policy or determine the fate of contemplated action.” *Davis v. Latschar*, 202 F.2d at 360 (quoting *Environmental Defense Fund v. Massey*, 986 F.2d 528, 532 (D.C. Cir. 1993)).

2. *Other Alternatives*

Agencies need only discuss those alternatives that are reasonable and “will bring about the ends” of the proposed action. *Citizens Against Burlington v. Busey*, 938 F.2d 190, 195 (D.C. Cir.), *cert. denied*, 502 U.S. 994 (1991). “When the purpose is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved.” *Id.* (citing *City of Angoon v. Hodel*, 803 F.2d 1016, 1021 (9th Cir. 1986) (*per curiam*), *cert. denied*, 484 U.S. 870 (1987)).

The Intervenor mischaracterize the project’s purposes by declaring — overbroadly — that the project’s main public benefit is simply to provide fuel for nuclear power plants. It is, more specifically, to help maintain the viability of a dwindling “domestic uranium mining industry.” FEIS at 5-1. The “viability of the industry is a Federal concern,” aimed at assuring a dependable, ongoing domestic source of uranium. *See id.* Other public benefits of the project include the socioeconomic benefits to the local community, the local governments, and the State of New Mexico. FEIS at 5-1 to 5-5; LBP-99-30, 50 NRC at 125-29. Of course, the Applicant, too, would benefit from revenues generated from uranium sales. FEIS at 5-1. Additional alternatives suggested by the Intervenor would not satisfy the goals of the project.

The Intervenor entirely ignore the nature of the ISL project — it is a project proposed by a private applicant, not the NRC. “Where the Federal government acts, not as a proprietor, but to approve . . . a project being sponsored by a local government or private applicant, the Federal agency is necessarily more limited.” *Citizens Against Burlington*, 938 F.2d at 197. The NRC is not in the business of crafting broad energy policy involving other agencies and nonlicensee entities. Nor does the initiative to build a nuclear facility or undertake ISL uranium mining belong to the NRC.

When reviewing a discrete license application filed by a private applicant, a federal agency may appropriately “accord substantial weight to the preferences of the applicant and/or sponsor in the siting and design of the project.” *Id.* The agency thus may take into account the “economic goals of the project’s sponsor.” *City of Grapevine v. U.S. Department of Transportation*, 17 F.3d 1502, 1506 (D.C. Cir.), *cert. denied*, 513 U.S. 1043 (1994); *see also Citizens Against Burlington*, 938 F.2d at 196 (“the agency should take into account the needs

and goals of the parties involved in the application’’). HRI proposes to mine on Section 8 of Church Rock because it owns land there in fee simple and that is where the ore body is located.

The NRC has the statutory responsibility to assure that all licensees meet applicable safety and environmental regulations. Here the Staff found that HRI satisfied all safety and environmental requirements for its license. In its NEPA review, the Staff determined that the health and environmental risks of the project could be mitigated satisfactorily and did not warrant denial of the license. The FEIS sets forth this conclusion.

As to the Section 8 site, the Intervenors already have had the opportunity to challenge the adequacy of HRI’s license and the FEIS. Today we order that the hearing be resumed, allowing the Intervenors to challenge the rest of the license and the rest of the FEIS. Their participation will help assure that the FEIS has identified and evaluated all adverse environmental effects of the other project sites. Indeed, throughout this decision, the Commission has emphasized that there has yet to be a final agency adjudicatory decision on the cost-benefit balance for the entire project, given that the hearing so far focused only upon Section 8.

3. Comparison of Alternatives

The Presiding Officer’s discussion of project alternatives, also, necessarily was limited because of his focus upon Section 8. The decision makes clear why the ‘‘no action’’ alternative (‘‘Alternative 4’’) was rejected. *See* LBP-99-30, 50 NRC at 132-33. It also notes that the Staff’s recommended ‘‘Alternative 3’’ — containing numerous additional Staff-imposed protective measures — is preferable to the other FEIS-listed alternatives (Alternatives ‘‘1’’ and ‘‘2’’), which only include those mitigative measures proposed originally by HRI but found inadequate by the Staff. *See id.* at 132; *see also id.* at 133-45. These conclusions on alternatives, however, necessarily only take into account the various findings on Section 8.

Having narrowed the initial hearing to Section 8, the Presiding Officer had no basis to address the full gamut of options available under ‘‘Alternative 2,’’ one of the proposed alternatives. Alternative 2 would restrict the number of sites for ISL mining. Specific options under Alternative 2 include restricting operations to: (1) the Church Rock site, or (2) the Unit 1 site, or (3) the Crownpoint site, or (4) the Church Rock and Unit 1 sites, or (5) the Church Rock and Crownpoint sites, or (6) the Unit 1 and Crownpoint sites. FEIS at 2-31.

Alternative 2 stems from the possibility — considered in the FEIS — that ‘‘potential impacts to public health and safety or the environment might indicate that ISL mining should not be conducted at all three sites’’ (Church Rock, Unit 1, and Crownpoint). *Id.* Given this possibility, instead of examining and discussing generally the entire project’s impacts, the FEIS addresses the Church Rock, Unit 1, and Crownpoint impacts individually, as ‘‘subunits of the proposed

project.’’ *Id.* For each type of environmental impact — ecological, hydrological, meteorological, radiological, etc. — the FEIS breaks its discussion down into separate sections for Church Rock, Unit 1, and Crownpoint. In the end, however, the FEIS does not find any of the proposed project sites’ impacts so significant as to warrant eliminating from the license one or more of the sites.

Because the hearing focused only upon Church Rock Section 8, the Presiding Officer’s decision does not address the sundry project configurations offered by Alternative 2. In the resumed hearing, however, the Intervenors may raise any of their arguments that go to whether the Unit 1, Crownpoint, or Church Rock Section 17 sites should not have been approved and included in the license. If the resumed hearing on the safety and environmental aspects of the Church Rock Section 17, Unit 1, and Crownpoint sites reveals any significant problem with conducting mining operations on any of those sites, there remains the possibility that the license ultimately may be restricted to fewer than the four proposed areas. At that time, there would be sufficient information and basis to examine in detail any called-for changes to this project.⁹

F. Cumulative Impacts

1. Interregional Impacts

We turn now to the question of the project’s ‘‘cumulative impacts.’’ Under NEPA, ‘‘[w]hen several proposals for . . . actions that will have a cumulative or synergistic environmental impact upon a region are pending concurrently before an agency, their environmental consequences must be considered together.’’ *Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976). The term ‘‘synergistic’’ relates to the *joint* action of different parts — or sites — which, acting together, enhance the effects of one or more individual sites.

The expression ‘‘cumulative impacts,’’ as it is used in NEPA analysis, frequently is misunderstood and indeed may have been misunderstood by one or more of the parties in this proceeding. NEPA analysis looks at both the severity of ‘‘impacts’’ a project may have on different resources, and the possibility that these impacts may combine in such a fashion that will enhance the significance of their individual effects. Only the latter consideration is the NEPA ‘‘cumulative impacts’’ concern.

To look at the ‘‘cumulative impacts’’ of a project, then, does not mean simply examining and adding up the ‘‘separate effects in each planning area,’’ but

⁹In the event that HRI chooses voluntarily to narrow the scope of its license to Section 8 alone, the issue of other possible project design configurations becomes moot. The license then is reduced to cover operations only at Section 8. In effect, that would be similar to the first option proposed under Alternative 2: restricting mining to Section 8. The license, however, would also include all of the current Staff-imposed mitigative measures, many of which Alternative 2 did not require.

instead goes to whether the “simultaneous development” of these areas will in fact heighten the project’s overall impact. *See Natural Resources Defense Council, Inc. v. Hodel*, 865 F.2d 288, 297 (D.C. Cir. 1988). In other words, cumulative impacts analysis considers whether the sum may be greater than its parts.¹⁰ Not all projects will have cumulative impacts. The impacts from separate actions or regions may simply not be “environmentally inter-related.” *See Kleppe v. Sierra Club*, 427 U.S. at 411 & n.25.

In this proceeding, the “cumulative impacts” issue led to some confusion over the precise scope of the Section 8 hearing. To better describe how the Presiding Officer approached cumulative impacts, the Commission believes it would be helpful here to outline a bit of the relevant procedural history.

When he first bifurcated the proceeding, the Presiding Officer said that, along with challenging Section 8, the Intervenors could litigate any of their concerns that “challenge[d] the validity of the license issued to HRI.” *See Memorandum and Order* (Sept. 22, 1998). Intervenors ENDAUM and SRIC accordingly sought to raise concerns over the project’s cumulative impacts. They requested, though, that the Presiding Officer clarify *how* the cumulative impacts issue under NEPA could be resolved within the context of a bifurcated proceeding. *See ENDAUM and SRIC’s Request for Clarification* (Nov. 2, 1998). Specifically, they stressed that the cumulative impacts of the proposed project on any given resource depends upon how the *four* project sites, considered together, might impact that particular resource. The Intervenors therefore sought to include information on project impacts “from all mine sites” as part of their cumulative impacts presentation. *Id.*

The Presiding Officer appeared to have concurred. Broadly, he replied that:

ENDAUM and SRIC are free to present any area of concern or portion of an area of concern that may demonstrate that the license at issue in this case was improperly granted. Since these intervenors believe that the cumulative impacts issue may invalidate the license, they may present that issue.

See Memorandum and Order (Nov. 10, 1998) (unpublished). Apparently confused by this ambiguous response, the Intervenors *did* raise arguments encompassing other — non-Section 8 — sites in their cumulative impacts brief.

The Presiding Officer, however, declined to consider any argument on impacts from the other sites. Instead, he emphasized that the scope of the initial hearing had been narrowed to “the Church Rock Area.” *See LBP-99-30*, 50 NRC at 121.

¹⁰ A classic example might be that of whales and salmon migrating through different project areas. Simply looking at the potential impacts from each project area and adding these up may not reflect the true overall impact upon these animals, because they would be swimming through the project areas one after another, without respite. Thus, the simultaneous development of several project areas could have a greater impact upon the animals than the simple sum of the impacts of each project area. Under NEPA, such a “cumulative” effect should be considered.

He therefore rejected Intervenor arguments on the potential impacts of relocating the Crownpoint site's wells as "not ripe for this phase of the proceeding, which is focused on Church Rock Section 8." *Id.*

What he *did* consider in the initial hearing were the past, present, and future impacts to Section 8, and whether these impacts considered together would lead to significant cumulative effects. He concluded that they would not. *See generally id.* at 119-21, 113-15, 109. Ultimately, he determined that there had been an adequate analysis of the "past and future cumulative impacts and segmentation issues associated with licensing HRI to conduct ISL operations at Section 8." *Id.* at 121 (emphasis added).

The cumulative impacts issue, perhaps more than any other NEPA issue, illustrates the awkwardness inherent in conducting a site-by-site hearing on what has been proposed and licensed as a multisite project. The Presiding Officer's exclusive focus upon Section 8 does not address any possible *interregional* effects of mining operations on the four proposed sites: Church Rock Section 8, Church Rock Section 17, Unit 1, and Crownpoint. And interregional impacts are a key focus of cumulative impacts analyses.

Apparently, the Presiding Officer intended *ultimately* to consider cumulative, interregional impacts as the proceeding progressed to the other sites. *See, e.g., id.* at 107-08, 116-17. His decision only approves Section 8. Significantly, he retained the ability to disapprove any of the other project sections should their individual or cumulative effects prove unacceptable.

Although the Presiding Officer conducted a limited cumulative impacts analysis, focused only upon those environmental impacts — past and future — taking place in Section 8, in the resumed hearing the Intervenor will have the opportunity to raise all their cumulative impacts concerns that involve the other project sites, including the effects of moving the Town of Crownpoint's wells, the groundwater impacts from the proposed sequence of mining, and the cumulative groundwater impacts from operations at the four sites. In the resumed hearing, the Presiding Officer must consider the impacts of Section 8 along with those of the other sections, to assure that all potential interregional cumulative effects have been adequately considered and discussed in the FEIS.

Because of the bifurcated hearing, it remains unclear whether the Intervenor's concerns over the other project sites indeed point to any significant "cumulative impacts," as that expression is understood under NEPA judicial cases. For instance, the impacts to Crownpoint's water supply — an issue the Intervenor

tried to raise — might not have any “cumulative” or “synergistic” relationship with the impacts of Section 8 or any other sites.¹¹

2. *Impacts Within Section 8*

Cumulative impacts analysis looks not only to possible *interregional* “synergistic” effects, but also to whether, even at just one site, the proposed action’s impacts will be significantly enhanced by already existing environmental effects from prior actions. A cumulative impacts review examines “the impact on the environment *which results from the incremental impact* of the action, when added to other past, present, and reasonably foreseeable future actions.” 40 C.F.R. § 1508.7 (emphasis added).

As to the past, present, and future environmental impacts on *Section 8* alone, the Commission finds no basis to overturn the Presiding Officer’s findings. The Intervenor’s vague, largely generalized claims do not identify any “clearly erroneous” factual finding or important legal error requiring Commission correction. It is clear from the record that the Presiding Officer in this proceeding reviewed voluminous filings from the parties and considered the Intervenor’s concerns, but nonetheless found the FEIS’s cumulative impacts discussion adequate. “The NEPA process involves an almost endless series of judgment calls. . . . It is . . . always possible to explore a subject more deeply and to discuss it more thoroughly.” *Coalition of Sensible Transportation v. Dole*, 826 F.2d 60, 66 (D.C. Cir. 1987).

Having considered the Intervenor’s claims, the Presiding Officer issued a series of partial initial decisions on the impacts to Section 8 and, in light of those decisions, he found no significant cumulative impact to the Section 8 site. Instead, he found that, read as a whole, the FEIS demonstrates sufficient consideration of the potential impacts of past and future impacts to Section 8. The Intervenor’s claims before the Commission fail to cast doubt on his conclusions. Indeed, the Intervenor fails to raise any discrete, supported argument.

One of the Intervenor’s general concerns, for instance, involves the project’s cumulative impacts on radiation levels. *See* Intervenor’s Brief at 47. As the Presiding Officer held, however, the FEIS addresses this issue adequately. *See* LBP-99-30, 50 NRC at 120. The FEIS acknowledges that previous mining and milling activities in the Church Rock area “resulted in large exposures to

¹¹ In the event that HRI were to abandon plans to mine the other sections and choose to have the scope of its license narrowed to merely Section 8, no further cumulative impacts review involving the other sites need be litigated. *See National Wildlife Federation v. FERC*, 912 F.2d 1471, 1476-78 (D.C. Cir. 1990) (where applicant withdrew from its application the later phase of a project — “Phase II” — FERC did not need to evaluate the environmental effects of Phase II in reviewing the license application for Phase I). If HRI ever later decided to submit an application for a license to mine one or more of the other sites, the impact statement on them would then consider the environmental effects of Section 8 along with the effects of the later-proposed sites, to reach a conclusion on the cumulative impact of the added sites. *Id.* at 1478; *see also Kleppe*, 427 U.S. at 415 n.26.

radioactive materials, especially radon,” and that these “exposures were large enough to result in a high incidence of cancer among workers.” FEIS at 4-124. It goes on to conclude, though, that the HRI project will only result in a “negligible increase” in radiological impacts. *Id.* at 4-125; *see also id.* at 4-73 (“no significant radiological impact to area”). This is because the ISL process HRI will use “does not result in large amounts of tailings or environmental releases of radioactive particulate matter.” *Id.* at 4-125; *see also id.* at 4-74, 4-82. Any expected exposures from possible sources of radon “are a very small fraction of the allowable limits for exposure of the public.” *Id.* at 4-125; *see also id.* at 4-83, 4-85, 4-117. Radon exposures and potential concentrations at Church Rock would amount to approximately 0.5% of the applicable regulatory public limit. *See id.* at 4-83. The Presiding Officer was not persuaded that Section 8’s radiological impacts would in any way result in unacceptable cumulative impacts. He therefore agreed with the FEIS’s conclusion that the Section 8 project’s impacts would not be a significant addition to the overall radiological impacts in the area.

Essentially, the Intervenor challenge the FEIS’s assessment of current radiation levels at Church Rock, and its calculation of expected radiation releases. The Intervenor raised virtually identical arguments in their petition for review of LBP-99-19, 49 NRC 421 (1999) (partial initial decision on radioactive air emissions). After considering the Intervenor’s arguments, the Commission denied review of LBP-99-19, on the ground the Intervenor failed to identify any “‘clearly erroneous’ factual finding” or “‘important legal error.’” *See* CLI-00-12, 52 NRC at 3 (denying plenary review). Here, while as a formal matter we are granting review of the NEPA claims in an effort to clear up lingering questions, we affirm the Presiding Officer’s ruling on cumulative impacts at Section 8 for the technical reasons given in the prior Presiding Officer and Commission decisions. At bottom, as the Presiding Officer recognized, the Intervenor’s various claims of environmental impacts are “‘a recapitulation of themes already stated by Intervenor and addressed by [the Presiding Officer]’” in earlier partial initial decisions dealing with the technical, public health, and safety review of the license. *See* LBP-99-30, 50 NRC at 109.

Cumulative impacts analysis looks to whether the impacts from a proposed project will combine with the existing, residual impacts in the area to result in a significant “cumulative” impact — where, in other words, the new impact is significantly enhanced by already existing environmental effects. The Intervenor simply have not credibly suggested how the relatively minor radiological impact of Section 8 will in fact prove significant even when added to already existing radiological conditions. They have not cast doubt on the FEIS’s conclusion that

the Church Rock Section 8 mining will make only a minor, insignificant addition to overall preexisting radiological impacts.¹²

Overall, the Commission finds that the Presiding Officer sufficiently supported his conclusions on the FEIS cumulative impacts discussion. When he reviewed the Intervenor's cumulative impacts claims, the Presiding Officer already had issued partial initial decisions encompassing a host of issues pertaining to cumulative impacts — air emissions, liquid waste disposal, historic preservation, groundwater impacts, and other issues. He had, in short, already given in-depth consideration to many of the arguments underlying the Intervenor's cumulative impacts claims. His cumulative impacts discussion, accordingly, refers back to several of these earlier decisions, none of which the Commission found cause to overturn or even to seriously question. We find no basis for reversal of the Presiding Officer's technical findings.¹³ We again stress, however, that the possibility of interregional cumulative impacts remains to be dealt with in the resumed hearing.

3. *Radiological Information in DEIS*

More extensive background information on Church Rock's existing radiological characteristics was provided in the DEIS, referenced by the Presiding Officer. LBP-99-30, 50 NRC at 120. The Intervenor suggests that the Presiding Officer committed "legal error" by finding the FEIS adequate merely "because information omitted from it on cumulative impacts was set forth in the DEIS and in a Staff affidavit." Intervenor's Brief at 48. The Commission disagrees.

First, the Presiding Officer's conclusions do not turn on his references to the DEIS. The Presiding Officer found the FEIS's discussion of cumulative impacts adequate. *See* LBP-99-30, 50 NRC at 120-21 (finding that FEIS adequately treats radiological, groundwater, liquid waste disposal, cultural, and other impacts). While he noted that the DEIS provided a relevant, more detailed assessment of Church Rock background characteristics, he nonetheless concluded that the FEIS sufficiently acknowledges the "existence of elevated levels of radioactivity from previous mining and milling activities near Church Rock." *See id.* at 120 (citing FEIS at 4-72, 4-73, and 4-125).

¹²The Intervenor is correct that even minor impacts may prove significant when considered together with other individually minor impacts. "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. The Presiding Officer's statement that Section 8's impacts are not "the straw that breaks the camel's back" simply reflects his conclusion that the future "small incremental increases" HRI's operations will bring to Section 8 will not add up to a significant cumulative impact when added to the current and past impacts to Section 8. He found Section 8's impacts "acceptable" and insignificant from the perspective of cumulative impacts analysis. *See* LBP-99-30, 50 NRC at 119.

¹³The Intervenor frequently mischaracterize the Presiding Officer's findings. The Presiding Officer never stated, for instance, that "adequate treatment in the License constitutes a sufficient evaluation of cumulative impacts." Intervenor's Brief at 48. While at times he notes applicable license conditions, these references relate to relevant FEIS discussions of Staff-imposed monitoring and other mitigative measures. *See, e.g.*, LBP-99-30, 50 NRC at 120-21 (citing FEIS and earlier Partial Initial Decisions covering liquid waste disposal and cultural resources).

Ideally, the FEIS might have included all of this additional, detailed background data made available in the DEIS. But none of this background data earlier provided in the DEIS casts any doubt on the FEIS's cumulative impacts conclusions. For instance, the DEIS concludes that previous mining and exploration activities at Church Rock "have probably slightly elevated" the area's background radiation levels, a point the FEIS fully recognizes. In some respects, the FEIS provides a greater acknowledgment of the earlier mining's impacts, even though its discussion is more qualitative than quantitative. *See, e.g.*, FEIS at 4-124 (describing legacy of "high incidence of cancer" among mine and mill workers, and high incidence of congenital abnormalities among Navajo babies born to mothers who live near mine waste sites).

In any event, the failure to include in the FEIS the detailed figures on background radiation did not prejudice the Intervenor. This information was made publicly available in the DEIS, was considered by the NRC Staff in its licensing decision, and was used and referenced by the Intervenor in the hearing. Moreover, to the extent that the Presiding Officer's decision in any respect differs from the FEIS, the FEIS is deemed modified by the decision. *See supra* p. 53.

4. Burden of Proof

Lastly, we reject the Intervenor's general claim that the Presiding Officer "erred as a matter of law by shifting the burden of proof on the cumulative impacts" issue to them. Intervenor's Brief at 48. As we already have said in this proceeding, "it is incumbent upon the Intervenor to identify, with some specificity, what the alleged deficiencies are." CLI-99-22, 50 NRC at 13. Throughout this proceeding, the Presiding Officer frequently has rejected the various claims of deficiency raised by the Intervenor. *See, e.g.*, LBP-99-1, 49 NRC 29, 35-36 (1999) (repeatedly finding that Intervenor has "incorrectly" or "erroneously" read FEIS discussions of liquid waste disposal issues and that the "FEIS has not been brought . . . into question by the arguments of the Intervenor"); *see also* CLI-99-22, 50 NRC at 12 & n.33 (affirming Presiding Officer's liquid waste disposal decision, and agreeing that Intervenor's claims about FEIS liquid waste discussion were erroneous). Ultimately, the Presiding Officer was persuaded by "HRI and the Staff, by a preponderance of the evidence," that the FEIS adequately discusses the Section 8 site's impacts and that Section 8 would have "no substantial inimical impact." LBP-99-30, 50 NRC at 110.

The Commission finds no indication that the Presiding Officer misplaced the burden of proof or conducted anything but a fair and unbiased review of Section 8's cumulative impacts. While his discussion at times is a bit short, it is because he relies upon earlier decisions whose extensive findings rejected the same key arguments underlying the Intervenor's cumulative impacts claims. The Presiding

Officer gave sufficient reason — based upon the FEIS and earlier decisions — for his cumulative impacts conclusions.

G. Environmental Justice

1. Introduction

The Intervenors claim that the NRC failed to adequately assess the environmental justice implications of the HRI project. Environmental justice concepts call for each agency to identify and address, as appropriate, any “disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,” 59 Fed. Reg. 7629 (Feb. 16, 1994), *codified at* 3 C.F.R. Part 859 (1995).

Any number of impacts, including health, ecological, or economic, may pose a disproportionately adverse burden upon a minority or Native American population. Environmental justice considerations therefore call for agencies to consider those “interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the proposed agency action.” *See* Council on Environmental Quality’s Guidance Under NEPA (Mar. 1998) (“CEQ Guidance”) (Exhibit 1-C, attached to Intervenors’ Env. Justice Brief, Vol. 1). The NRC integrates environmental justice considerations into its NEPA review process. *See Claiborne*, CLI-98-3, 47 NRC at 100-10. We expect NRC EISs, and presiding officers in adjudications, to inquire whether a proposed project has disparate impacts on “environmental justice” communities and whether and how those impacts may be mitigated. *See id.* at 106-10.

2. FEIS Environmental Justice Discussions

We begin this section by acknowledging that the Presiding Officer’s statements on environmental justice may seem cursory or dismissive of the project’s potential risks. *See* Intervenors’ Brief at 51. The Presiding Officer’s statements, though, reflect merely his *overall* conclusion — and that of the FEIS — that with proper mitigative measures the Section 8 portion of the project is not expected to cause any severe health or environmental impacts to the Church Rock population. Yet, because the Presiding Officer’s statements are brief and do not reference the numerous environmental justice discussions in the FEIS, the Commission adds the following discussion.

Simply put, environmental justice considerations are infused throughout this FEIS. The Commission therefore believes it is appropriate to begin this discussion

by outlining some of the various environmental justice topics addressed in the FEIS.

First, while the FEIS finds that with proper mitigative measures the project is acceptable, it does not fail to reveal potential environmental risks. Both the FEIS as a whole and the particular FEIS section on environmental justice make clear that there are inherent risks involved in ISL mining and that significant geological information for the region has yet to be determined. These risks and unknowns underlie the various Staff-imposed license conditions, requiring HRI to conduct extensive additional testing, analysis, and monitoring.

The FEIS fully discloses, for instance, that “[s]ignificant adverse effects to groundwater quality would result if an excursion (either horizontal or vertical) occurs or if, after routine mining, water quality is not restored.” FEIS at 4-113. It further emphasizes that “[s]uccessful restoration of a production-scale ISL well-field has not previously occurred,” and that “site-specific tests conducted by HRI have not demonstrated that the proposed restoration standards can be achieved at a production scale.” *Id.* Nevertheless, after assessing the risks of horizontal and vertical excursions at Church Rock, the FEIS determines that HRI’s monitoring program should be able both to detect and correct any excursions. *See generally id.* at 4-54 to 4-58. The FEIS thus ultimately concludes that the “previously identified impacts of this project can be mitigated.” *Id.* at 4-60; *see also id.* at 4-60 to 4-63 (outlining mitigative measures to protect groundwater — including well integrity tests, effluent monitoring programs, and a maximum allowable production flow rate). These Staff-imposed mitigative measures will reduce the “likelihood” and “severity” of any adverse impacts. *Id.* at 4-127.

Second, the FEIS outlines special areas of concern involving the Native American population. The FEIS acknowledges that the population near the proposed sites is almost entirely Navajo, and largely lives at a poverty level. *Id.* at 4-112, 3-79, 3-56. Those living in the 50-mile area surrounding the Hydro project comprise, “[b]y nearly any definition,” an “environmental justice population.” *Id.* at 3-79. Approximately 75% of the population within 50 miles of Church Rock is Native American. Within 10 miles of Church Rock, the percentage of Native Americans rises to approximately 97%. *Id.* In 1990, per capita income in the county was under \$10,000. *Id.* at 3-56.

The FEIS provides extensive health data on the Navajo population, obtained from the Indian Health Service (IHSO), including its regional office for New Mexico and Arizona. *See id.* at 3-80 to 3-85. This information indicates that, compared to the general U.S. population, the Navajo population suffers disproportionately from fatal accidents, alcoholism, diabetes, tuberculosis, and pneumonia. *Id.* at 3-83 to 3-85.

Infant mortality also is higher for the Navajo population. *Id.* at 3-80, 3-84, 3-85. Moreover, the FEIS highlights that there is a significantly higher rate of

congenital anomalies among Navajo infants than for U.S. infants generally. *Id.* at 3-84, 3-85. As the FEIS explains:

This difference is noteworthy because there is some evidence to indicate that radiation exposure may be related to the incidence of congenital anomalies. Researchers investigated the birth outcomes of Navajo infants born between 1964 and 1981 at the IHS hospital in Shiprock. The research concluded that there were trends in occurrences of adverse birth outcomes that lend limited support for the hypothesis that adverse genetic outcomes are related to radiation exposure. The associations were weak between unfavorable birth outcomes (including congenital anomalies and stillbirths) and radiation exposure of the parents. The only statistically significant association was identified when the mother lived near uranium mill tailings or mine waste sites. However, when placing these conclusions in context, the researchers state that given the extensive uranium mining operations that have gone on for decades, including radiation exposures at levels greatly exceeding what would be allowed today, the lack of clear evidence for increased risk of adverse outcomes should be reassuring.

FEIS at 3-85 (citations omitted). Thus, while acknowledging that the data are not conclusive, the FEIS nonetheless emphasizes that the high level of congenital abnormalities *may* in fact be the direct result of past uranium mining operations in the area.

The FEIS further discusses this adverse legacy of previous uranium mining in the Church Rock region. This was a time when “miners were exposed to radiation levels greatly exceeding what would be allowed today and were poorly informed of the potential health effects of radon gas.” *Id.* at 3-87. The FEIS duly notes this “long history of uranium mining and milling.” *Id.* at 4-124. It describes how:

The Church Rock facility as proposed would mine an area previously mined by underground mining. . . . Uranium mining was a large employer in the area and many individuals worked in the mining and milling operations. Early mines and mills operated under much less stringent standards than exist today, and this resulted in large exposures to radioactive materials, especially radon and its daughters. The exposures were large enough to result in a high incidence of cancer among workers, and information gathered on these workers resulted in development of risk factors on radon.

In addition, the methods used to mine and mill the uranium (i.e., “conventional” mining) resulted in very large amounts of radioactively and chemically contaminated sands and slimes, also known as tailings. In 1978, the U.S. Congress passed the Uranium Mill Tailings Control Act, which required standards to be developed to control exposures from tailings and clean up past sites of uranium milling.

Id. at 4-124 to 4-125. This site of former underground mining at Church Rock has been decommissioned and the tailings pile is being stabilized. *Id.* at 4-121.

In addition, the FEIS reveals that a United Nuclear Corporation’s uranium mill tailings dam broke in 1979, contaminating the local Rio Puerco River. The dam break released 94 million gallons of tailings liquid and 1100 tons of tailings solids into the Rio Puerco. *Id.* at 4-125. As a result, livestock that drank the river water

were found to have high radionuclide levels. FEIS at 3-86. The contaminated area was later cleaned subject to the standards of the New Mexico Environmental Improvement Division. *Id.* at 4-125.

The FEIS also depicts how some Navajo Indians lack “adequate or reliable wage work to provide for themselves and their family,” and thus must “rely on their livestock and gardens” for subsistence. *See id.* at 3-86. Their sheep, goats, and cattle graze on the land and obtain water from shallow wells on the Rio Puerco. The FEIS identifies the local Navajos’ reliance on agriculture-based activities since these “could introduce exposure pathways . . . that potentially affect a population’s exposure to — and health consequences of — contamination.” *Id.* at 3-85. Accordingly, the models used to predict the project’s radiological impacts “account[] for exposures possible from being outdoors much of the time and for consuming vegetative matter and animals affected by the project.” *Id.* at 4-117, 4-75.

In addition, the FEIS acknowledges that one possible land-use impact may be the “temporary disruption of livestock grazing at project sites.” *Id.* at 4-94. This would “adversely affect Navajo who have grazing permits for the land and rely on livestock as an important economic resource.” *Id.* The FEIS deems these land-use interruptions an environmental justice impact, and calls for appropriate mitigative measures, including providing compensation to grazing rights permittees “for the temporary loss of their grazing permits.” *Id.* at 4-118. These interruptions are expected to be temporary, given the sequential nature of ISL mining operations. *Id.* at 4-92.

One of the most significant environmental and health impacts possible from Section 8 mining may occur if HRI uses surface water discharge as a liquid waste disposal method for Section 8. While this is only a possibility — for HRI has not determined whether it will use surface water discharge and it would need appropriate approvals and permits — the FEIS does not shirk from revealing the potential consequences of this waste disposal method, and its potentially amplified consequences for the local Navajo population. If HRI were to discharge wastewater into surface water, the uranium concentration of the wastewater would exceed NRC regulatory standards. *Id.* at 4-115. As the FEIS explains, “exposures to individuals who drink the [river] water prior to full mixing in the stream could result in an individual dose that exceeds the 1 mSv (100 mrem) limit. Exceeding a regulatory limit is considered a significant adverse effect. This alternative would, therefore, result in a significant environmental justice impact.” *Id.* at 4-116; *see also id.* at 4-87.

The FEIS elaborates further:

The conservative scenario that results in the individual dose is a highly unlikely occurrence because individuals are not likely to drink from the river at the wastewater discharge site. However, the local population is known to drink directly from the Rio Puerco and to water

livestock there. The livestock provide milk and meat for their owners. Because of these subsistence activities, it is possible that individual doses could be much higher to the Navajo population than they would be to another population that did not participate in such subsistence activities. Further, this same stream has elevated background levels of naturally occurring uranium and has been contaminated further by a mill tailings dam break and mine dewatering effluent discharge. Cumulative exposures to the population using the water are an important consideration under NEPA. This alternative must be fully analyzed before receiving further consideration.

Id. at 4-116. Indeed, HRI is not currently authorized to go forward with this waste disposal option. At a minimum, it would have to request and obtain an exemption to our regulatory requirements which would not be a simple proposition. The FEIS fully recognizes that the additional, significant incremental radiation from surface water discharge at Section 8 might combine with existing levels of radiation in the river to cause a significant cumulative impact for the Navajo population. Further technical and environmental analysis would be needed to determine this, if and when HRI ever proposes this liquid waste disposal option.

In addition, the FEIS points out disagreement within the Navajo community over the HRI project. Due to the adverse impacts of former uranium mining activities in the region, the Navajo Nation in 1983 issued a moratorium on uranium mining, renewed by tribal executive order in 1992. *Id.* at 3-87. The FEIS points out, however, that there are conflicts between the Navajo Nation's moratorium and the views of particular Navajo chapters. "Referenda held at the Church Rock and Crownpoint chapters, where the proposed project would be located, supported the HRI proposal despite the moratorium." *Id.* Similarly, while some Navajo organizations have denounced the HRI project, others support it. *Id.* at 3-84. The project does have the secondary benefit of creating jobs in the local community. *Id.* at 5-3 to 5-4; LBP-99-30, 50 NRC at 126-27.

In light of these conflicts, the NRC's role in reviewing the license application has been to determine what health and environmental impacts could result from the project. FEIS at 4-120. The licensing decision, "which will be based on the FEIS, the Safety Evaluation Report, and the hearing record . . . will be the NRC Staff's determination of whether the local community's safety and health can be assured." *Id.* at 4-120.

3. Analysis

The Commission believes that the FEIS sufficiently identified this project's environmental justice implications, at least insofar as Section 8 is concerned. With the exception of the potential radiological impact of surface water discharge, the FEIS concludes that overall cumulative impacts to the local population will be minor, even considering the particular circumstances of the environmental justice population. The Intervenor's arguments do not point to any serious deficiency in

the environmental justice analysis, which, at bottom, is similar to a cumulative impacts analysis but also takes into account relevant features of the minority community.

In this proceeding, the Intervenors have had the opportunity to litigate whether Section 8's radiological, groundwater, and other impacts pose any significant risk of public health or environmental damage. Essentially, the Intervenors' environmental justice arguments — like so many of their NEPA claims — are rooted in these earlier technical arguments raised unsuccessfully before the Presiding Officer. In a series of Partial Initial Decisions, the Presiding Officer considered but rejected their numerous challenges. The Commission, also, has had the opportunity to consider the Intervenors' various claims of adverse impacts, both when we considered their earlier petitions for review and, now, in our review of the Presiding Officer's NEPA decision and the FEIS. We, like the Presiding Officer, have not found the Intervenors' arguments on health and safety and environmental impacts persuasive, at least insofar as Section 8 is concerned.

The Intervenors claim that the FEIS “ignore[s] data showing that poverty, geographic isolation, poor health conditions, and ongoing radiological contamination from earlier uranium mining activities make the Church Rock community especially vulnerable.” *See* Intervenors' Brief at 52. While it is always possible to provide more detail and more analysis, the Commission believes that the FEIS adequately considers the environmental justice population. The reality of adverse impacts from former mining in the region does not require the conclusion that *any* additional increment of radiation from Section 8 is unacceptable, even if negligible in amount. The Intervenors understandably and appropriately focus upon the adverse effects of former mining, but they have not explained why the additional, and expected to be negligible, radiation impact from Section 8 would have any public health and safety significance.¹⁴

The Intervenors would have preferred all manner of additional details, including specific health data on the immediate Church Rock community, to the FEIS's reliance upon information provided by the regional office of the U.S. Indian Health Service. *See* Intervenors' Brief at 53. They do not specify, however, how the absence of additional details makes a crucial difference given the negligible radiological impact of Section 8. Again, the focus of the FEIS is not merely on existing radiological conditions at Section 8, but on whether the Section 8 mining will make an *appreciable* additional impact. The FEIS expressly recognizes that the local population largely lives at a poverty level, suffers disproportionately from various ailments, and may suffer from radiation-caused health effects. The

¹⁴Indeed, the long-term radiological impact from the Section 8 project may in fact prove beneficial because HRI will need to clean up the area to standards needed for decommissioning the site. Some of the areas currently have higher levels of residual radioactivity than would be permitted for decommissioning, and these areas “may be cleaned up as part of the well field decontamination.” FEIS at 4-117.

Intervenors, though, point to no specific facet of the Church Rock population's health that conceivably would alter the FEIS's cumulative impacts/environmental justice conclusions, given the negligible incremental impacts from Church Rock Section 8.

The Intervenors would have liked the Presiding Officer to have required additional mitigative measures, but he found additional measures unnecessary. The FEIS and HRI's license already describe a host of protective, mitigative measures, many of which specifically address environmental justice considerations. *See generally* FEIS at 4-113 to 4-119; *see also id.* at 4-105, 4-14, 4-61 to 4-63, 4-66, 4-87 to 4-88, 4-95, 4-111 to 4-112. In none of their various presentations have the Intervenors persuasively depicted a need for additional mitigative measures.

In conclusory fashion, the Intervenors call for "mitigative measures for the cumulative effects of potential HRI radiological emission with the ongoing ambient radiation doses to the public in the vicinity of the Church Rock mine." Intervenors' Brief at 54. But the radiological doses from operations at Section 8 are a small fraction of allowable exposures to the public. The Intervenors simply have not raised a credible argument on how this additional increment would be of health and safety significance to the area.

The Intervenors also fault the Presiding Officer for saying that the Church Rock community lives more than 4 miles from Section 8. *See id.* Instead, the Intervenors state, there are at least 350 residents located within 2½ miles of Section 8. The Intervenors, however, do not provide any reason for why this distinction would be material. Moreover, the FEIS itself acknowledges that 575 people live within about 3 miles of Church Rock. FEIS at 4-83. Modeling for radiological dose considerations was based upon the nearest residence downwind and on residences located on lease areas. Again, the Intervenors have not pointed to any error of consequence in either the Presiding Officer's decision or the FEIS.¹⁵

Environmental justice issues, however, "may arise at any step of the NEPA process and agencies should consider these issues at each and every step of the process, as appropriate." *See* CEQ Guidance at 8. When the hearing resumes to consider the potential impacts to the other project sites, the topics must include environmental justice, as well as the full panoply of technical and environmental issues raised by ISL mining at those sites. If, for example, the Intervenors

¹⁵ The Presiding Officer's statements, however, can at times be confusing. At one point he states that there is "[no] reason to consider, in the context of a new project, the highly regrettable negative impacts of prior projects." LBP-99-30, 50 NRC at 123. We agree with the Intervenors that the statement, read literally, is wrong. There certainly *could* be major cumulative impacts if new impacts either add appreciably to or otherwise significantly enhance the adverse effects of existing conditions. Both the FEIS and the Presiding Officer properly considered this issue in their cumulative impacts and environmental justice analyses. The Commission believes the Presiding Officer merely meant to emphasize that the FEIS need not extensively recount all details of the historical mining in the region. This likely was the case since, immediately following his statement, he cites to a page in the Intervenors' brief that called for a more "descriptive summary" of past mining.

raise their concerns about the adequacy of the secondary groundwater restoration standard for uranium, they will also be able to cite any specific health data pertinent to whether the local Navajo population — because of existing local health conditions — might face an amplified health risk to kidneys or other organs due to the restoration standard provided in the license.

In conclusion, the Commission finds the FEIS's discussion on environmental impacts adequate. One can always flyspeck an FEIS to come up with more specifics and more areas of discussion that conceivably could have been included. There is no "standard formula for how environmental justice issues should be identified or addressed." CEQ Guidance at 8. Here, though, the FEIS comes to grips with all important considerations at the Section 8 sites. The Commission finds that the FEIS: (1) sufficiently highlights issues pertinent to the environmental justice community, including those factors that might amplify the environmental effects of the project, (2) recommends appropriate mitigative measures, and (3) provides adequate information for effective public participation.¹⁶

IV. CONCLUSION

For the foregoing reasons, the Commission *grants review* of LBP-99-40 and *reverses* the decision. The Commission *remands* the proceeding to the Presiding Officer for further proceedings, which shall resume approximately 6 months from the date of this Order. The Commission *grants review* of the NEPA/environmental justice portions of LBP-99-30, and *affirms* the decision.

¹⁶In CLI-00-12, 52 NRC 1 (2000), the Commission declined to review the Presiding Officer's technical findings on the groundwater impacts to Church Rock Section 8. We did, however, note that the Presiding Officer in three places in LBP-99-30 had referred to an aquifer exemption HRI obtained in 1989 for Section 8, but that a recent Tenth Circuit decision leaves unresolved the ultimate validity of that aquifer exemption. We therefore asked the parties to address the significance to this case of the 1989 exemption and its now yet-unresolved status. Our careful review of the parties' responses leads us to conclude, with the NRC Staff, that "the technical merits of LBP-99-30's groundwater findings . . . would be the same, regardless of whether or not HRI's Section 8 is covered by a current valid aquifer exemption." NRC Staff's Answers (Aug. 9, 2000) at 8. While it seems that the Presiding Officer sought to buttress his findings with the occasional reference to the Section 8 aquifer exemption, we agree with the NRC Staff that the Presiding Officer's conclusions on groundwater and drinking water hinged not upon the aquifer exemption, but upon a long list of technical reasons given for rejecting the Intervenor's claims. *See generally* NRC Staff's Answers at 8-13; LBP-99-30, 50 NRC at 101-09. We therefore concur that the Presiding Officer's "technical groundwater findings would not be undermined should the 1989 aquifer exemption prove not to be valid." NRC Staff's Answers at 7. Quite apart from the existence — or not — of the Section 8 aquifer exemption, the Presiding Officer was satisfied that "the underground geology of this area and the monitoring program that HRI will implement carefully attend to the protection of drinking water." *See* LBP-99-30, 50 NRC at 109.

Of course, HRI's license requires it to obtain all necessary permits from the appropriate regulatory authorities. *See* License Condition 9.14. If HRI proves unable to obtain a current valid aquifer exemption and Underground Injection Control (UIC) permit for Section 8, no mining can take place in Section 8.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 31st day of January 2001.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
Edward McGaffigan, Jr.
Jeffrey S. Merrifield

In the Matter of

Docket No. 40-7580-MLA

FANSTEEL, INC.
(Muskogee, Oklahoma Facility)

January 31, 2001

ORDER

Fansteel, Inc., the State of Oklahoma, and NRC Staff have filed a Joint Motion to Dismiss Fansteel's appeal of the Presiding Officer's decision to grant Oklahoma a hearing on Fansteel's application for a license amendment relating to the decommissioning of its Muskogee, Oklahoma site. *See* LBP-99-47, 50 NRC 409 (1999).

According to the parties' motion, the proposed Restricted Release Decommissioning Plan, on which Oklahoma had requested a hearing, is no longer under consideration by the NRC Staff. The parties indicate that they have also filed a joint motion to dismiss the informal hearing with the Atomic Safety Licensing Board.

These developments render Fansteel's appeal moot, and the appeal is, accordingly, dismissed.

IT IS SO ORDERED

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 31st day of January 2001.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Charles Bechhoefer, Chairman
Dr. Richard F. Cole
Dr. Charles N. Kelber

In the Matter of

Docket No. 50-423-LA-3
(ASLBP No. 00-771-01-LA-R)
(Facility Operating
License NPF-49)

NORTHEAST NUCLEAR ENERGY
COMPANY
(Millstone Nuclear Power Station,
Unit 3)

January 17, 2001

The Atomic Safety and Licensing Board denies a motion by Intervenors to reopen the record on one of their contentions, based on newly discovered information, on the ground that the information as presented would not likely have changed the result reached by the Licensing Board in LBP-00-26.

RULES OF PRACTICE: REOPENING OF PROCEEDINGS

Motions to reopen the record on a particular contention are governed by 10 C.F.R. § 2.734, which requires, *inter alia*, that the motion must demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially.

RULES OF PRACTICE: DISCOVERY (UPDATING OF RESPONSES)

The obligation to update discovery responses (*see* 10 C.F.R. § 2.740(e)(2)) ends upon issuance by the Licensing Board of a ruling terminating that aspect of the proceeding to which the discovery relates.

**MEMORANDUM AND ORDER
(Denying Motion to Reopen Record on Contention 4)**

On December 18, 2000, the Connecticut Coalition Against Millstone (CCAM) and the Long Island Coalition Against Millstone (CAM), Intervenors in this proceeding (collectively referenced as CCAM/CAM), filed a motion requesting that the Licensing Board reopen the record with respect to CCAM/CAM Contention 4, and to vacate its decision in LBP-00-26 on that contention, based on new information which, they assert, would have caused the Board to reach a different result with respect to that contention. Northeast Nuclear Energy Co. (NNECO or Licensee) and the NRC Staff oppose such motion. For reasons set forth below, we deny that motion and decline to reopen the record on Contention 4.

I. BACKGROUND

CCAM/CAM Contention 4, as admitted in LBP-00-2, 51 NRC 25, 32, 34 (2000), reads as follows:

“Undue and Unnecessary Risk to Worker and Public Health and Safety”

The new set of administrative controls trades reliance on physical protection for administrative controls to an extent that poses an undue and unnecessary risk of a criticality accident, particularly due to the fact that the licensee has a history of not being able to adhere to administrative controls with respect, *inter alia*, to spent fuel pool configuration.

The Licensing Board, in accord with procedures spelled out in 10 C.F.R. Part 2, Subpart K, and based on affidavits or declarations filed by all parties, together with oral argument, concluded that

NNECO has demonstrated that it can adhere to administrative controls, with adequate safety margin and defense-in-depth, without posing an undue or unnecessary risk to plant workers or the public. The conservatively estimated error rate of fuel assembly misplacement of 1 in 3000 moves (or once every 9 years) is not high enough to characterize such an event as likely. Safety margins are maintained by the regulatory requirement that rack reactivity be less than 0.95, while the use of soluble boron adds defense-in-depth against an accidental criticality. Criticality calculations have used conservative assumptions, thereby introducing additional

margin. We find, therefore, that, relative to Contention 4, there is no genuine and substantial dispute of fact or law that can only be resolved with sufficient accuracy by the introduction of evidence in an evidentiary hearing. As such, based on the record before us, we dispose of this contention as being resolved in favor of NNECO.

LBP-00-26, 52 NRC 181, 200 (2000).

CCAM/CAM on November 13, 2000, filed a petition for Commission review of LBP-00-26, including specifically our ruling on Contention 4. NNECO and the NRC Staff have opposed Commission review, claiming our ruling in LBP-00-26 was appropriate (including, *inter alia*, our ruling on Contention 4). The Commission has not yet ruled on CCAM/CAM's petition. The license amendments authorized by LBP-00-26 have, however, been issued by the NRC Staff (including a particular condition sought by CCAM/CAM, not directly pertinent to the matter here under consideration, on which all parties had agreed).

During the pendency of CCAM/CAM's appeal, however, CCAM/CAM became aware of further information they assert bears on their Contention 4. Specifically, during the week of November 24, 2000, NNECO advised the Staff that it "could not confirm the location of two fuel pins" at the Millstone Unit 1 spent fuel pool. Such disclosure was assertedly made public by NRC in the NRC Weekly Information Report for the Week Ending November 24, 2000. (CCAM/CAM have attached a copy of the pertinent excerpt from that report to its Motion to Reopen.) Further, CCAM/CAM advise that such disclosure was made public in the NRC Daily Events Report as Event No. 37596 dated December 14, 2000, a copy of which was also attached to the Motion. CCAM/CAM further note that the missing fuel pins would have properly been included among events set forth in NNECO's April 4, 2000 response to one of CCAM/CAM's March 21, 2000 interrogatories (adding that NNECO should have updated the interrogatory response as of the time it became aware of the new information).

Although the proceeding is currently pending before the Commission, CCAM/CAM filed their motion to reopen the record, and to vacate the decision in LBP-00-26, with the Board, with a copy of the motion included in CCAM/CAM's motion dated December 19, 2000, requesting that the Commission stay our decision in LBP-00-26 pending review of the motion to reopen. In CLI-00-25, 52 NRC 355, 357 n.3 (2000), the Commission noted that, during the appeal, the Board lacked jurisdiction to entertain the motion, that the motion should properly have been filed with the Commission, but it expressly remanded the motion to reopen to the Board for our consideration in the first instance, "given the Board's greater familiarity with the record in this case."

On January 8, 2001, NNECO and the Staff each filed responses in opposition to CCAM/CAM's motion, based on both procedural and substantive considerations. We turn now to our ruling on these matters.

II. LICENSING BOARD RULING ON CCAM/CAM MOTION

Under NRC rules, motions to reopen the record are governed by 10 C.F.R. § 2.734, which reads in pertinent part:

- (a) A motion to reopen a closed record to consider additional evidence will not be granted unless the following criteria are satisfied:
- (1) The motion must be timely
 - (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. . . .

At the outset, NNECO would have us reject the motion out of hand, for lack of any supporting affidavit (irrespective of any health and safety consequences that might be entailed). The Staff likewise would have us take into account the lack of an affidavit as one reason for denying the motion. Although we recognize the importance of the affidavit requirement, we decline to premise our decision in this particular instance on the lack thereof, for two reasons. First, the Commission is well aware of the affidavit requirement and that CCAM/CAM's motion failed to include an affidavit. When it remanded the motion to us for our consideration, given our "greater familiarity with the record," it would appear that the Commission intended that we consider the merits of the motion and not be swayed solely by its apparent procedural inadequacies. Second, the matters giving rise to the motion are matters of public record (copies of which have been provided in full to the Board and the Commission.) An affidavit to the effect that CCAM/CAM's representative discovered the reports that, in her opinion, bore on the contention that CCAM/CAM previously raised, would consist of little more than unnecessary paperwork. (In contrast, the demonstration of the significance of the new information and the likelihood of its causing a change in the result we previously reached might well have benefitted from the affidavit of a competent witness.)

Turning to the first reopening criterion — timeliness — the NRC Staff states that the motion was timely filed, and NNECO raises no timeliness objection. We find the motion to have been timely filed — i.e., within 3 weeks of the initial public availability of the information on which it is based.

Turning to the second criterion — significance of the issue — no party contests the safety significance of the issue to which the motion is addressed — i.e., NNECO's ability and willingness to carry out administrative controls relative to the spent fuel pool (SFP). Nor do we.

It is the third criterion — ability of the new information to cause us to reach a result different from that we previously reached — that NNECO and the Staff assert mandates that the motion must fail.

As described by NNECO, the facts giving rise to their identification of the missing fuel pins (or rods)¹ are as follows. NNECO first disclosed its findings to the NRC in mid-November, as reflected in the NRC Weekly Information Report specifically cited by the Intervenor. Subsequently, on December 14, 2000, NNECO made a report on this matter to the NRC in accordance with 10 C.F.R. § 20.2201(a)(1)(ii) (Event Number 37596). To summarize the event, as outlined in the affidavit of Joseph J. Parillo, a Senior Engineer in the Nuclear Analysis Section at the Millstone facility, attached to NNECO's response to the motion to reopen, the two fuel pins at issue were removed from a Millstone Unit 1 fuel assembly in October 1972 to allow General Electric (the fuel vendor) to examine the fuel to study the effects on the fuel of a saltwater intrusion into the reactor vessel at Unit 1. After the examination, the two pins could not be reinserted into the fuel assembly. The records indicate that the two pins were subsequently stored separately from the fuel assembly in a storage container in the Millstone Unit 1 SFP.

As part of the ongoing decommissioning of Unit 1, NNECO has been conducting records reviews for material in the Unit 1 SFP. During those reviews, the Licensee identified a discrepancy in the paperwork: NNECO records do not account for the two pins beginning in September 1980. Upon discovery of the discrepancy, NNECO began further records reviews and examinations in the Unit 1 SFP. Those reviews are currently ongoing with full knowledge and oversight of the NRC Staff. Contrary to the implications in the Motion to Reopen, there appears to have been no bad faith or attempt to conceal the issue by NNECO. NNECO promptly made the December 14 event notification to the NRC related to the unaccounted-for licensed material. Indeed, CCAM/CAM, in their motion, acknowledge that NNECO disclosed the event to the NRC during the week of November 24, 2000, and that they have access to the NRC documentation.²

It is CCAM/CAM's position that, had the Board been made aware during the proceeding that NNECO is unable to account for two highly radioactive spent fuel rods at Unit 1, we would have been unable to reach the conclusion we did relative to Contention 4 (see quotation above) and that we would have been legally compelled to commence a full evidentiary hearing on that contention. We disagree.

¹Fuel rods (or, equivalently, pins) are elements of fuel assemblies. In boiling water reactors such as Millstone Unit 1, assemblies are typically denoted by the size of the array of fuel rods: a 15 × 15 assembly (sometimes called a bundle) consists of 225 rods.

²We express no opinion, however, as to whether NNECO's reporting of this incident to the NRC satisfactorily corresponded to reporting requirements applicable to NNECO's license for Unit 1.

CCAM/CAM themselves provide no basis, other than the opinion of counsel, to support this conclusion. To the extent that the missing fuel rods reflect on the ability of NNECO to carry out administrative controls — a major premise of Contention 4 — the issue is clearly one that would have been encompassed within the scope of the contention. We may also presume, although there is no evidence to this effect before us, that some of the NNECO personnel involved in the Unit 1 event may also be involved in the operation of Unit 3. But the event occurred long before the shutdown and later restart of Unit 3 (1996-1998). In LBP-00-26, we determined, on the basis of Staff affidavits together with Licensee statements of intentions, that NNECO's managerial capability and willingness to carry out administrative controls had dramatically improved following the restart.³ As reiterated by the Staff in opposing the motion to reopen,⁴ there is nothing in the new information concerning Millstone Unit 1 that would change the conclusions previously expressed by their witnesses, upon which we relied in part,⁵ to the effect that, following restart, NNECO had demonstrated its ability to carry out administrative controls adequately. Further, as emphasized both by NNECO (Affidavit of Joseph J. Parillo, dated January 5, 2001, ¶ 15) and the Staff (Affidavit of Laurence I. Kopp and Anthony C. Attard, dated January 8, 2001, ¶ 6), the misplacement of two fuel rods at Millstone Unit 3 would pose no criticality concern.

In its motion, CCAM/CAM also claim that NNECO should have updated its discovery response at the time it became aware of the missing fuel rods. In this instance, however, the obligation to update discovery responses (*see* 10 C.F.R. § 2.740(e)(2)) ended upon issuance by the Licensing Board of its ruling terminating that aspect of the proceeding to which the discovery related. Because NNECO apparently did not become aware of the missing fuel rods until November 2000, and because our decision in LBP-00-26 was issued on October 26, 2000, NNECO was not required to update its discovery responses at the time it became aware of the new information.

III. CONCLUSION

For the foregoing reasons, CCAM/CAM have not established a sufficient basis for us to conclude that, had the Millstone Unit 1 information been before us, we would have determined that an evidentiary hearing on Contention 4 was

³We note, however, that, in accord with general NRC rules, there was no opportunity for public participation in the Millstone Unit 3 restart decision. Following approval by the Commission, the Staff authorized restart.

⁴Affidavit of James C. Linville, Jr., dated January 8, 2001, ¶ 5; Affidavit of Antone C. Cerne, Jr., dated January 8, 2001, ¶ 4.

⁵LBP-00-26, 52 NRC at 199-200 & n.51.

warranted. For that reason, CCAM/CAM's December 18, 2000 motion to reopen the record is hereby *denied*.⁶

IT IS SO ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Charles Bechhoefer, Chairman
ADMINISTRATIVE JUDGE

Dr. Richard F. Cole
ADMINISTRATIVE JUDGE

Dr. Charles N. Kelber
ADMINISTRATIVE JUDGE

Rockville, Maryland
January 17, 2001

[Copies of this Memorandum and Order have this date been transmitted by e-mail to counsel for each of the parties.]

⁶On January 16, 2001, CCAM/CAM moved for permission to respond to NNECO's January 8, 2001 filing in opposition to the Motion to Reopen. The Licensing Board hereby *denies* this motion. We note that the major point raised by NNECO was the lack of any affidavit — a requirement that we have found unnecessary with respect to the particular motion before us. CCAM/CAM may, of course, file a petition for reconsideration of this Memorandum and Order. *See* 10 C.F.R. § 2.771. Consideration of particular matters relevant to the incident at Millstone Unit 1 would be within our remanded jurisdiction, although other related matters might not be. Such a petition must be filed by January 29, 2001.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Thomas S. Moore, Presiding Officer
Thomas D. Murphy, Special Assistant

In the Matter of

Docket No. 40-7580-MLA
(ASLBP No. 00-772-01-MLA)

FANSTEEL, INC.
(Muskogee, Oklahoma Facility)

January 31, 2001

MEMORANDUM AND ORDER
(Terminating Proceeding)

In LBP-99-47, 50 NRC 409 (1999), the Presiding Officer granted the request of the State of Oklahoma (State) for an informal Subpart L proceeding on the application of Fansteel, Inc. (Fansteel) to amend its materials license. Fansteel's license amendment request seeks agency approval for both the construction of a permanent, onsite, abovegrade, radioactive waste disposal cell at its facility located near Muskogee, Oklahoma, and restricted-release decommissioning of the disposal site pursuant to 10 C.F.R. § 20.1403.

Shortly after the Presiding Officer granted the State's hearing request, the NRC Staff recommended to the Presiding Officer, with the concurrence of Fansteel and the State, that the proceeding be held in abeyance while the Staff completed its safety and environmental review of the Fansteel license amendment application. In a January 13, 2000 order, the Presiding Officer directed that the case be held in abeyance and it remains in that status today. While the proceeding was suspended, Fansteel, on May 9, 2000, requested the Staff to discontinue review of Fansteel's Restricted Release Decommissioning Plan — the primary subject of its license amendment application — in order to allow Fansteel time to explore other

possible disposal options. In response to the Fansteel request, the Staff, on July 25, 2000, notified Fansteel that it would suspend its review only until November 1, 2000, by which time Fansteel must request the Staff to continue its review or the Staff would cancel the licensing action and Fansteel would be required to file a new, current license amendment application. Fansteel did not request the Staff to continue its review and the Staff discontinued its consideration of the Fansteel license amendment application.

On January 2, 2001, Fansteel, the State, and the NRC Staff filed a joint motion to dismiss the license amendment proceeding. Because Fansteel has abandoned its license amendment application, there is no longer any basis for the proceeding. Accordingly, the joint motion to dismiss the proceeding is granted and the proceeding is *terminated*.

It is so ORDERED.

By the Presiding Officer

Thomas S. Moore
ADMINISTRATIVE JUDGE

Rockville, Maryland
January 31, 2001

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of

Docket No. 72-22-ISFSI
(ASLBP No. 97-732-02-ISFSI)

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage
Installation)

January 31, 2001

In this 10 C.F.R. Part 72 proceeding concerning the application of Private Fuel Storage, L.L.C. (PFS), for a license to construct and operate an independent spent fuel storage installation (ISFSI) on the reservation of the Skull Valley Band of Goshute Indians in Skull Valley, Utah, the Licensing Board (1) finds admissible certain portions of Intervenor State of Utah's request for a late-filed contention modification contesting a PFS request for an exemption from the deterministic seismic hazards analysis requirements of Part 72 in favor of a probabilistic methodology; and (2) pursuant to 10 C.F.R. §§ 2.718(i), 2.730(f), refers its admissibility rulings to the Commission and certifies to the Commission the question whether the State exemption request challenges are litigable in this adjudicatory proceeding.

RULES OF PRACTICE: NONTIMELY SUBMISSION OF
CONTENTIONS (GOOD CAUSE FOR DELAY)

To justify a presiding officer's consideration of the "merits" of a late-filed contention, i.e., whether the contention fulfills the admissibility standards specified in 10 C.F.R. § 2.714, a party must demonstrate that a balancing of

the five factors set forth in section 2.714(a)(1)(i)-(v) supports acceptance of the petition. The first and foremost factor in this appraisal is whether good cause exists that will excuse the late-filing of the contention. *See Commonwealth Edison Co.* (Braidwood Nuclear Power Station, Units 1 and 2), CLI-86-8, 23 NRC 241, 244 (1986). And relevant to the evaluation of that factor, the good cause element has two components that impact on our assessment of the timeliness of a contention's filing: (1) when was sufficient information reasonably available to support the submission of the late-filed contention; and (2) once the information was available, how long did it take for the contention admission request to be prepared and filed. *See LBP-99-3*, 49 NRC 40, 46-48 (assessing late-filing factors relative to petition to intervene), *aff'd*, CLI-99-10, 49 NRC 318 (1999).

RULES OF PRACTICE: NONTIMELY SUBMISSION OF CONTENTIONS (BALANCING OF 10 C.F.R. § 2.714(a)(1) CRITERIA)

Relative to the other four factors, in the absence of good cause there must be a compelling showing on the four remaining elements, of which factors two and four — availability of other means to protect the petitioner's interest and extent of representation of petitioner's interest by other parties — are to be given less weight than factors three and five — assistance in developing a strong record and broadening the issues/delaying the proceeding. *See Braidwood*, CLI-86-8, 23 NRC at 244-45.

ADJUDICATORY BOARDS: AUTHORITY OVER STAFF ACTION

LICENSING BOARD/PRESIDING OFFICER: REVIEW OF NRC STAFF'S ACTIONS

It is a well-established principle relative to safety-related matters, such as are implicated here, that the adequacy of the application, not the adequacy of the Staff's review or evaluation, e.g., its SER, is the focus for a proper contention. 54 Fed. Reg. 33,168, 33,171 (1989).

ADJUDICATORY BOARDS: AUTHORITY OVER STAFF ACTION

LICENSING BOARD/PRESIDING OFFICER: REVIEW OF NRC STAFF'S ACTIONS

A significant concern underlying the presumption against challenges to Staff review efforts was expressed by the Commission in *Curators of the University of Missouri*, CLI-95-1, 41 NRC 71, 121-22 (1995), when it observed:

[E]ven assuming *arguendo* that Staff did conduct an insufficient review, a denial of a meritorious application on that ground would be grossly unfair — punishing the applicant for an error by Staff. The subject of the litigation in this proceeding is the [applicant's] entitlement to the license amendments, not the adequacy of the Staff's review of those amendments.

Thus, this “Staff review” principle seems intended to ensure that, as a general matter, so long as the Applicant provides appropriate justification for its request, notwithstanding any Staff actions, the sufficiency of the licensing request will not be impaired.

RULES OF PRACTICE: CONTENTIONS (PLEADING IMPERFECTIONS)

Technical perfection is not an essential element of contention pleading. *See Houston Lighting and Power Co.* (South Texas Project, Units 1 and 2), ALAB-549, 9 NRC 644, 649 (1979).

MEMORANDUM AND ORDER (Rulings on Admissibility of Late-Filed Modification of Contention Utah L, Geotechnical, Basis 2; Referring Rulings and Certifying Question Regarding Admissibility)

With its pending November 9, 2000 request, Intervenor State of Utah (State) seeks the late-filed modification of basis two to contention Utah L, Geotechnical, so as to permit it “to address the NRC Staff’s position that [applicant Private Fuel Storage, L.L.C. (PFS)] should be granted the exemption it requested from [10 C.F.R.] Part 72 to allow the use of a [probabilistic seismic hazards analysis (PSHA)] methodology with a 2,000 year return period instead of a [deterministic seismic hazards analysis (DSHA)] required by Part 72.” [State] Request for Admission of Late-Filed Modification to Basis 2 of Contention Utah L (Nov. 9, 2000) at 1 [hereinafter November 2000 State Request]. Both PFS and the Staff oppose this request, declaring that the Board should dismiss it because the State has failed to comply with the late-filing and/or substantive admissibility requirements of 10 C.F.R. § 2.714(a)(1), (b), (d), or, alternatively, certify to the Commission the question whether State challenges to the PFS exemption should be considered in this adjudicatory proceeding.

Although we find certain portions of the State’s proposed revisions are sufficient under the late-filing and contention admission criteria of section 2.714 to provide the State with further litigable issues relative to contention Utah L, pursuant to 10 C.F.R. §§ 2.718(i), 2.730(f), we refer our rulings regarding the admissibility of the State’s contention Utah L additions and certify to the

Commission the question whether the State challenges should be cognizable in this proceeding. We take this action because this matter involves an applicant request for an exemption from a regulatory requirement, specifically a request that the seismic suitability of the PFS proposed independent spent fuel storage installation (ISFSI) site on the Skull Valley, Utah reservation of the Skull Valley Band of Goshute Indians be assessed probabilistically rather than with the deterministic methodology now required by Part 72.

I. BACKGROUND

Among the contentions the Licensing Board admitted in this proceeding is contention Utah L, Geotechnical, which declares:

The Applicant has not demonstrated the suitability of the proposed ISFSI site because the License Application and [Safety Analysis Report] do not adequately address site and subsurface investigations necessary to determine geologic conditions, potential seismicity, ground motion, soil stability and foundation loading.

LBP-98-7, 47 NRC 142, 253, *reconsideration granted in part and denied in part on other grounds*, LBP-98-10, 47 NRC 288, *aff'd on other grounds*, CLI-98-13, 48 NRC 26 (1998). Further, as set forth in the November 1997 PFS supplemental intervention petition, basis two to contention Utah L provides:

2. **Ground motion.** The site may also be subject to ground motions greater than those anticipated by the Applicant due to spatial variations in ground motion amplitude and duration because of near surface traces of potentially capable faults (the Stansbury and Cedar Mountain faults). Sommerville, P.G., Smith, N.F., Graves, R.W., and Abrahamson, N.A., *Modification of empirical strong ground motion attenuation relations to include the amplitude and duration effects of rupture directivity*, in 68 Seismological Research Letters (No. 1) 199 (1997). Failure to adequately assess ground motion places undue risk on the public and the environment and fails to comply with 10 C.F.R. § 72.102(c).

[State] Contentions on the Construction and Operating License Application by [PFS] for an [ISFSI] (Nov. 23, 1997) at 82-83.

The State's current concern relative to this contention and basis first manifested itself in late April 1999 when the State filed a request with the Board to (1) require PFS to submit an early April 1999 exemption request it had filed with the NRC Staff as a rule waiver petition under 10 C.F.R. § 2.758(b), thereby permitting Board consideration of that request; or (2) permit the State to amend contention Utah L to allow the State to litigate the adequacy of the PFS exemption request in this proceeding. *See* [State] Motion Requiring Applicant to Apply for Rule Waiver Under 10 CFR § 2.758(b) or in the Alternative Amendment to Utah Contention L

(Apr. 30, 1999) at 1-2. In our May 1999 ruling on this State request, we described the exemption in question as follows:

Under the current provisions of 10 C.F.R. Part 72 relating to ISFSI seismic analysis, a facility like that proposed by PFS must meet the same standards applicable to a nuclear power plant under 10 C.F.R. Part 100, Appendix A. *See* 10 C.F.R. § 72.102(f)(1). The Part 100 standard for calculating a safe shutdown or design-basis earthquake uses a deterministic approach. In an April 2, 1999 request directed to the Staff, invoking 10 C.F.R. § 72.7, PFS asked for an exemption from this Part 72 standard to permit the use of a probabilistic seismic hazard analysis along with a consideration of the risk involved to establish the design-basis earthquake at the PFS facility. According to PFS, such a change would have some significance because its own probabilistic analysis indicates that the relative risk at the PFS ISFSI warrants a design-basis earthquake with lower peak ground accelerations than that calculated using the Part 100, Appendix A deterministic methodology.

LBP-99-21, 49 NRC 431, 434 (1999) (citation and footnote omitted). Indeed, this exemption is important to PFS because there is a significant question as to whether PFS can comply with the existing Part 72 standards.

In our May 1999 ruling, noting that section 2.758(b) and the waiver/exemption provisions applicable to 10 C.F.R. Part 72 and other substantive Commission regulatory schemes offered alternative methods for seeking rule waivers or exemptions, we denied the State's request to require the PFS exemption request to be considered under section 2.758(b), finding that vehicle inappropriate under existing agency caselaw given that the PFS "request to use a probabilistic methodology in lieu of the deterministic approach of Part 100 does not raise any questions about regulatory interpretation or application relative to the facts at issue in this proceeding as expressed in contention Utah L." *Id.* at 436 (footnote omitted). Further, noting that "there is a considerable question whether the State has really framed what could be considered a 'contention' relative to the PFS request," *id.* at 437, we denied the State's request to amend contention Utah L, declaring:

the exemption material provided by PFS to the Staff and the State seems to be sufficiently well-defined to provide the information needed to formulate a contention. Considerably less certain, however, is the question of its ripeness. By its nature, an exemption request is atypical. The rules promulgated by the Commission reflect a considered judgment about the requirements necessary to protect the public health and safety and the environment. In contrast to a license application that generally seeks to demonstrate the requester's compliance with agency requirements, an exemption request attempts to show why those regulatory requirements should not be applied to the requester. The latter thus is more problematic in terms of its likely impact on the administrative process. Indeed, the uncertain nature of an exemption request (i.e., that the request may not be granted) counsels that consideration of an exemption-related contention should await Staff action on the exemption. Accordingly, the timeliness of a contention based on an applicant's exemption request is more properly judged from the time of Staff action on the exemption rather than when the exemption request is filed.

Id. at 437-38 (footnote omitted). Additionally, the Board observed that, in the event the question of the amended contention's admissibility became ripe, in order "to countenance an adjudicatory challenge to the PFS exemption petition, the Board would have to invoke its certified question or referred ruling authority under 10 C.F.R. §§ 2.718(i), 2.730(f) to determine whether the Commission wants the Board to consider the contention." *Id.* at 438 (footnote omitted).

The State again sought to have the PFS exemption become a litigable issue in this matter in January 2000, following the Staff's December 15, 1999 issuance of its safety evaluation report (SER) (as revised on January 4, 2000) concerning its analysis of the noncask storage systems at the PFS facility. *See* [State] Request for Admission of Late-Filed Modification to Basis 2 of Contention Utah L (Jan. 26, 2000) at 1 [hereinafter January 2000 State Request]. In our June 2000 decision regarding that State request, we explained by way of background:

Relative to the present State request, we note that while the Part 100, Appendix A, standard applicable under section 72.102(f) remains deterministic, in 1997 the agency amended section 100.23 to permit the optional use of a probabilistic seismic hazards analysis for new 10 C.F.R. Part 52 power reactor early site permit and combined construction permit/operating license applicants. *See* 10 C.F.R. § 100.23(a), (c)-(d); *see also* 61 Fed. Reg. 65,167 (1996). Thereafter, in a 1998 rulemaking plan, *see* SECY-98-126, Rulemaking Plan: Geological and Seismological Characteristics for Siting and Design of Cask [ISFSIs] (June 4, 1998), the Staff proposed and the Commission approved the institution of a rulemaking proceeding to conform the seismic evaluation standard of section 72.102 to the new section 100.23 probabilistic methodology rather than the Part 100, Appendix A deterministic analysis. Moreover, as part of the rulemaking plan, the Staff proposed requiring that ISFSI systems, structures, and components (SSCs) be designed to withstand either a Frequency Category 1 design basis ground motion, with a 1000-year recurrence interval, or a Frequency Category 2 design basis ground motion with a 10,000-year recurrence interval. In its original exemption request, PFS submitted its design basis ground motion based on a 1000-year interval, but in August 1999 amended its request to substitute a 2000-year interval. Thereafter, in its December 15, 1999 SER, which was received by the State on December 27, 1999, the Staff noted relative to the pending PFS exemption request that it proposed to grant the exemption request using a 2000-year return period interval as requested by PFS. *See* [SER] of the Site-Related Aspects of the [PFS] Facility [ISFSI] at 2-45 (Dec. 15, 1999).

LBP-00-15, 51 NRC 313, 315 (2000). There, as here, the State asked that the Board permit it to modify basis two of contention Utah L so as to permit it to challenge the use of a probabilistic approach, in particular the 2000-year return period interval. We declined again, however, on ripeness grounds, noting that the Staff SER continued to list the facility seismic design and the PFS exemption requests "as an 'open item.'" *Id.* at 318.

The State's current attempt to have issues relating to the PFS exemption request admitted into this proceeding came about following the Staff's September 29, 2000 action issuing its final SER for the proposed PFS facility. There, the Staff noted that it had completed its review on the PFS seismic exemption request and

had concluded that “the use of PSHA methodology is acceptable. A 2,000-year return period is acceptable for the seismic design of the PFS Facility.” [SER] Concerning the [PFS] Facility at 2-42 (Sept. 29, 2000). In the November 9, 2000 pleading that is now before the Board, the State declares it

seeks to modify Utah L Basis 2 to require either the use of a PSHA with a return period of 10,000 years, consistent with the NRC Rulemaking Plan, or compliance with the deterministic approach currently required by 10 CFR 72.102(f)(1). In the alternative, if the Board allows the use of a PSHA with a return period of less than 10,000 years, the State seeks to require the use of a return period significantly greater than 2,000 years to avoid placing undue risk on public safety and the environment.

November 2000 State Request at 5. Given the Board’s earlier ruling concerning certification or referral to the Commission, the State requests that if the Board finds it does not have the authority to address the State’s contention amendment, the Board certify or refer the matter to the Commission. *See id.* at 5-6. The State also asserts that a balancing of the late-filing factors of section 2.714(a)(1) supports admission of its amended contention. *See id.* at 14-15. Further, relative to the admissibility of the contention under the standards in section 2.714(b)(2), (d)(2), relying for support on the accompanying declarations of University of Utah geology and geophysics research professor Dr. Walter J. Arabasz and Radioactive Waste Management Associates Senior Associate Dr. Marvin Resnikoff, the State maintains that the Staff’s position supporting the exemption is deficient in that (1) it fails to comply with the 1998 rulemaking plan, which provides only for 1000-year and 10,000-year design basis ground motion return periods, and fails to take into account (a) the radiological consequences of a failed design, or (b) the PFS failure to demonstrate that the PFS facility and its equipment will protect against exceeding the dose limitations of 10 C.F.R. § 72.104(a) or can withstand a 2000-year return period earthquake; (2) the reasons relied upon by the Staff for permitting the 2000-year return period — lower hazard compared to commercial power reactors, Department of Energy (DOE) category-3 facility performance characteristics, an exemption granted to DOE relative to ISFSI storage of Three Mile Island, Unit 2 fuel at DOE’s Idaho National Engineering and Environmental Laboratory (INEEL) — are flawed or not compelling; and (3) a 2000-year return interval does not provide an adequate level of conservatism given the higher Utah new building construction/highway bridge design levels and the 30- to 40-year facility operating period. *See id.* at 6-14.

In response, PFS opposes the State’s late-filed contention admission request arguing that (1) the Board lacks jurisdiction over the PFS exemption request; (2) the State request constitutes an impermissible collateral attack on 10 C.F.R. § 72.7 and other NRC regulations that permit applicants and licensees to seek exemptions, regardless of the provisions included in a rule, or rulemaking plan; and (3) the State has failed to provide an admissible contention supported by

adequate bases. Moreover, according to PFS, because the State has failed to submit an admissible contention, there is no basis for certification or referral to the Commission. See [PFS] Response to [State] Request for Admission of Late-Filed Modification to Basis 2 of Utah Contention L (Nov. 29, 2000) at 5-15 [hereinafter PFS Response]. The Staff, on the other hand, asserts that the Board should certify or refer the State's request to the Commission inasmuch as it seeks to invoke the agency's adjudicatory procedures relative to an exemption request or, alternatively, deny the request as failing to provide a litigable contention. As grounds for denying the State's request, the Staff argues that it (1) seeks improperly to challenge the adequacy of Staff review activities; (2) utilizes provisions of an unadopted rulemaking plan as the basis for challenges to the Staff's technical determinations; and (3) seeks to introduce issue statements by reference to its January 2000 exemption filing, including the seismic qualifications of the facility's Canister Transfer Building (CTB) equipment and assumptions about accident leak rates, "breach hole" and leak hole sizes, and the potential for sabotage events involving specified weapons, that are late-filed and do not meet the section 2.714(a)(1) standards for admission. See NRC Staff's Response to [State] Request for Admission of Late-Filed Modification to Basis 2 of Contention Utah L (Nov. 29, 2000) at 6-13 [hereinafter Staff Response].

II. ANALYSIS

In evaluating the current State request, given our decisions regarding the State's attempts to have the PFS exemption request become the subject of litigation in this proceeding, we start with the premise that, at best, the only relief we can afford the State is a certification or referral to the Commission to ascertain to what degree, if any, the Commission wishes the Board to permit consideration of the exemption request in an adjudicatory context. See LBP-99-21, 49 NRC at 438; LBP-00-15, 51 NRC at 318. We could do this by simply certifying a question regarding the State's motion, without further discussion. As PFS points out, however, unless the State has posited an issue statement regarding the exemption that otherwise would be admissible, such a certification could involve the Commission in dealing with essentially nonlitigable matters, arguably not an efficient or effective use of its time and resources. See PFS Response at 9 (citing *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-86-24, 24 NRC 769, 772 n.3, 774-75 (1986), *aff'd*, *Edelman v. NRC*, 825 F.2d 46 (4th Cir. 1987)); see also Staff Response at 5-6. Accordingly, we turn first to the matter of the admissibility of the State's issue statement relative to the PFS exemption.

A. Admissibility of State Concerns

As we suggested in our first decision on this matter, an initial consideration is to accurately parse from the State's pleading the focus of its concerns relative to the PFS exemption request. From our reading of its current pleading, as well as its prior attempts to have an exemption-related issue statement admitted, the matters in controversy now appear to be as follows:

Relative to the PFS seismic analysis supporting its application and the PFS April 9, 1999 request for an exemption from the requirements of 10 C.F.R. § 72.102(f) to allow PFS to employ a probabilistic rather than a deterministic seismic hazards analysis, PFS should be required either to use a probabilistic methodology with a 10,000-year return period or comply with the existing deterministic analysis requirement of section 72.102(f), or, alternatively, use a return period significantly greater than 2000 years, in that:

1. The requested exemption fails to conform to the SECY-98-126 rulemaking plan scheme, i.e., only 1000-year and 10,000-year return periods are specified for design earthquakes for safety-important SSCs — SSC Category 1 and SSC Category 2, respectively — and any failure of an SSC that exceeds the radiological requirements of 10 C.F.R. § 72.104(a) must be designed for SSC Category 2, without any explanation regarding PFS SSC compliance with section 72.104(a).
2. PFS has failed to show that (a) its facility design will provide adequate protection against exceeding the section 72.104(a) dose limits; and (b) its facility and equipment, specifically the components within the CTB involved in the transfer of the spent fuel canister from a transportation cask to a storage cask, including the proposed single-failure transfer crane, are designed to withstand a 2000-year return period earthquake.
3. The PFS accident evaluation is inadequate because (a) it does not bound the design basis accident DE IV under American National Standards Institute (ANSI)/ANS-57.9-1999; (b) its leakage rate and breach hole assumptions are based on information in NUREG/CR-6487, "Containment Analysis for Type B Packages Used to Transport Various Contents" and NUREG-1617, "Standard Review Plan for Transportation Packages for Nuclear Spent Fuel," which in turn is derived from ANSI standard N14.5 for transportation casks, despite the fact that PFS cannot meet the leak-testing, repair, and maintenance assumptions upon which standard N14.5 is based; and (c) it does not account for beyond design basis accidents involving sabotage using anti-tank devices.
4. The staff's reliance on the reduced radiological hazard of stand-alone ISFSIs as compared to commercial power reactors as justification for granting the PFS exemption is based on incorrect factual and technical assumptions about the PFS facility's mean annual probability of exceeding a safe shutdown earthquake (SSE), and the relationship between the median and mean probabilities for exceeding an SSE for central and eastern United States commercial power reactors and the median and mean probabilities for exceeding an SSE for the PFS facility.
5. In supporting the grant of the exemption based on 2000-year return period, the staff relies upon the DOE standard, DOE-STD-1020-94, and specifically the category-3 facility SSC performance standard that has such a return period, notwithstanding the

fact the staff categorically did not adopt the four-tiered DOE category scheme as part of the Part 72 rulemaking plan.

6. In supporting the grant of the exemption based on the 2000-year return period, the staff relies upon the 1998 exemption granted to DOE for the INEEL ISFSI for the TMI-2 facility fuel, which was discussed in SECY-98-071 (Apr. 8, 1998), even though that grant was based on circumstances not present with the PFS ISFSI, including (a) existing INEEL design standards for a higher risk facility at the ISFSI host site; (b) a settlement agreement with the State of Idaho that required ISFSI construction by the end of 1998; and (c) the use of a peak design basis horizontal acceleration of 0.36 g that was higher than the 2000-year return period value of 0.30 g.
7. Because (a) design levels for new Utah building construction and highway bridges are more stringent; and (b) the PFS return period is based on the twenty-year initial licensing period rather than the proposed thirty to forty year operating period, the 2000-year return period for the PFS facility does not ensure an adequate level of conservatism.

See November 2000 State Request at 6-14; January 2000 State Request at 7-12. We consider each of these aspects of the State's concern relative to the late-filing and admission standards of section 2.714.

1. Balancing Under Section 2.714(a)(1) Late-Filing Standards

Recently, in dealing with the question of whether a late-filed contention should be admitted, we characterized the basic analytical process as follows:

To justify a presiding officer's consideration of the "merits" of a late-filed contention, i.e., whether the contention fulfills the admissibility standards specified in 10 C.F.R. § 2.714, a party must demonstrate that a balancing of the five factors set forth in section 2.714(a)(1)(i)-(v) supports acceptance of the petition. The first and foremost factor in this appraisal is whether good cause exists that will excuse the late-filing of the contention. See *Commonwealth Edison Co.* (Braidwood Nuclear Power Station, Units 1 and 2), CLI-86-8, 23 NRC 241, 244 (1986). And relevant to our evaluation of that factor here, as we have noted previously (albeit in a somewhat different context), the good cause element has two components that impact on our assessment of the timeliness of a contention's filing: (1) when was sufficient information reasonably available to support the submission of the late-filed contention; and (2) once the information was available, how long did it take for the contention admission request to be prepared and filed. See LBP-99-3, 49 NRC 40, 46-48 (assessing late-filing factors relative to petition to intervene), *aff'd*, CLI-99-10, 49 NRC 318 (1999). Moreover, relative to the other four factors, in the absence of good cause there must be a compelling showing on the four remaining elements, of which factors two and four — availability of other means to protect the petitioner's interest and extent of representation of petitioner's interest by other parties — are to be given less weight than factors three and five — assistance in developing a strong record and broadening the issues/delaying the proceeding. See *Braidwood*, CLI-86-8, 23 NRC at 244-45.

LBP-00-27, 52 NRC 216, 220-21 (2000). Although the matters the State now seeks to introduce into this proceeding relate generally to the PFS exemption request, they are not all of the same stripe when it comes to the section 2.714(a)(1) balancing analysis of the late-filing factors, particularly factor one.

With regard to factor one — good cause for late filing — because items four through six set forth above, which challenge the Staff’s rationale for supporting the exemption, were filed within the time allotted by the Board for submitting exemption-related late-filed contentions, *see* Licensing Board Order (Schedule for Filing New or Modified Contentions) (Nov. 1, 2000) at 2 (unpublished), they are timely and thus place the good cause factor on the admissibility side of the section 2.714(a)(1) balance. The same is true for items one and seven, which relate directly to the exemption request and the 2000-year return period endorsed by the Staff relative to that request. In connection with items two and three, however, PFS and the Staff take the position that these matters, in fact, are not associated with the exemption, but rather are a State attempt to introduce issues into the proceeding that it should have contested as part of its initial contentions filing in November 1997 or at some other point significantly before its current filing. *See* PFS Response at 9 n.13; Staff Response at 9-11. We agree with their argument that, although couched in terms of the exemption request, item three raises matters that could have been raised much earlier, regardless of the PSHA return period under consideration or, indeed, whether a deterministic or probabilistic analysis is used. The same cannot be said for item two, which is grounded in the assertion that the CTB “is a Category 1 SSC,” January 2000 State Request at 10, thus tying it, for the purpose of this late-filing analysis, directly to the return period that is at issue relative to the exemption.

Relative to factors two and four — availability of other means and protection of interests by other parties — these two factors support admission of all seven items. In connection with factor three — contribution to a sound record — item one appears to be an argument of counsel, while items two and three are supported by State affiant Resnikoff, and items four through seven are supported by State affiant Arabasz. In connection with the first item, it is not the type that necessarily requires technical support to put factor three in the “admissibility” column, given that it is essentially an assertion that no explanation has been given as to why the regulatory scheme proposed in the rulemaking plan was not appropriate relative to the exemption. *See* LBP-99-7, 49 NRC 124, 128-29 (1999). As to the other six items, one or the other of these possible witnesses has put forth some information, albeit not extensive, in support of each of these concerns.¹ We conclude as to these items that this factor, at best, provides moderate support for contention admissibility. *See* LBP-00-28, 52 NRC 226, 238-39, *reconsideration denied*

¹ At this juncture, neither PFS nor the Staff has seriously challenged the qualifications of Drs. Arabasz or Resnikoff relative to the seismic and radiological dose items their declarations support.

on other grounds, LBP-00-31, 52 NRC 340 (2000), *petition for interlocutory review denied on other grounds*, CLI-01-1, 53 NRC 1 (2001). And relative to factor five — broadening the issues/delaying the proceeding — given the current status of this proceeding in which all safety-related issue discovery is concluded and evidentiary sessions for all remaining admitted safety and environmental contentions are scheduled for July 2001,² including admitted contention Utah L regarding seismic matters not directly related to the exemption controversy, addition of these issues at this point would certainly broaden the matters in controversy and in all likelihood delay the completion of this proceeding to some degree.³

Finally, weighing the support provided for admission by factors one through four, in particular factors one and three, against that afforded by factor five on the inadmissibility side of the balance, we conclude that in this instance, relative to items one, two, and four through seven, the State has met its burden of establishing the admissibility of these late-filed issues. On the other hand, the State has not sustained its burden in connection with item three, which we thus find would not be admissible.

2. Admissibility Under Section 2.714(b), (d) Standards

In LBP-98-7, 47 NRC at 178-81, the Board discussed the various pleading requirements for contentions set forth generally in 10 C.F.R. § 2.714(b), (d), which are applicable to both timely and late-filed issue statements. As they reflect the substantive challenges to the PFS-requested and Staff-endorsed exemption request from compliance with the DSHA requirement of section 72.102(f), below we outline our views regarding the admissibility of items one, two, and four through seven set forth above, relative to those standards.⁴

²Recently, the Staff has brought to the Board's attention certain matters that may lead to a delay regarding some of the issues scheduled to be heard in July 2001. See Jan. 21, 2001 Letter from Sherwin E. Turk, NRC Staff Counsel, to the Licensing Board at 2-3. The Board, however, has not yet made any schedule revisions. Nor does the Board currently contemplate that its consideration of the pending December 30, 2000 PFS dispositive motion regarding admitted contention Utah L will be impacted by the pendency of this certification/referral determination with the Commission.

³We note in this regard that, under the existing schedule for this proceeding, section 2.714(a) factor five is likely to become increasingly significant in relation to the other three non-good cause factors.

⁴Our ruling on the late-filing criteria means we would not need to reach the matter of item three's admissibility under the section 2.714(b), (d) criteria. We note, however, that we would not admit subitem a because it lacks materiality, see LBP-98-7, 47 NRC at 179-80, or subitem c because it impermissibly challenges the Commission's regulations or rulemaking-associated generic determinations, *id.* at 179. We would admit subitem b as raising a genuine material dispute adequate to warrant further inquiry. See [PFS], [SAR for] Private Fuel Storage Facility at 8.2-37 (rev. 17) (leak rate calculation results, performed using ANSI N14.5-1977 equations, are included in HI-STORM storage cask SAR).

a. Item One

For this State concern, a central question posed by both PFS and the Staff is the degree to which the 1998 Staff rulemaking plan, SECY-98-126, and its purported section 72.104(a) dose-limit related, two-return period category scheme can be used as the basis for a contention contesting the PFS exemption request that does not fall into either of those return period categories. Both PFS and the Staff maintain that the rulemaking scheme is essentially irrelevant, given it does not in any way bind the Staff relative to the exemption, thus making this State concern inadmissible as an impermissible challenge to 10 C.F.R. § 72.7, the provision that permits applicants and licensees to seek exemptions from the Part 72 requirements. *See* PFS Response at 10-12; Staff Response at 8. We agree with PFS and the Staff that the rulemaking plan and the regulatory scheme it outlines does not preclude the Staff from allowing PFS to use another return period, such as 2000 years, in connection with the proposed PFS facility. We do not agree, however, that this rulemaking plan has no role to play as the basis for an admissible contention relative to the PFS exemption request. Certainly, its existence creates the reasonable expectation that, as part of the rationale provided in support of the exemption, an explanation will be provided about why the scheme, as set forth in the plan, is not appropriate relative to the exemption. That explanation is, in turn, subject to scrutiny in a properly pled contention. In this instance, because it fulfills the pleading requirements and reflects a genuine material dispute adequate to warrant further inquiry, we would not preclude consideration of item one, as it frames a challenge to the rationale for the 2000-year return period, in connection with any further litigation on the State's exemption challenge.

b. Item Two

In its two subparts, this item reflects somewhat different approaches to challenging the adequacy of the PFS facility design in relation to the exemption. Subitem a is an adjunct to the item one concern that, in light of the explanation given in the Staff rulemaking plan, the technical basis for a 2000-year return period has not been adequately established. As with item one, we would permit it to be part of any further litigation regarding the State's challenge to the exemption. Regarding subitem b, we find it inadmissible as failing properly to challenge the application. Whatever the PFS application may have provided when this concern was first posed in January 2000, the PFS Safety Analysis Report (SAR) has, since at least August 2000, provided that “[t]he overhead bridge crane and the semi-gantry crane are designed to withstand the [PFS facility] design basis ground motion (determined by the PSHA with a 2,000-yr return period, as is the Canister Transfer Building that provides the structural support for the cranes.” [PFS], [SAR for] Private Fuel Storage Facility at 8.2-15 (rev. 17) [hereinafter SAR].

c. *Item Four*

As worded, this item challenges one of the bases given in the Staff's SER analysis of the PFS exemption request. In addition to objecting to any further consideration of item four as irrelevant based on the purported State failure to demonstrate that the selected 2000-year return period earthquake will exceed regulatory limits, *see* PFS Response at 13 & n.20, an argument we deal with below, in concert with the Staff, PFS objects to the admissibility of this item, as well as similarly worded items five and six, as an impermissible attempt to challenge the Staff's review activities, *id.* at 12-13; Staff Response at 7-8.

i. VALIDITY OF STAFF-REVIEW-BASED CONTENTION

It is a well-established principle relative to safety-related matters, such as are implicated here, that the adequacy of the application, not the adequacy of the Staff's review or evaluation, e.g., its SER, is the focus for a proper contention. 54 Fed. Reg. 33,168, 33,171 (1989). And in this instance, for items four through six, the focus as outlined by the State is the Staff's September 2000 SER discussion of the exemption. While this fact alone normally would render these items inadmissible, the circumstances here require additional consideration.

A significant concern underlying this presumption against challenges to Staff review efforts was expressed by the Commission in *Curators of the University of Missouri*, CLI-95-1, 41 NRC 71, 121-22 (1995), when it observed:

[E]ven assuming *arguendo* that Staff did conduct an insufficient review, a denial of a meritorious application on that ground would be grossly unfair — punishing the applicant for an error by Staff. The subject of the litigation in this proceeding is the [applicant's] entitlement to the license amendments, not the adequacy of the Staff's review of those amendments.

Thus, this “Staff review” principle seems intended to ensure that, as a general matter, so long as the Applicant provides appropriate justification for its request, notwithstanding any Staff actions, the sufficiency of the licensing request will not be impaired.

This assumes, however, that the appropriate justification for the Applicant's request is in its licensing submission. In this instance, however, a review of the relevant materials suggests there is some question as to the source of the justification for the 2000-year return period. The PFS SAR now declares that “[i]t was determined that an appropriate design probability for the [PFS facility (PFSF)] is 5×10^{-4} per year or a 2,000-yr return period (PFS letters of April and August 1999).” SAR at 2.6-92 (rev. 9). The citations in support of that statement are, in turn, to letters dated April 2, 1999, and August 24, 1999, from PFS to the Staff. *See id.* at 2.8-7 (rev. 12), 2.8-8 (rev. 16). The April 1999 letter includes an attachment entitled “Request for Exemption to 72.102(f)(1) Seismic Design Requirement for the [PFSF]” that provides support for a 1000-year return period

in which, among other things, there is a discussion of SECY-98-126, the Staff rulemaking plan referenced in item one, and SECY-98-071, the TMI exemption request referenced in item five. See Apr. 2, 1999 Letter from John D. Parkyn, PFS Chairman, to Mark Delligatti, NRC Spent Fuel Project Office, attach. at 4-5. Thereafter, in the August 24, 1999 letter, PFS declares “[b]ased on recent discussions with the NRC, PFS has decided to use a 2,000 year recurrence interval to calculate the PFSF design basis ground motion (Reference 2). This will provide a greater margin of safety than the 1,000 year recurrence interval specified in [the April 1999 exemption request].” Aug. 24, 1999 Letter from John D. Parkyn, PFS Chairman, to NRC Document Control Desk at 1. The “Reference 2” referred to in this letter is, in turn, an August 6, 1999 letter from PFS to the Staff in which PFS recounts that among the items raised by the Staff in an August 4, 1999 phone call was the following:

NRC Comments

1. PFS should consider using a design earthquake that is based on a [PSHA] with a return frequency of 2000 years. Alternatively, PFS could submit additional regulatory and technical basis information to justify the use of a 1000-year period.

* * * *

PFS Response

1. In order to include additional conservatism in the [PFSF] design, PFS will revise the design earthquake to utilize the PSHA approach with a return frequency of 2000 years. A license amendment reflecting this change will be submitted by August 20, 1999. Additionally, the seismic exemption request submitted in [the April 1999 letter] will be revised to state that for additional conservatism PFS has chosen to use a return frequency of 2000 years. A revised seismic exemption request will also be submitted by August 20, 1999.

Aug. 6, 1999 Letter from John L. Donnell, PFS Project Director, to NRC Document Control Desk at 1-2.

As is apparent from the relevant portions of the August 24, 1999 letter quoted above, the PFS justification for adopting the 2000-year return period was a recognition that it was an “additional conservatism.” There is no detailed discussion of reasons, such as accompanied the April 1999 PFS exemption request, thus leaving the Staff’s SER explanation as the only specific enumeration of reasons for adopting the 2000-year return period.⁵ To be sure, in providing that explanation, the Staff relies on two of the elements that are referenced by PFS relative to the 1000-year return period request: the 1998 rulemaking plan and the

⁵ Also provided by PFS with the April 1999 letter was a March 1999 report from Geomatrix Consultants, Inc., entitled “Development of Design Ground Motions for the [PFSF]” that sets forth the calculations establishing the design ground motion response spectra for both 1000-year and 2000-year return period earthquakes. That technical report, however, does not set forth any conclusions about which return period should be used.

TMI spent fuel exemption. But these are supplemented to a significant degree by other matters that were not proffered by PFS in seeking the exemption for either return period, including existing commercial reactor seismic analyses and the DOE categorization scheme for its facilities, items four and five, respectively.

Bearing in mind the general admonition that technical perfection is not an essential element of contention pleading, *see Houston Lighting & Power Co.* (South Texas Project, Units 1 and 2), ALAB-549, 9 NRC 644, 649 (1979), in the context of this exemption request, we would not reject items four and five based solely on the State's reference to the Staff. Moreover, notwithstanding the PFS reference to the TMI ISFSI exemption in its April 1999 1000-year return period exemption request, we would not reject item six based on the State's failure to recite that PFS endorsed this rationale as supporting the 2000-year return period as well. We thus would not consider the State's "Staff review" references as grounds in this instance for rejecting items four through six.

ii. ADMISSIBILITY OF ITEM FOUR

As noted above, PFS also objects to the admission of this concern as lacking an adequate basis because of the State's purported failure to demonstrate that the selected 2000-year return period earthquake will exceed regulatory limits. We find, however, that the Staff's explanation in the rulemaking plan regarding the section 72.104(a)-based rationale for the choice between Frequency Categories 1 and 2, as referenced in the State's request, *see* State November 2000 Request at 3 & n.3, is sufficient in this regard. This item thus would be admissible as reflecting a genuine material dispute adequate to warrant further inquiry.

d. *Item Five*

This concern is inadmissible, PFS declares, because it is footed in the Staff's rulemaking plan, which is not controlling as a standard for judging its exemption request. *See* PFS Response at 13-14. As we indicated in section II.A.2.a above, although we agree that the rulemaking plan does not compel any particular result relative to the PFS exemption request, we disagree that it lacks any relevance as a supporting basis for the State's issue statements. We thus would find this item admissible as reflecting a genuine material dispute adequate to warrant further inquiry.

e. *Item Six*

PFS contests the admissibility of this State concern as both speculative and irrelevant because the issue, it asserts, is not why DOE asked for the exemption but whether the Staff granted it, thereby providing an important precedent for use of a 2000-year return period. *See* PFS Response at 14. We agree that subitem

b regarding settlement negotiations lacks an adequate factual basis so as to be inadmissible, *see* LBP-98-7, 47 NRC at 180, but find that subitems a and c are admissible as reflecting a genuine material dispute adequate to warrant further inquiry.

f. Item Seven

This concern about conservatism relative to new building construction/highway bridge design levels and the PFS facility operating period should not be admitted, according to PFS, because it lacks adequate factual support and fails to recognize the level of conservatism that is inherent in 10 C.F.R. Part 72 and NRC Standard Review Plan guidance based on those regulations. *See* PFS Response at 14-15. In light of the State's detailed exposition of the new building construction/highway bridge seismic design standards, State affiant Arabasz's declaration that these standards "are more stringent" as well as his statements regarding the facility's operating period, State November 2000 Request at 12-13, exh. 1, at 3 (Nov. 9, 2000 Declaration of Dr. Arabasz), and the fact that PFS is seeking an exemption from the existing provisions of Part 72 (and whatever conservatism they embody), we find this item admissible as reflecting a genuine material dispute adequate to warrant further inquiry.

B. Certification to the Commission

Having concluded in section II.A above that certain of the matters the State seeks to raise relative to the PFS exemption request would constitute admissible late-filed issue statements under section 2.714, the question remains as to whether these exemption-related matters should be considered in the context of this adjudicatory proceeding. As we have made clear in our previous rulings, we consider this a matter that can only be resolved by the Commission, leading us to consider certifying to the Commission the question whether the April 1999 PFS exemption request, as modified in August 1999, is an appropriate subject for litigation in the proceeding.

We find certification is warranted in this instance. Seismic qualification is a matter that, under the agency's regulatory program, has a significant role in affording adequate protection of the public health and safety and the environment. Moreover, as the Staff has noted, the PFS facility apparently cannot meet the deterministic seismic qualification standards of the existing 10 C.F.R. § 72.102(f)(1). *See* Staff Response at 2 (PFS analyses indicate that seismic event peak horizontal and vertical acceleration values would exceed proposed PFS facility design values); *see also* November 2000 State Request at 11. It thus seems apparent that resolution of this seismic uncertainty is central to a determination of the technical sufficiency of the PFS application. This alone likely is not sufficient

to warrant certification. Nonetheless, the fact that the technical resolution of this issue is being sought by a request to excuse the Applicant from the agency's current regulatory requirements governing seismic qualification suggests that whether to permit a properly pled challenge to that exemption in this proceeding is a matter the Commission may wish to give early consideration. *Cf.* 10 C.F.R. § 2.758(d). Accordingly, pursuant to 10 C.F.R. § 2.718(i), we certify to the Commission the question whether the State's contention Utah L challenge to the April 1999 PFS seismic exemption request should be litigated in this proceeding, along with a referral of our rulings in section II.A on the admissibility of the items the State has framed in support of its challenge.

III. CONCLUSION

In connection with the April 1999 PFS request for an exemption from the requirements of 10 C.F.R. § 72.102(f)(1) to permit it to use a probabilistic rather than a deterministic seismic hazards analysis for its proposed Skull Valley, Utah ISFSI, as revised in August 1999 to incorporate a 2000-year return period, relative to the State's contention Utah L challenges to that exemption as set forth in section II.A above, the Board finds that item three is not admissible under a balancing of the section 2.714(a)(1) late-filing criteria; item two, subitem b, and item six, subitem b, are inadmissible as failing to meet the section 2.714(b) admissibility criteria; and item one, item two subitem a, item four, item five, item six, subitems a and c, and item seven are admissible as establishing a genuine material dispute adequate to warrant further inquiry. Additionally, in accordance with 10 C.F.R. §§ 2.718(i), 2.730(f), we refer our rulings in section II.A above on the admissibility of the items the State has framed in support of its challenge and certify to the Commission the question whether the State's contention Utah L challenge to the April 1999 PFS seismic exemption request should be litigated in this proceeding.

For the foregoing reasons, it is, this thirty-first day of January 2001, ORDERED that:

1. In accordance with 10 C.F.R. § 2.730(f), the Licensing Board's rulings in section II.A above regarding the admissibility of the State's revised November 9, 2000 contention Utah L challenge to the April 1999 PFS request from the requirements of 10 C.F.R. § 72.102(f)(1), as amended in August 1999 to incorporate a 2000-year return period, are *referred* to the Commission for its consideration and further action, as appropriate; and

2. In accordance with 10 C.F.R. § 2.718(i), the Board *certifies* to the Commission the question whether the State's November 9, 2000 contention Utah L challenge to the April 1999 PFS request from the requirements of 10 C.F.R.

§ 72.102(f)(1), as amended in August 1999 to incorporate a 2000-year return period, should be subject to further litigation in this adjudicatory proceeding.

THE ATOMIC SAFETY AND
LICENSING BOARD⁶

G. Paul Bollwerk, III
ADMINISTRATIVE JUDGE

Dr. Jerry R. Kline
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
January 31, 2001

⁶Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Applicant PFS; (2) Intervenors Skull Valley Band of Goshute Indians, Ohngo Gaudadeh Devia, Confederated Tribes of the Goshute Reservation, Southern Utah Wilderness Alliance, and the State; and (3) the Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

William F. Kane, Director

In the Matter of

Docket No. 030-28641
(License No. 42-23539-01AF)
(Department of the Air Force)
Docket No. 030-29462
(License No. 45-23645-01NA)
(Department of the Navy)
Docket No. 040-08767
(License No. SUC-1380)
(Department of the Army)

U.S. DEPARTMENT OF DEFENSE
USERS OF DEPLETED
URANIUM

January 9, 2001

The Petitioner requested a formal NRC hearing to consider: (1) the revocation of the master DU (depleted uranium) license for the U.S. Department of Defense (DOD) and all services, (2) implementation of substantial fines and consideration of personal criminal liability, (3) formal protection under the whistleblower statutes for himself and all others who are trying to obtain medical care for all DU casualties, and (4) completion of environmental remediation of all DU contamination.

The Director's Decision on this petition was issued on January 9, 2001. The NRC Staff has considered the issues raised by the Petitioner, and has determined that a significant portion of those issues falls outside NRC-regulated activities because this portion relates to military activities outside U.S. territories. With respect to the issues that fall within NRC jurisdiction, the Petitioner does not substantiate any significant health or safety concerns or significant violations of NRC requirements.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

By electronic mail dated June 1, 2000, Doug Rokke, Ph.D. (Petitioner), requested that the U.S. Nuclear Regulatory Commission (NRC) hold a hearing to consider “the revocation of the master DU (depleted uranium) license for the U.S. Department of Defense and all services, implementation of substantial fines, and consideration of personal criminal liability.” As the basis for this request, the Petitioner stated that “the continuing deliberate use of DU munitions during battle and during peacetime is resulting in serious health and environmental consequences.” The Petitioner also requested “formal protection under the ‘whistleblower’ statutes for himself and all others who are trying to obtain medical care for all DU casualties and completion of environmental remediation of all DU contamination.” The NRC Staff accepted this electronic mail as a petition pursuant to section 2.206 of Title 10 of the U.S. *Code of Federal Regulations* (10 C.F.R. § 2.206). The petition may be viewed in the NRC Agencywide Document Access and Management System (ADAMS), under accession number ML003736826.

NRC contacted the Petitioner via telephone on July 25, 2000. During that conversation, the NRC Staff explained the section 2.206 process to the Petitioner, and offered him an opportunity to make a personal presentation of his concerns to the NRC Staff. This telephone conversation was confirmed by a followup letter dated August 4, 2000. The Petitioner did not respond to the letter; therefore, NRC informed him, by letter dated August 24, 2000, that the petition would be evaluated based on the information he had previously submitted.

II. BACKGROUND

The Petitioner stated that he served as a health physicist for the DU team in Operation Desert Storm (ODS) and subsequently as the Department of Defense (DOD)/Army Depleted Uranium Project Director. The Petitioner stated that the recommendations made by the DU team, during ODS, regarding contamination control and medical care, were not followed by DOD. Also with respect to ODS, the Petitioner asserts that DOD failed to satisfy NRC requirements for training and notices to workers, radiation protection programs, and dose assessments for those exposed to DU. The Petitioner stated that he was exposed to DU during ODS, and again in 1994 during the conduct of an experiment at the Nevada Test Site, and alleged that he did not receive a prompt dose assessment for this exposure. The Petitioner stated that he became sick from DU exposure and that

DOD subsequently denied him medical care. The Petitioner also provided general comments about the adverse environmental and health effects of DU.

The NRC has granted licenses to the U.S. Department of the Army (U.S. Army), the U.S. Department of the Navy (U.S. Navy), and the U.S. Department of the Air Force (U.S. Air Force) authorizing, in part, the possession and use of source nuclear material, including DU contained in munitions and armor, in U.S. territories. By letters dated September 8, 2000, the NRC Staff requested the Licensees to respond to the petition. All three Licensees responded and the information provided was considered by the Staff in its evaluation of the petition. The Licensees' responses can be found in the NRC ADAMS under accession numbers ML003767582 (U.S. Air Force), ML003767591 (U.S. Army), ML003769942 (U.S. Army), and ML003767666 (U.S. Navy).

The U.S. Army stated that its regulated activities involving DU have been conducted safely and in compliance with NRC requirements, provided background documentation, and noted that some of the Petitioner's concerns involving ODS are outside NRC jurisdiction. With respect to personnel who were exposed to DU during ODS, the Army stated that they had received appropriate medical followup. The U.S. Air Force stated that it has implemented appropriate radiation protection programs for its DU activities, including appropriate training, and noted that some of the Petitioner's concerns are outside the scope of NRC-licensed activities. The U.S. Navy provided documentation related to DU activities in Vieques, Puerto Rico, and stated that the Navy has provided appropriate personnel training related to DU activities.

III. DISCUSSION

A. Jurisdictional Limitations: Military Operations, Department of Energy Activities, and Medical Treatment

The Petitioner asserted that the military use of DU has caused widespread environmental contamination and serious health effects to military and civilian personnel. The Petitioner specifically referenced the use of DU by the U.S. Armed Forces in ODS, Serbia, Kosovo, Okinawa, and Vieques.

Under the Atomic Energy Act of 1954, as amended,¹ NRC regulates most uses of source material, including DU, in the U.S. and U.S. territories. However, NRC does not regulate most of the activities conducted by the U.S. Department

¹NRC was created as an independent agency by the Energy Reorganization Act of 1974, which abolished the Atomic Energy Commission (AEC), and moved the AEC's regulatory function to NRC.

of Energy (DOE),² including, for example, testing performed at DOE test sites, or battlefield and direct support activities thereof involving source material by the armed forces outside of U.S. territories. Therefore, NRC did not regulate the testing performed at DOE's Nevada Test Site, nor did it regulate the military use of DU munitions in ODS, Serbia, Okinawa, or Kosovo. NRC cannot grant the petition or take any other regulatory action with respect to military activities that it does not regulate.

Furthermore, with respect to the Petitioner's concerns related to the medical care and treatment of those who served in ODS, it is the NRC Staff's understanding that the DOD Office of the Special Assistant for Gulf War Illnesses is the appropriate contact for these matters.

B. Event in Vieques, Puerto Rico, Under NRC Jurisdiction

The Petitioner asserted that the U.S. Navy had caused widespread DU contamination on the island of Vieques, Puerto Rico. The Petitioner further asserted that there were documented adverse health effects associated with the Vieques event, which does fall under NRC jurisdiction.

On February 19, 1999, two U.S. Marine Corps aircraft expended 263 ammunition rounds containing DU on the Live Impact Area (LIA), Atlantic Fleet Weapons Training Facility on the island of Vieques. The LIA is a 2.5-square-mile (6.5-square-kilometer) live-fire training range used by the Navy and Marine Corps for aircraft, ship, and amphibious assault exercises. The area where the DU munitions were fired was isolated to a portion of the LIA called the North Convoy Site. The U.S. Navy's NRC Master Materials License, which regulates such activities, does not authorize the firing of DU munitions at this range. The incident was identified on March 5, 1999, when a Marine Corps Ordnance Officer reviewed a report of the expended DU ammunition and recognized that the ammunition can only be used during combat. NRC was notified of the incident by the Naval Radiation Safety Committee (NRSC) Executive Secretary that same day.

On March 22 and 23, 2000, NRC conducted an inspection of the Vieques event. The NRSC had concluded that the firing of DU on the LIA was caused by administrative errors; failure to follow established procedures for issuing and receiving ammunition; a lack of awareness of restrictions placed on DU munitions by certain individuals; an overreliance on an automated database system that contained errors in the data; and significant pressure on those directing and

²Except where DOE facilities and activities are subject to the licensing and related regulatory authority of the Commission under section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244), the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3021), the Nuclear Waste Policy Act of 1982 (96 Stat. 2201), and section 3(b)(2) of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (99 Stat. 1842).

supporting the training mission to precisely execute a “time-on-target” training exercise. NRC inspectors agreed with NRSC’s conclusions.

The corrective actions taken by the U.S. Navy to prevent recurrence include: retraining of individuals to follow written procedures for issuing ammunition; issuance of an “All-Points Administrative Message” to all commands associated with the handling, storage, or deployment of all forms of DU ammunition; development of a self-audit checklist to all commands that have DU ammunition deployed; development of training for Marine Corps detachments, to be conducted before deployments; development of new curriculum requirements, for Navy and Marine Corps entry-level training schools, that will emphasize DU ammunition restrictions and hazards; and change of the condition code for DU ammunition in the automated database system from “B” (restricted) to “N” (suspended, use for combat only). A copy of NRC’s inspection report, dated April 19, 2000, is available in ADAMS (ML003767648).

The NRSC had identified the use of DU ammunition at Vieques as a Severity Level IV violation of the Navy’s Master Materials License, specifically, a violation of naval radioactive material permit number 13-00164-L1NP. This permit is issued to the Naval Surface Warfare Center, in Crane, Indiana, and specifies the DU ammunition as war reserve material, deployed only for combat use. Based on the results of this inspection, NRC determined that the NRSC properly identified the violation and appropriately issued a Notice of Violation to the responsible command. NRC Inspection Manual Chapter 2810, “Master Material License Inspection Program,” states that NRC will not take any further enforcement action for Severity Level IV violations by permittees that have already been identified and adequately corrected by the Master Material Licensee’s Radiation Safety Committee. Therefore, no NRC enforcement action was taken.

From May 29 to June 12, 2000, the U.S. Navy performed radiological surveys of the LIA. An NRC inspector accompanied the surveyor during these surveys. The LIA has several target areas simulating airfields, surface-to-air missile sites, convoys, and other type of targets. The surveys conducted by the U.S. Navy, and independently observed by the NRC, concluded that there were no elevated exposure rates or count rates indicative of radioactive contamination on areas of the LIA exclusive of the North Convoy Site, where the DU was fired during the February 19, 1999 incident.

While observing the U.S. Navy survey activities between May 31 and June 12, 2000, the NRC Staff also performed numerous surveys and collected soil samples. Soil samples were collected from the areas where DU penetrators had already been excavated. In addition, soil samples were collected downhill of areas known to have been impacted by the DU penetrators. Soil, vegetation, water, and sediment samples were also collected in areas accessed by the general public and in nearby towns. The purpose was to independently assess the Licensee’s DU recovery performance and to determine whether the surrounding environment and

members of the public had been exposed to DU. The samples were shipped to Oak Ridge Institute for Science and Education (ORISE) in Oak Ridge, Tennessee, for independent analysis.

The NRC Inspection Reports dated July 13, 2000, and September 28, 2000, document the performance and results of the environmental samples taken in June 2000. Copies of these reports are available in ADAMS (ML003767608 and ML003755565). The NRC samples demonstrated that there was no spread of DU contamination to areas outside of the LIA and that contamination from the DU inside the LIA was limited to the soil immediately surrounding the DU penetrators. With the exception of the soil samples taken from holes where the Navy had recovered DU penetrators, neither the direct measurement nor the environmental sample results identified the presence of radioactive materials exceeding those associated with naturally occurring radioactive materials routinely found in the environment. NRC concluded that members of the public outside of the LIA were not exposed to the DU that was fired into the LIA. NRC determined that members of the public could only have received measurable doses from the DU penetrator event if they directly accessed a DU penetrator for extended periods of time. NRC is not aware of anybody who may have directly accessed a DU penetrator. Based on these survey results, NRC has concluded that no member of the public is likely to have received radiation doses above applicable limits. Furthermore, the Staff concludes that the corrective actions implemented by the U.S. Navy are adequate, and that the enforcement action requested by the Petitioner is not warranted.

C. Notification of Workers

The Petitioner makes a general assertion that there is a neglect of DU training and education in the U.S. Armed Forces. The Petitioner claims that this is a violation of NRC regulation 10 C.F.R. § 19.12, "Instructions to Workers."

Routine NRC inspections of licensed DOD activities have not identified general neglect of training and education. As discussed above, the U.S. Navy conducted retraining as part of the corrective actions for the Vieques event. Therefore, further enforcement action as requested by the Petitioner is not warranted.

D. Whistleblower Protection

In his petition, the Petitioner requested formal protection under the "whistleblower" statutes. Discrimination by an NRC licensee against an employee for engaging in protected activities, including filing a section 2.206 petition, is prohibited under 10 C.F.R. § 30.7, "Employee Protection." The Department of Labor (DOL) is the agency from which nuclear workers may seek personal remedies when discrimination has occurred for reporting a concern. For remedies

such as job reinstatement or back pay, a written complaint must be filed with DOL within 180 days of notification of the alleged discriminatory act, clearly outlining the facts and circumstances. During a telephone call on July 25, 2000, the Petitioner was notified by the NRC Staff of his right to file such a complaint with the DOL.

IV. CONCLUSION

The NRC Staff has considered the issues raised by the Petitioner, and has determined that a significant portion of those issues falls outside NRC-regulated activities because this portion relates to military activities outside U.S. territories. With respect to the issues that fall within NRC jurisdiction, the Petitioner does not substantiate any significant health or safety concerns or significant violations of NRC requirements.

Therefore, the Director of the Office of Nuclear Material Safety and Safeguards has determined that the request to hold a hearing to consider the revocation of military licenses authorizing the use of DU, implementation of substantial fines, and consideration of personal criminal liability, should be denied.

As provided in 10 C.F.R. § 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, this Decision will constitute the final action of the Commission 25 days after the date of the Decision unless the Commission, on its own motion, institutes a review of this Decision within that time.

FOR THE NUCLEAR REGULATORY
COMMISSION

William F. Kane, Director
Office of Nuclear Material Safety
and Safeguards

Dated at Rockville, Maryland,
this 9th day of January 2001.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
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)

February 14, 2001

ORDER

In its January 31, 2001 order, the Atomic Safety and Licensing Board certified for the Commission's review the issue of whether Applicant Private Fuel Storage, L.L.C.'s request for exemption from the agency's seismic hazards analysis regulations should be adjudicated. *See* LBP-01-3, 53 NRC 84 (2001). *See* 10 C.F.R. § 2.718(i). The Board also referred to the Commission the Board's holding that Utah's exemption-related issues would be admissible were we to allow the Board to entertain Utah's exemption challenge. *See* 10 C.F.R. § 2.730(f). Consistent with our policy to accept Board certifications and referrals where "early resolution" of issues is desirable, we grant review and set the case for briefing. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-13, 52 NRC 23, 28-29 (2000).

The Applicant, Private Fuel Storage, L.L.C., seeks a license to operate an independent spent fuel storage installation (ISFSI) on the Skull Valley Goshute Indian Reservation in Utah. It has requested an exemption from our regulations requiring ISFSI licensees to meet the same seismic hazards analysis standards

applicable to nuclear power facilities.¹ *See* 10 C.F.R. Part 72. In its September 29, 2000 final Safety Evaluation Report, the NRC Staff found acceptable the alternative seismic analysis proposed by PFS.

The State of Utah contests the exemption request. It seeks to amend Contention Utah L (geotechnical) to encompass the issues raised by PFS's exemption request. The exemption and admissibility questions arise in that context.

The parties should submit briefs as follows:

All parties should submit electronic copies of briefs, with paper copies to follow, by March 2, 2001. The briefs should be no more than twenty pages in length. The briefs should address both the exemption and the admissibility questions.

Reply briefs should be submitted no later than March 12, 2001. Reply briefs should not exceed ten pages in length.

IT IS SO ORDERED.

For the Commission²

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 14th day of February 2001.

¹An ISFSI located west of the Rocky Mountain Front is required to meet the standards applicable to nuclear power facilities found in 10 C.F.R. Part 100, Appendix A. Appendix A calls for the use of a deterministic seismic hazard analysis. In 1997, Part 100 was amended to allow nuclear power reactor licensees to use a probabilistic analysis. *See* 10 C.F.R. § 100.23. The NRC Staff is currently revising Part 72 to conform to this change and allow new ISFSI licensees the option to use a probabilistic analysis. *See* "Rulemaking Plan: Geological and Seismological Characteristics for Siting and Design of Dry Cask Independent Spent Fuel Storage Installations, 10 C.F.R. Part 72," SECY-98-126. The exemption approved by the Staff, however, allows PFS to design the ISFSI to standards that do not conform to either Appendix A or to the proposed rule.

²Commissioner Diaz was not present at the affirmation of this Order. Had he been present, he would have affirmed his prior vote to approve this Order.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
Edward McGaffigan, Jr.
Jeffrey S. Merrifield

In the Matter of

Docket No. 50-400-LA

**CAROLINA POWER & LIGHT
COMPANY
(Shearon Harris Nuclear Power
Plant)**

February 14, 2001

The Commission denies the Intervenor's petition for review of the NRC Staff's no significant hazards consideration determination and issuance of a license amendment for spent fuel pool expansion prior to completion of a related 10 C.F.R. Part 2, Subpart K proceeding. The Commission, however, directs the Staff to provide additional information to enable the Commission to decide whether to take discretionary review of the Staff's action, and directs the Licensee temporarily not to store spent fuel under the license amendment.

**AEA: LICENSING DECISION (IMMEDIATE EFFECTIVENESS);
RIGHT TO HEARING**

**COMMISSION PROCEEDINGS: AMENDMENTS (NO SIGNIFICANT
HAZARDS CONSIDERATION)**

**OPERATING LICENSE AMENDMENTS: NO SIGNIFICANT
HAZARDS CONSIDERATION**

RULES OF PRACTICE: OPERATING LICENSE AMENDMENTS

OPERATING LICENSES: AMENDMENTS

Under the so-called “Sholly Amendment,” the Commission is authorized to issue immediately effective reactor license amendments, “in advance of the holding and completion of any required hearing,” upon a “no significant hazards consideration” determination. *See* Atomic Energy Act § 189a(2)(A), 42 U.S.C. § 2239(a)(2)(A).

**COMMISSION PROCEEDINGS: AMENDMENTS (NO SIGNIFICANT
HAZARDS CONSIDERATION)**

**OPERATING LICENSE AMENDMENTS: NO SIGNIFICANT
HAZARDS CONSIDERATION**

OPERATING LICENSES: AMENDMENTS

RULES OF PRACTICE: OPERATING LICENSE AMENDMENTS

The Staff is authorized to find that a license amendment involves no significant hazards consideration

if operation of the facility in accordance with the proposed amendment would not:

- (1) [i]nvolve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) [c]reate the possibility of a new or different kind of accident from any accident previously evaluated; or
- (3) [i]nvolve a significant reduction in a margin of safety.

See 10 C.F.R. § 50.92(c).

RULES OF PRACTICE: APPELLATE REVIEW

Our regulations provide that “[n]o petition or other request for review of or hearing on the staff’s significant hazards consideration determination will be entertained by the Commission.” *See* 10 C.F.R. § 50.58(b)(6).

OPERATING LICENSE AMENDMENTS: NO SIGNIFICANT HAZARDS CONSIDERATION

RULES OF PRACTICE: APPELLATE REVIEW; FINALITY OF DECISIONS

COMMISSION AUTHORITY OVER STAFF ACTIONS

NRC: AUTHORITY

RULES OF PRACTICE: *SUA SPONTE* REVIEW

The NRC Staff's determination on the no significant hazards consideration issue is final, "subject only to the Commission's discretion, on its own initiative, to review the determination." *See* 10 C.F.R. § 50.58(b)(6).

COMMISSION AUTHORITY OVER STAFF ACTION

NRC: SUPERVISORY AUTHORITY

RULES OF PRACTICE: *SUA SPONTE* REVIEW

The Commission has inherent authority to exercise its discretionary supervisory authority to stay the NRC Staff's actions or rescind a license amendment. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-86-12, 24 NRC 1, 4-5 (1986), *rev'd and remanded on other grounds, San Luis Obispo Mothers for Peace v. NRC*, 799 F.2d 1268 (9th Cir. 1986).

OPERATING LICENSE AMENDMENTS: NO SIGNIFICANT HAZARDS CONSIDERATION; DISPOSAL OF SPENT FUEL

In enacting the "Sholly Amendment" in 1983, Congress expressed "special concerns about significant hazards considerations for spent fuel license amendments." *See Diablo Canyon*, CLI-86-12, 24 NRC at 5 n.2. But "what may appear to raise significant hazards consideration at one time may, at some subsequent time and in light of technological advances and further study, be determined to present no significant hazards consideration." *See id.* at 6.

OPERATING LICENSE AMENDMENTS: NO SIGNIFICANT HAZARDS CONSIDERATION; CRITERIA FOR ISSUANCE

In adopting final implementing regulations for the Sholly Amendment, the Commission also provided in the Statement of Considerations particular criteria for making no significant hazards consideration determinations in spent fuel

amendment cases. *See* “Final Procedures and Standards on No Significant Hazards Considerations,” 51 Fed. Reg. 7744, 7753-55 (Mar. 6, 1986).

MEMORANDUM AND ORDER

The Board of Commissioners of Orange County, North Carolina (“Orange County”), has filed a petition for review and request for immediate suspension and stay of the NRC Staff’s no significant hazards consideration (“NSHC”) determination and issuance of a license amendment for spent fuel pool expansion at the Shearon Harris nuclear power plant (“Shearon Harris”). Such a petition is not permitted by our regulations and we reject it summarily. However, to assist us in determining whether we should exercise our discretion and review the NRC Staff’s NSHC determination in this specific case, we seek additional information and views from the Staff, and direct the Licensee temporarily not to store spent fuel under the license amendment pending further Commission order or a licensing board decision approving the amendment.

I. BACKGROUND

This proceeding involves a December 1998 license amendment application filed by Carolina Power & Light Company (“CP&L”) to increase the spent fuel storage capacity at Shearon Harris. The Shearon Harris fuel handling building was originally designed and constructed with four separate storage pools to support four nuclear units. All four spent fuel pools had been constructed by the time three of the four Shearon Harris units were cancelled. Only pools A and B are currently in service. CP&L desires to add rack modules to spent fuel pools C and D and place pool C in service.

The Licensing Board granted Orange County intervenor status to challenge the application, and admitted two of Orange County’s technical contentions. *See* LBP-99-25, 50 NRC 25 (1999). Following an oral argument held pursuant to 10 C.F.R. Part 2, Subpart K, the Board ruled that Orange County had presented no genuine and substantial dispute of fact or law requiring an evidentiary hearing and resolved the merits of the contentions in favor of CP&L. *See* LBP-00-12, 51 NRC 247 (2000). Orange County prematurely sought review of the Board’s order while admissibility of the County’s late-filed environmental contentions was pending, and the Commission denied the request for interlocutory review without prejudice. *See* CLI-00-11, 51 NRC 297 (2000).

The Board subsequently admitted one of Orange County’s environmental contentions (EC-6) and heard oral argument on it on December 7, 2000, after receiving extensive written submissions from all parties. *See* LBP-00-19, 52

NRC 85 (2000). The Board has not yet issued its ruling on the environmental contention. The crux of the contention proposed by Orange County is whether a seven-step accident sequence, culminating in initiation of an exothermic oxidation reaction in spent fuel pools C and D,¹ has “a probability sufficient to provide the beyond-remote-and-speculative ‘trigger’ that is needed to compel preparation of an EIS [environmental impact statement] relative to [the] proposed licensing action.” *See* 52 NRC at 95.

On December 21, 2000, the NRC Staff, pursuant to 10 C.F.R. §§ 50.58(b)(5) and 50.92, issued the license amendment, making it immediately effective on the ground that it raised no significant hazards consideration. The Staff is authorized by our rules to make such a determination

if operation of the facility in accordance with the proposed amendment would not:

- (1) [i]nvolve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) [c]reate the possibility of a new or different kind of accident from any accident previously evaluated; or
- (3) [i]nvolve a significant reduction in a margin of safety.

See 10 C.F.R. § 50.92(c). Our rules implement a statutory directive, the so-called “Sholly Amendment,” authorizing the Commission to issue immediately effective reactor license amendments, “in advance of the holding and completion of any required hearing,” upon a “no significant hazards consideration” determination. *See* Atomic Energy Act § 189a(2)(A), 42 U.S.C. § 2239(a)(2)(A).

On December 22, 2000, Orange County submitted a “petition for review and request for immediate suspension and stay of the NRC staff’s no significant hazards determination and issuance of license amendment for Harris spent fuel pool expansion” (“Orange County’s Petition”). Orange County alleged that the no significant hazards consideration determination fails to satisfy the criteria in 10 C.F.R. § 50.92 and violates the National Environmental Policy Act (“NEPA”). *See* 42 U.S.C. §§ 4321-4347 (2000). A series of motions, responses, and replies ensued. The most recent was the NRC Staff’s January 19 opposition to Orange County’s motion to file a reply.

¹The seven-step sequence is as follows: (1) a degraded core accident; (2) containment failure or bypass; (3) loss of all spent fuel cooling and makeup systems; (4) extreme radiation doses precluding personnel access; (5) inability to restart any pool cooling or makeup systems due to extreme radiation doses; (6) loss of most or all pool water through evaporation; and (7) initiation of an exothermic oxidation reaction in pools C and D.

II. DISCUSSION

A. Orange County's Petition

Our regulations provide that “[n]o petition or other request for review of or hearing on the staff’s significant hazards consideration determination will be entertained by the Commission.” See 10 C.F.R. § 50.58(b)(6). The regulations are quite clear in this regard. Accordingly, we reject Orange County’s petition.

B. Exercise of the Commission’s Discretion

Under our regulations, the Staff’s determination on the no significant hazards consideration (“NSHC”) issue is final, “subject only to the Commission’s discretion, on its own initiative, to review the determination.” See *id.* The Commission has inherent authority to exercise its discretionary supervisory authority to stay the Staff’s actions or rescind the license amendment. See *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-86-12, 24 NRC 1, 4-5 (1986), *rev’d and remanded on other grounds, San Luis Obispo Mothers for Peace v. NRC*, 799 F.2d 1268 (9th Cir. 1986).

In enacting the “Sholly Amendment” in 1983, Congress expressed “special concerns about significant hazards considerations for spent fuel license amendments.” *Diablo Canyon*, CLI-86-12, 24 NRC at 5 n.2. But “what may appear to raise significant hazards consideration at one time may, at some subsequent time and in light of technological advances and further study, be determined to present no significant hazards consideration.” *Id.* at 6. The Commission, in response to the stated congressional concern for spent fuel pools, obtained comment, used an outside contractor evaluation, and considered Staff recommendations on how to apply proposed rule criteria to spent fuel pool amendment cases. As a result of this process, in adopting final implementing regulations for the Sholly Amendment, the Commission also provided in the Statement of Considerations particular criteria for making NSHC determinations in spent fuel amendment cases.²

The NRC Staff’s final NSHC determination and assessment of comments in this particular case do not appear to reference explicitly the specific spent fuel pool criteria as such, although information relevant to the criteria is identifiable in the SER. The Staff’s NSHC determination also does not explicitly reference one of Orange County’s comments on the then-proposed NSHC finding — i.e., the County’s expression of concern about a severe accident scenario (whose probability the Licensing Board currently is assessing under the rubric of NEPA).

² See “Final Procedures and Standards on No Significant Hazards Considerations,” 51 Fed. Reg. 7744, 7753-55 (Mar. 6, 1986).

Before deciding whether the Staff's NSHC determination requires further action by the Commission under its discretionary powers, therefore, we request additional information and views from the NRC Staff. Accordingly, we direct the Staff, within 14 days of the date of this Order, to file a brief addressing the 1986 NSHC criteria, the severe accident question, and any other aspect of the NSHC determination that, in the Staff's judgment, would benefit from elaboration. The Commission would be particularly interested in a summary of any quantitative data that underlie the Staff's NSHC determinations on accident probability, accident consequences, and margins of safety. Thus far, the Staff understandably has taken the position that it need file no merits pleading, as Orange County's petition for Commission review was unauthorized by our rules. Both Orange County and CP&L already have filed substantive briefs on the no significant hazards consideration issue. We will entertain no further filings on this issue from any party other than the NRC Staff.

To preserve the status quo while we consider the Staff's brief, we direct CP&L to store no spent fuel under the license amendment, pending a further order of the Commission or a licensing board decision approving the amendment, whichever comes sooner. *See* 10 C.F.R. § 2.764. CP&L may continue necessary prestorage activities should it so choose.

IT IS SO ORDERED.

For the Commission³

ANDREW L. BATES for
ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 14th day of February 2001.

³ Commissioner Diaz was not present at the affirmation of this Order. Had he been present, he would have affirmed his prior vote to approve this Order.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judge:

Charles Bechhoefer, Presiding Officer

In the Matter of

**Docket Nos. 50-333-LT
50-286-LT
(consolidated)
(ASLBP No. 01-785-02-LT)**

**POWER AUTHORITY OF THE
STATE OF NEW YORK and
ENERGY NUCLEAR FITZPATRICK LLC,
ENERGY NUCLEAR INDIAN
POINT 3 LLC, and
ENERGY NUCLEAR OPERATIONS, INC.
(James A. FitzPatrick Nuclear Power
Plant; Indian Point, Unit 3)**

February 5, 2001

The Presiding Officer in a license-transfer proceeding subject to the procedures set forth in 10 C.F.R. Part 2, Subpart M, approves portions of a proposed contention based on proprietary information and sets filing schedules for position papers and testimony for that contention.

RULES OF PRACTICE: CONTENTIONS

Where information founding a contention does not, because of its proprietary status, become available to an intervenor until after the time for filing contentions generally has elapsed, good cause for late filing, within the meaning of 10 C.F.R. § 2.1308(b), would be demonstrated, assuming the contention is filed shortly after the information becomes available.

TECHNICAL ISSUES DISCUSSED

The following technical issues are discussed: Capacity factor, Submission of cost-and-revenue estimates by newly formed entities, Supplemental funding.

MEMORANDUM AND ORDER (CAN's Revised Contention on Financial Qualifications)

On January 10, 2001, the Citizens Awareness Network (CAN) submitted a revised contention on financial qualifications, as authorized by the Commission in CLI-00-22.¹ On January 24, 2001, the Licensees (Power Authority of the State of New York (PASNY), Entergy Nuclear FitzPatrick LLC (ENF), Entergy Nuclear Indian Point 3 LLC (ENIP), and Entergy Nuclear Operations, Inc.) filed their response, opposing admission of the entire proposed contention.² On January 31, 2001, CAN filed a reply.³

For the reasons set forth, the Presiding Officer admits portions of the proposed contention, subject to the qualifications set forth below. Further, schedules for filings on this contention are set forth, all leading to an oral hearing already scheduled for March 13, 2001.

I. BACKGROUND

The Commission, in its Memorandum and Order of November 27, 2000, CLI-00-22, 52 NRC 266 (2000), granted the request for a hearing submitted by, *inter alia*, the Citizens Awareness Network (CAN), and the Town of Cortlandt together with the Hendrick Hudson School District (collectively, Cortlandt). In doing so, it found each of those organizations to have standing and to have each submitted at least one acceptable contention. The Commission also approved transfer of the hearing responsibilities in this proceeding to a Presiding Officer, the undersigned having been selected, with responsibility for the final decision remaining with the Commission.

¹ Citizens Awareness Network, Inc.'s Revised Contention on Financial Qualifications Issue in the License Transfers for James A. FitzPatrick and Indian Point Unit 3 Nuclear Power Stations per Commission Memorandum & Order, November 27, 2000, dated January 10, 2001 [CAN Revised Contention]. On January 23, 2001, CAN submitted errata to its proposed contention, consisting largely of typographical errors or corrected references. In evaluating this contention, the Presiding Officer will consider the corrected version of the contention.

² NYPA/Entergy Companies' Response to Citizens Awareness Network, Inc.'s Revised Contention on Financial Qualifications, dated January 24, 2001 [Licensees' Response].

³ Citizens Awareness Network, Inc.'s Reply to NYPA/Entergy Companies' Response to CAN's Revised Contention on Financial Qualifications, dated January 31, 2001 [CAN Reply].

Subsequently, Cortlandt withdrew from the proceeding, and the contention it solely sponsored (hereinafter Issue 1, concerning “Joint and Several Liability,” approved in CLI-00-22, 52 NRC at 296-97) was thus dismissed. *See* Memorandum and Order (Approving Withdrawal of Cortlandt/Hendrick Hudson School District), LBP-00-34, 52 NRC 361 (2000). Cortlandt additionally, however, proposed another contention (hereinafter Issue 3, concerning “revenue shortfalls”) that was approved in CLI-00-22, 52 NRC at 300, subject to further specification based on proprietary data (to which Cortlandt previously had not had access).⁴ CAN also proposed a similar issue as a portion of its “Baseline Funding Issue,” which the Commission likewise approved subject to further specification based on proprietary data. Cortlandt and CAN were each authorized to submit a revised financial qualifications issue based on “revenue shortfalls,” following their access to the proprietary data.

Cortlandt, of course, has withdrawn from the proceeding. CAN, however, on January 10, 2001, timely (in accord with the schedule I previously set) submitted its revised financial qualifications issue following its access to the proprietary data. I turn now to the acceptability of its proposed issue (hereinafter referenced as Issue 3).⁵

II. ISSUE 3

As submitted by CAN, Issue 3 reads as follows:

The license transfer applications do not provide adequate financial assurance for the safe operation of FitzPatrick and Indian Point 3 because the applications do not demonstrate an appropriate margin between anticipated operating costs and revenue projections, and the Entergy applicants do not provide evidence of access to sufficient reserve funding.

In support of this claim, CAN (through an expert witness) sets forth both general and specific scenarios in which, it claims, the Licensees’ funding may be projected as being deficient. For example, CAN generally references the possibility of lengthy outages at either or both reactors as influencing the financial ability of the Licensees to operate the reactors successfully, i.e., at a profit. Further, it claims that the revenue projections are based on flawed assumptions regarding prices for power in the Northeast’s new deregulated markets. Finally, CAN claims that the uncertain cost-and-revenue projections, minimal projected

⁴The other contention approved by the Commission (Issue 2) was sponsored by the Nuclear Generation Employees Association (NGEA) as well as by CAN. It remains an issue in this proceeding, albeit being sponsored solely by CAN.

⁵Although proposed Contention 3 (including its bases) references proprietary data to some extent, this Memorandum and Order is intended not to reveal any such data and thus may be released publicly.

profit margins, and shared responsibilities for the facilities and fuel payments make continued operation of the reactors financially dependent upon each other.

In further support of its claim, CAN sets forth five specific reasons (designated as in CAN's contention):

- (A) the property tax agreements with local municipalities are not considered in cost projections;
- (B) the revenue projections are based on unreasonable assumptions — in particular, the projected average annual capacity factor of 85% for each reactor is not supported by the operating histories of either reactor;
- (C) the revenue projections are not adequate to cover common increases in operating costs — as supported by its expert's declaration, the anticipated annual operating costs are on the low end of those common in the nuclear industry, and because operation and maintenance costs in his opinion can reasonably be expected to increase by 15% or more annually, potentially for years at a time, the Licensees' projections for both reactors — FitzPatrick and Indian Point 3 — must be analyzed for both increased operating expenses and decreased capacity factors;
- (D) the supplemental funding available to the Licensees (assertedly, credit arrangements with two other Entergy subsidiaries) does not provide adequate financial assurance to protect the public and worker health and safety; specifically, according to CAN's expert, the credit arrangements would only be able to support a limited outage at a single facility or a slightly longer outage time between the two reactors (both less than 1 year⁶), whereas, in the past 15 years, at least twenty-three nuclear power plants have been shut down for a year or longer (with the recent outage at Indian Point 2 exceeding the duration that either reactor involved here could survive); and
- (E) the Licensees' market revenue projections have not been evaluated (presumably by the NRC Staff) to determine whether their assumptions about market prices are reasonable; market factors in the market areas for each reactor could introduce significant uncertainty and prevent the companies from meeting their revenue requirements, thereby undermining the Licensees' ability to offer adequate financial assurance. In particular, CAN asserts that the 5-year revenue projections submitted by the Licensees are inadequate in light of the regulatory requirement set forth in 10 C.F.R. § 50.33(f)(2) that Licensees provide estimated operating costs "for the period of the license."

⁶The precise number of months asserted by CAN is being omitted because of its proprietary content.

III. RESPONSE OF LICENSEES

In their response dated January 24, 2001, the Licensees claim that the entire contention should be rejected. To substantiate this claim, they pose what they regard as several premises of the Commission's ruling in CLI-00-22 that, in their view, affect the matters on which a revised contention may be based. They then proceed to assert that the five aspects of the revised contention fail to satisfy one or more of these premises and accordingly claim that the issues either "(1) are not based on the proprietary information of the Entergy Companies, or (2) are new issues that could have been raised in CAN's Petition but were not, or (3) fail to meet the requirements for the adoption of issues in Subpart M proceedings."⁷

The premises set forth by the Licensees are (1) that the only issues admissible are those arising from the Entergy Companies' proprietary information made available to CAN pursuant to CLI-00-22; and (2) the issues would need to meet the admissibility requirements for Subpart M proceedings, as set forth in 10 C.F.R. § 2.1306(b)(2). With respect to CAN's five specific issues, the Licensees assert that (A) estimated costs associated with the Entergy Companies' property tax agreements with local municipalities (although marginally less than the costs cited in CAN's proposed contention) were included in the Entergy Companies' cost projections; (B) CAN's challenge to the Entergy Companies' 85% capacity factor assumption should be rejected as untimely; (C) CAN's challenges to ENF's and ENIP's proposed operating costs are vague and speculative; (D) CAN's challenges to the Entergy Companies' supplemental funding have been previously rejected by the Commission and either fail to rely on proprietary information or are erroneous; and (E) CAN's challenges to the Entergy Companies' market projections do not rely on proprietary information and raise no admissible contention.

Further, the Licensees read CAN's petition as raising certain other issues and seeking relief apart from the question of admissibility of particular issues. They deem the other allegations in CAN's revised contention as failing to raise an issue warranting adjudication. Specifically, they claim that CAN's challenge to the use of 5-year economic projections is impermissible and untimely and that CAN's proposed license conditions should be rejected, as being both irrelevant (because not relating to the financial qualifications issue) and premature (given their view that CAN has not raised any admissible issues).

IV. CAN'S REPLY

In its timely reply, which is backed by the declaration of its expert witness, CAN challenges almost all of the Licensees' assertions, demonstrating (in its

⁷Licensees' Response, dated January 24, 2001, at 4.

view) the relevance of all of its claims to the issue authorized by CLI-00-22. Further, it claims why, contrary to the Licensees' claims, the issue should not be considered late-filed but, rather, should be evaluated under standards for timely filed issues, as set forth at 10 C.F.R. § 2.1306(c)(3). It adds, however, that its issues also satisfy the late-filed standards set forth in 10 C.F.R. § 2.1308(b)(2).

V. ANALYSIS

In determining the acceptability of this proposed issue or contention, I differ in certain respects from the premises that the Licensees read as incorporated into CLI-00-22. In particular, I believe that the Commission perceived access to proprietary data as necessary to formulate a contention challenging the cost-and-revenue projections of the Licensees, but not requiring that proprietary data be actually incorporated into the contention itself. Although certain aspects of the contention could perhaps have been formulated earlier on the basis of nonproprietary information, the Intervenor could not have been able to formulate the entire issue or to have determined whether certain of its claims incorporated therein are meaningful without at least having had access to the proprietary data. In CAN's words,

[t]he issues CAN raised which were not based directly on proprietary information were pertinent either (1) because their full significance could not be ascertained independently of the proprietary information that was only recently provided to CAN and its supporting expert, Edward A. Smeloff; or (2) because the non-proprietary information is necessary to understand whether the proprietary information provides reasonable financial assurance to warrant approval of the applications.⁸

In that connection, although the Licensees would portray the issue as five separate issues, I interpret CAN as posing a single issue with five subparts or bases. Further, along the same line, where the nonproprietary bases of the issue are being considered, the Commission did not limit the issue's bases to information arising after the time when information supporting the proposed contention was being submitted. The issue sanctioned by CLI-00-22 seeks to create a complete picture of the alleged potential revenue shortfall, without regard to the precise minute that the separate bases may have become available to CAN. True, CLI-00-22 does not permit litigation of issues that the Commission has already rejected. But it also does not contemplate a characterization of all asserted facts as falling within the parameters of such rejected issues, particularly where, as here, the same facts may undergird an essentially different issue. Moreover, because the issue relies in part on certain information existing at the time issues were first defined,

⁸ CAN Reply, dated January 31, 2001, at 3-4.

combining that information with later-arising or later-available information does not convert the particular aspects of the issue based on preexisting information as late-filed issues that are subject to the more stringent acceptance criteria (*see* 10 C.F.R. § 2.1308(b)) applicable to such issues.

I note that, under 10 C.F.R. Part 2, Subpart G, any issues submitted after the initial filing date for contentions would be considered late-filed. *See, e.g., Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235 (1996). But the appearance of information for the first time in a document not available when contentions initially were to be filed would satisfy the “good cause for delay” aspect of the late-filed contention criteria, assuming the proposed contention was filed shortly after the information became available. *Id.* at 255; *but cf. Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1045, 1048 (1983) (unavailability of licensing-related document does not establish good cause for late filing of a contention if information was publicly available early enough to provide the basis for the timely filing of that contention).

Here, under 10 C.F.R. Part 2, Subpart M, similar criteria might govern, absent Commission direction to the contrary. According to CAN, however, the Commission in CLI-00-22 has so directed. The Commission noted that CAN had not had access to the proprietary information it needed to formulate its issue with sufficient particularity, and it set a schedule (which has been modified to some degree by the Presiding Officer) for filing, using “usual specificity requirements.” CLI-00-22, 52 NRC at 300. CAN timely submitted its issue under that revised schedule. In the circumstances, therefore, CAN’s proposed issue should be, and is being, evaluated under standards of 10 C.F.R. § 2.1306(c)(3) applicable to timely submitted issues.⁹

(A) Turning first to the subissues raised by CAN and challenged by the Licensees, the first — consideration of property-tax agreements or payments in lieu of taxes to local municipalities — appears to have only minimal impact on the adequacy of the revenue projections. The Licensees assert that payments in lieu of taxes were projected as an estimated expense in the initial transfer application, and the actual payment amounts (which were not revealed until November 15, 2000, and December 4, 2000, respectively) were only marginally greater than those estimated. The payment amounts, which will affect the adequacy of projected revenues and hence the overall contention, will only affect the adequacy of revenue projections in a minimal way. Thus, this subissue does not warrant separate adjudication, although the bottom-line payment amounts must be considered in assessing the overall adequacy of revenue-and-cost projections.

⁹I note, however, that CAN has addressed the criteria for late-filed issues and, in the opinion of the Presiding Officer, has also satisfied those standards for the issues that are being admitted.

(B) On the other hand, the second subissue — the unreasonableness of several of the assumptions relied upon by the Licensees and the failure of the Licensees to provide estimates for the life of the licenses (rather than the 5 years in fact projected by the Licensees) — creates two issues worthy of litigation.

(i) The first concerns the validity of the capacity factor assumed by the Licensees. CAN, backed by the declaration of its expert witness, claims that the capacity factor (85%) is significantly higher than has in fact been achieved for either reactor in the past (for the years 1994-1999, 52.3% for Indian Point 3, and 80.7% for FitzPatrick). It further asserts that no more than a 75% capacity factor should be assumed and, at that level, neither reactor could operate profitably. (CAN cites proprietary information demonstrating significant consequences to the Licensees if the 85% capacity factor is not achieved.)

The Licensees oppose this issue as being late-filed because, they claim, the capacity factors for each reactor, both achieved in the past and projected for the future, were known at the time of the license-transfer application. Although that may be so, the margin of profit that the Licensees need to achieve to satisfy their license-transfer obligations, along with penalties that may be incurred by the Licensees should such capacity factors not be achieved, was not known nor could have been known by CAN prior to its access to the proprietary data. The penalties facing ENF and ENIP for not achieving the 85% capacity factor are particularly pertinent, for without the proprietary data, CAN could not have known whether achieving a particular capacity factor made any difference with respect to ENF's or ENIP's obligations with respect to license-transfer contracts — an essential ingredient of any approved issue or contention. *See* 10 C.F.R. § 2.1306(b)(2)(iv). That being so, CAN could not have set forth this issue with adequate specificity at the time its issues were initially being formulated. I hereby accept for litigation this aspect of Contention 3.

(ii) The second aspect of Subpart (B) — whether the Licensees should be required to submit estimates for receipts and operating costs over the life of the license rather than for only 5 years — parallels a portion of the issue set forth as part (E) of this issue. Both issues pose a legal question that is suitable for litigation. Under 10 C.F.R. § 50.33(f)(2), an applicant for an operating license (including organizations such as ENF and ENIP) must submit “information that demonstrates the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated operation costs *for the period of the license*” (emphasis supplied). The section goes on to require that an applicant submit “estimates for total annual operating costs for each of the first five years of operation of the facility.” In addition, a “newly-formed entity organized for the primary purpose of . . . operating a facility” must include certain additional information (10 C.F.R. § 50.33(f)(3)), and the Commission may request such a newly formed entity to submit additional or more-detailed information, including “information regarding a licensee’s ability to continue the conduct of the activities

authorized by the license.’’ 10 C.F.R. § 50.33(f)(4). CAN asserts that, under the foregoing criteria, ENF and ENIP should be required to file estimates of total operating costs for the remaining authorized years of each of the licenses under review. (CAN acknowledges that ENF and ENIP have filed the requisite 5-year cost-and-revenue projections with their license applications.) CAN regards ENF and ENIP as newly formed entities organized primarily for operating the reactors in question and thus subject to additional filing requirements.

In contrast, the Licensees claim that CAN’s challenge to the use of 5-year economic projections is impermissible and untimely. The Licensees portray CAN’s challenge as an impermissible attack on NRC regulations. They also would reject it as untimely in that, in their view, it did not require access to proprietary information to formulate.

The regulation, itself, appears to support the view advanced by CAN, particularly since ENF and ENIP appear to be newly formed entities organized primarily for operating the reactors in question. As support for its interpretation of the rules, CAN cites the Commission’s decision in an earlier license-transfer case, *North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201 (1999), to the effect that

Section 50.33(f)(2) nowhere declares that the proffering of 5-year projections will, *per se*, prove adequate in any and all cases. To the contrary, the rule contains a “safety-valve” provision explicitly reserving the possibility that, in particular circumstances, and on a case-by-case basis, additional protections may be necessary. *See* 10 C.F.R. § 50.33(f)(4) (to ensure adequate funds for safe operation, NRC may require “more detailed or additional information” if appropriate). As we detail below, [the Intervenor] is entitled to argue that *this case* calls for additional financial qualification measures beyond 5-year projections and that the Applicants therefore have not met their burden under section 50.33(f)(2) to satisfy Commission financial qualification requirements.

49 NRC at 220.

It is clear that, as formulated, this aspect of Issue B, as well as Issue E, does not constitute an attack on the rule, but only on the Licensees’ (and perhaps the Staff’s) interpretation of the rule. As such, the issue is admissible. As for timeliness, the proprietary data appear to have provided CAN with a rationale for seeking cost-and-revenue projections for more than the prescribed 5-year period. Without such a rationale, based on penalties and other costs that could be incurred beyond the 5-year period, in a period of deregulation (*see* Smeloff declaration dated January 10, 2001, ¶ 20), CAN could not have asserted a meaningful contention

on this subject without resort to the proprietary data. Thus, I am admitting this legal issue for litigation.¹⁰

(C) This subpart of Issue 3, which asserts that the Licensees' cost-and-revenue projections are not adequate to cover common increases in operating costs, is premised upon Mr. Smeloff's declaration that the operation and maintenance cost projections submitted with the applications are on the low end of those common in the nuclear industry, that those costs can reasonably be expected to increase by 15% or more annually, potentially for years at a time (greater than specified by the Licensees) and, accordingly, that the Licensees' projections must be analyzed for increased operating expenses and decreased capacity factors (as outlined under Issue (B)(i).) CAN further faults the Staff for not including a projected 15% increase in revenues and costs in its SER analysis. (Tangentially, CAN also here reiterates its claim that the cost-and-revenue projections must be analyzed for the life of the license, rather than for 5 years — a claim that we have accepted as a legal issue and will not repeat in this context.)

In response, the Licensees characterize the issue as vague and speculative. Particularly with respect to the 15% increase, the Licensees assert that it is premised "purely on unsupported speculation by Mr. Smeloff"¹¹ and that he provides no basis for his 15% increase claim. Specifically, they fault Mr. Smeloff for not analyzing the past cost-and-revenue experiences of the two plants in question.

In its reply, CAN disputes both the Licensees' evaluation of Mr. Smeloff's expertise and its lack-of-basis assertions for the 15% increase. Specifically, CAN emphasizes the relevance of Mr. Smeloff's experience to the legitimacy of his projections and the incorrectness of the Licensees' lack-of-basis assertions, noting that Mr. Smeloff was not in fact predicting a 15% increase in costs but only asserting that, because of Mr. Smeloff's actual experience in estimating revenues and costs, the Licensees should perform a sensitivity analysis concerning the adequacy of increases that they have predicted. CAN views the Licensees' assertions concerning the failure to analyze past cost experiences at FitzPatrick and Indian Point 3 as specious, noting that such information was not provided in the license-transfer application and is not publicly available.

I view the substance of this contention as a dispute between experts as to how predicted cost increases must be calculated. How the cost increases were being calculated is clearly derived from the proprietary data. Accordingly, this is a dispute that can appropriately be litigated in this proceeding. (The portions of the issue concerning the adequacy of annual capacity factors and the necessity *vel*

¹⁰ Although not a party, the NRC Staff is invited to submit its views on this legal question, on the same schedule as governs other parties on this issue. In presenting its Safety Evaluation Report (SER) at the oral hearing, the Staff is requested to be able to comment on this issue.

¹¹ NYPA/Entergy Companies Response, dated January 24, 2001, at 11.

non of estimating costs (and revenues) for the life of the license are being litigated under other issues and will not be included in this one.) I therefore accept Subpart (C) as an issue to be litigated, to the extent it challenges the methodology for calculating cost projections.

(D) This subpart of Issue 3 asserts that the supplemental funding available to ENF and ENIP does not offer adequate financial assurance to protect the public and worker health and safety. Such funding is said to be comprised of (1) a credit agreement with Entergy Global Investments, Inc. [EGI] to provide \$20 million each to ENF and ENIP as a working capital credit line; and (2) a credit agreement with Entergy International Ltd. [EIL] for a total of \$50 million to be shared by ENF and ENIP.¹² Mr. Smeloff declares that such funding would only be able to support a limited-time outage at a single facility or slightly greater outage time between the two reactors (both periods less than a year, but not here set forth specifically to avoid revealing proprietary data). CAN claims such funding is insufficient, particularly in light of ENF's and ENIP's status as newly formed entities that are not public utilities. CAN further claims, based on Mr. Smeloff, that the credibility of the credit arrangements with EGI and EIL have not been clearly established. CAN concludes that the "possibility that ENF and/or ENIP would need to draw on those agreements and then find that the required funds are not available could compromise safety at FitzPatrick and/or IP3."¹³

In response, the Licensees assert that the Commission has already ruled that questions regarding the sufficiency of supplemental funding do not constitute grounds for a hearing, "on the ground that NRC rules do not mandate supplemental funding." See CLI-00-22, 52 NRC at 300, On that basis, according to the Licensees, the Commission refused to admit as an issue CAN's challenge to supplemental funding and there is no reason "why CAN should fare better the second time around with this previously rejected contention."¹⁴ In the alternative, the Licensees also claim that the issue was based on nonproprietary versions of the applications and thus should be rejected as untimely.¹⁵

Finally, however, the Licensees concede that Mr. Smeloff's knowledge of the cash and cash equivalents of EGI and EIL arises from the proprietary data made available to CAN. But they claim, based on the affidavit of their expert, Barrett E. Green, Director, Finance and Development, Entergy Nuclear Operations, Inc., that Mr. Smeloff has totally misread the financial statements and, contrary to his claim, the actual cash and cash equivalent amounts available to EIL and EGI are more than sufficient to support the lines of credit.¹⁶

¹² CAN Revised Contention, dated January 10, 2001, at 9.

¹³ *Id.* at 11.

¹⁴ Licensees' Response at 14-15.

¹⁵ *Id.* at 15.

¹⁶ *Id.* at 16; Affidavit of Barrett E. Green, dated January 22, 2001, ¶ 5.

In its reply, CAN claims that this subissue does not challenge the amount of supplemental funding — the issue that was barred by CLI-00-22 — but rather takes issue with EGI and EIL’s cost projections stemming from proprietary data previously unavailable to CAN. Further, that CAN’s assertions on this subissue are based in part on the maximum outage time for each reactor for which EGI and EIL would provide, a calculation that could only be derived from the proprietary data. CAN lists numerous outage times at various reactors, including simultaneous outages of multiple-unit reactors, that far exceed the maximum outage for which the funds provided by EGI and EIL would suffice.¹⁷ CAN emphasizes that Mr. Smeloff has also raised concerns about EGI and EIL’s interlocking fiduciary interests, their lack of due diligence investigations into ENF’s and ENIP’s business plans, and the fact that neither company is a well-known financial institution — to use the vernacular, shell corporations. Although such concerns may not be fully based on proprietary information, they are “relevant to the concerns Mr. Smeloff raises with respect to the liquidity of EGI’s and EIL’s assets, and the need for the Entergy companies to provide more information to establish the reliability of the supplemental funding offered.”¹⁸

This subissue may to some extent rely on information available other than through the proprietary information. But the issue as a whole can be better understood after reference to the proprietary data. As set forth by CAN, its arguments on this subissue “are based in part on the financial statements of EGI and EIL, which were not available to CAN prior to” CLI-00-22.¹⁹ Indeed, because one crucial aspect of the issue was, as conceded by the Licensees, only available through the proprietary data, I am not prepared to reject the issue as a whole for untimeliness or to require it to meet the more-stringent standards applicable to late-filed issues.

Further, taking the nature of the issue as described by CAN, the issue does not focus solely on the amount of supplemental funding required so as to be barred by the prohibitions of CLI-00-22. It does not, except incidentally, focus on the amount of supplemental funding required. Rather, the issue to the extent acceptable seeks to determine the adequacy of supplemental funding in the context of the ENF and ENIP’s asserted status as non-electrical utilities that are newly formed entities and their ability to demonstrate the validity of projected operations and maintenance (O&M) costs in the context of cost-and-revenue projections.

The crucial unresolved question in this subissue is the difference of opinion between Mr. Smeloff and Mr. Green, both of whom appear to be qualified experts, on the limited liquidity of EGI and EIL’s assets. The correctness *vel non* of these

¹⁷ Declaration of Edward A. Smeloff, dated January 10, 2001, ¶¶ 17-18; Declaration of Edward A. Smeloff, dated January 31, 2001, ¶ 9.

¹⁸ CAN Reply at 16-17.

¹⁹ *Id.* at 16.

individuals' calculations is the basis for acceptance in part of this issue. On that basis, I accept for litigation the extent to which the limited liquidity of EGI and EIL's assets undermines ENF and ENIP's ability to demonstrate reasonable financial assurance, as required by 10 C.F.R. § 50.33(f).

(E) Turning now to the fifth and final subissue, CAN asserts that the Licensees' market revenue projections for FitzPatrick or IP3 have not been effectively evaluated by the Licensees or the Staff in light of significant uncertainty in the market, such as utility deregulation and planned new generation, and furthermore, because the Licensees have only provided revenue data for 5 years versus the period remaining for the licenses, as assertedly required in section 50.33(f)(2). Acknowledging the difficulty in predicting market prices, CAN argues that there needs to be a "deeper investigation of applicant's financial reserves,"²⁰ which CAN alleges its expert witness has done, in order for the Licensees to demonstrate their adequate financial assurance.

Licensees, on the other hand, have asserted that CAN's claim should be rejected as being untimely due to the fact that CAN only asserts publicly available testimony given in another licensing proceeding involving market volatility in New England, publicly available energy generation projections in New York, and news accounts of deregulation effects in California, all of which could have been cited without access to Licensees' proprietary data. Furthermore, the Licensees claim that, even if the subissue be considered timely, the NRC Staff has already performed a detailed analysis of the Licensees' market projections, and they fault CAN for not providing any specific criticism of the Staff's methodology, and for only asserting that it wants a more thorough review of the facts.²¹

After evaluating the arguments of the parties, I first note that the question of whether or not financial projections of the Licensees should extend for 5 years or for the remaining term of the license (a legal interpretation of 10 C.F.R. § 50.33(f)) has already been addressed and admitted for hearing under subpart (B)(ii) of this decision. Because I have already determined to admit this issue, I need not again address the merits of each argument in the context of this issue.

However, the admissibility of the other aspect of this subpart — the sufficiency of the Licensees' and Staff's market projections — must be analyzed in more detail. First, I find the Licensees' argument that this subpart of the contention be considered late-filed, and hence inadmissible, due to the use of publicly available information unpersuasive. Again, I will reiterate that even though this information may have been available at the time the original contention was filed, proprietary information provided by the Licensees was arguably necessary for CAN to assess the adequacy of the Licensees' and Staff's projections. Therefore, this argument is rejected.

²⁰ CAN Revised Contention at 12.

²¹ See Licensees' Response at 17-20.

On the other hand, although I agree with CAN's assertion that the Staff's data and findings with regard to the market revenue projections are "extremely vague,"²² CAN itself admits "the difficulty in predicting market prices in the next several years."²³ Even with an in-depth analysis of the market, as CAN requests, these projections and estimates are so speculative, subjective, and uncertain that there is no assurance that the figures could reflect accurately Licensees' situation in the future. Furthermore, even if I accepted CAN's position with respect to the need for a further analysis of the projected market conditions, CAN has not stated what aspects, or a methodology for projecting these figures, in the Staff's report that it regards as inadequate. Therefore, I reject this subpart of the revised issue (to the extent not encompassed within other issues accepted for litigation) for lack of specificity.

(F) CAN additionally sets forth alternative conditions to be considered for approval of the license-transfer applications, in the event that its issues prevailed but the Commission ultimately determined that dismissal of the applications is not warranted. The Licensees regard the conditions as irrelevant (because not relating to the financial qualifications issue) and premature (given their view that CAN has not raised any admissible issues). Further, the Licensees reiterate their view that none of the contentions and (accordingly) none of the proposed conditions arise from proprietary data and hence should be rejected as late-filed.

I have, of course, accepted certain of the issues. In doing so, I have found them not to have been late-filed. I agree, however, with the Licensees' final point, that I lack jurisdiction to resolve any of the issues and hence to accept any of the proposed remedies. After hearing the issues in question, I will certify the entire record to the Commission, including CAN's proposed conditions, without a recommended or preliminary decision. *See* 10 C.F.R. § 2.1309(b)(3). The Commission, of course, will resolve all of the issues and determine what remedies, if any, warrant adoption.

VI. FILING SCHEDULES

With respect to CAN's revised issue, to the extent admitted, the following filing schedules will govern. I note that these schedules are quite compressed but are necessary to be able to meet the March 13, 2001 oral hearing date already scheduled for Issue 2.

1. *February 26, 2001 (11:59 p.m.):* Filing of initial statements of position and written direct testimony (together with supporting affidavits).

²² *See* CAN Revised Contention at 11.

²³ *See id.* at 12.

2. *March 5, 2001 (11:59 p.m.):*
 - a. Submission of written responses to direct testimony, and rebuttal testimony (with supporting affidavits).
 - b. Submission of proposed questions on written direct testimony.
3. *March 8, 2001 (11:59 p.m.):* Submission of proposed questions directed to written rebuttal testimony.
4. *March 13, 2001 (9:30 a.m.):* Oral hearing.

VII. ORDER

Based on the foregoing, it is, this 5th day of February 2001, ORDERED:

1. CAN Issue 3, Subparts (B)(i), (B)(ii) (and the similar issue in Subparts (C) and (E)), (C) (concerning projected cost increases), and (D) (concerning the financial soundness of ENF and ENIP) are hereby *accepted* as issues for litigation.
2. CAN Issue 3, Subparts (A) and (E) (to the extent not accepted elsewhere) are hereby *rejected* as issues for litigation.
3. The filing schedules set forth in Section VI of this Memorandum and Order are hereby *adopted*.

Charles Bechhoefer, Presiding Officer
ADMINISTRATIVE JUDGE

Rockville, Maryland
February 5, 2001

[Copies of this Memorandum and Order have been transmitted this date by e-mail to counsel for or representatives of each of the parties, as well as the NRC Staff.]

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judge:

Charles Bechhoefer, Presiding Officer

In the Matter of

**Docket Nos. 50-333-LT
50-286-LT
(consolidated)
(ASLBP No. 01-785-02-LT)**

**POWER AUTHORITY OF THE
STATE OF NEW YORK and
ENERGY NUCLEAR FITZPATRICK LLC,
ENERGY NUCLEAR INDIAN
POINT 3 LLC, and
ENERGY NUCLEAR OPERATIONS, INC.
(James A. FitzPatrick Nuclear Power
Plant; Indian Point, Unit 3)**

February 14, 2001

The Presiding Officer in a license-transfer proceeding approves the voluntary withdrawal with prejudice of one of the Intervenors but does not dismiss the only contention sponsored by that Intervenor inasmuch as the contention had been jointly sponsored by another Intervenor who was actively litigating the contention.

MEMORANDUM AND ORDER

(Approving Withdrawal of Nuclear Generation Employees' Association)

On January 8, 2001, the Nuclear Generation Employees Association (NGEA), a party in this license-transfer proceeding, filed a notice that it was voluntarily

and with prejudice withdrawing from this proceeding. It stated that it lacked the financial resources to prosecute properly the issues for which it was granted intervention but added that it believed those issues have substantial merit and should be heard by the Presiding Officer. No other party has responded to NGEA's withdrawal notice.

NGEA was admitted to this proceeding by the Commission's Memorandum and Order of November 27, 2000. CLI-00-22, 52 NRC 266, 325 (2000). Its only approved issue was the decommissioning funding issue jointly sponsored by the Citizens Awareness Network (CAN) and currently being litigated as CAN's Issue 2. *Id.* at 301-02 & n.25, 319; *see also* Notice of Oral Hearing, dated February 13, 2001, at 2.

When a party withdraws from a proceeding, the issues solely sponsored by it are normally dismissed from the proceeding. *See Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), LBP-00-34, 52 NRC 361 (2000) (approving withdrawal of Cortlandt/Hendrick Hudson School District from this proceeding). Here, the issue sponsored by NGEA is also co-sponsored by CAN and thus need not be dismissed as a result of NGEA's withdrawal.

Accordingly, NGEA's requested withdrawal with prejudice is hereby *ap-proved*.

IT IS SO ORDERED.

Charles Bechhoefer, Presiding Officer
ADMINISTRATIVE JUDGE

Rockville, Maryland
February 14, 2001

[Copies of this Memorandum and Order have been e-mailed this date to counsel for or representatives of each of the parties and participating governmental entities.]

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Thomas S. Moore, Chairman
Dr. Richard F. Cole
Dr. Charles N. Kelber

In the Matter of

Docket Nos. 50-250-LR
50-251-LR
(ASLBP No. 01-786-03-LR)

FLORIDA POWER & LIGHT
COMPANY
(Turkey Point Nuclear Generating
Plant, Units 3 and 4)

February 26, 2001

In this operating license renewal proceeding, the Licensing Board finds that each of the Petitioners has standing to intervene but that neither Petitioner has proffered an admissible contention, so the Petitioners' intervention petitions must be denied.

RULES OF PRACTICE: STANDING TO INTERVENE

In ascertaining whether a petitioner has set forth a sufficient "interest" to intervene in this proceeding within the meaning of the Atomic Energy Act and the Commission's regulations, the Commission long ago held that contemporaneous judicial concepts of standing are to be applied. *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 613-14 (1976).

RULES OF PRACTICE: STANDING TO INTERVENE

Judicial concepts of standing require a petitioner to assert a concrete and particularized injury that is fairly traceable to the challenged action and likely

to be redressed by a favorable decision. See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999); *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 188 (1999); *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998).

RULES OF PRACTICE: STANDING TO INTERVENE (PROXIMITY PRESUMPTION)

In certain types of proceedings, the agency has recognized a proximity or geographical presumption that presumes a petitioner has standing to intervene without the need specifically to plead injury, causation, and redressability if the petitioner lives within, or otherwise has frequent contacts with, the zone of possible harm from the nuclear reactor or other source of radioactivity.

RULES OF PRACTICE: STANDING TO INTERVENE (PROXIMITY PRESUMPTION)

In *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329-30 (1989), the Commission articulated the rule for determining the applicability of the proximity presumption: “Absent situations involving such obvious potential for offsite consequences, a petitioner must allege some specific ‘injury in fact’”

RULES OF PRACTICE: STANDING TO INTERVENE (PROXIMITY PRESUMPTION)

“[O]utside the nuclear power reactor construction permit or operating license context,” *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 247 (1996), the rule laid down in *St. Lucie* is intended to be applied across the board to all proceedings regardless of type because the rationale underlying the proximity presumption is not based on the type of proceeding per se but on whether “the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences.” *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116 (1995).

RULES OF PRACTICE: STANDING TO INTERVENE (PROXIMITY PRESUMPTION)

As the Commission explained earlier in *Sequoyah Fuels Corp.* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994), “[t]he determination

of how proximate a petitioner must live or have frequent contacts to a source of radioactivity depends on the danger posed by the source at issue. The rule of thumb generally applied in reactor licensing proceedings (a presumption of standing for persons who reside or frequent the area within a 50-mile radius of the facility) is not applied in material cases. However, a presumption based on geographical proximity (albeit at distances much closer than 50 miles) may be applied where there is a determination that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences.’’

RULES OF PRACTICE: CONTENTIONS

Not only must a contention meet the pleading requirements of 10 C.F.R. § 2.714(b)(2), but the subject matter of all contentions is limited to the scope of the proceeding delineated by the Commission in its hearing notice and referral order delegating to the Licensing Board the authority to conduct the proceeding. *See Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 329 (2000); *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790 (1985).

RULES OF PRACTICE: CONTENTIONS (CHALLENGE OF COMMISSION RULE)

A corollary of this fundamental principle of NRC adjudication is that any contention challenging a Commission regulation, whether directly or indirectly, is always outside the scope of the proceeding and therefore impermissible. *See* 10 C.F.R. § 2.758; *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-8, 29 NRC 399, 416-17 (1989); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-87-12, 26 NRC 383, 395 (1987).

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY; OPERATING LICENSE RENEWAL PROCEEDING)

With respect to technical issues, the renewal regulations, 10 C.F.R. Part 54, are footed on the principle that, with the exception of the detrimental effects of aging and a few other issues related to safety only during the period of extended operations, the agency’s existing regulatory processes are sufficient to ensure that the licensing bases of operating plants provide an acceptable level of safety to protect the public health and safety. 60 Fed. Reg. at 22,461, 22,464 (1995).

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
OPERATING LICENSE RENEWAL PROCEEDING)**

In 10 C.F.R. § 54.21, the Commission identified the limited matters the Applicant need include in its renewal application. Similarly, in 10 C.F.R. § 54.29, the Commission limited the scope of its safety review for license renewal to (1) managing the effects of aging of certain systems, structures, and components; (2) review of time-limited aging evaluations; and (3) any matters for which the Commission itself has waived the application of these rules.

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
OPERATING LICENSE RENEWAL PROCEEDINGS)**

As the Commission stated, “[t]he scope of Commission review determines the scope of admissible contentions in a renewal hearing absent a Commission finding under 10 C.F.R. 2.758.” 60 Fed. Reg. at 22,482 n.2.

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
OPERATING LICENSE RENEWAL PROCEEDING)**

With respect to environmental issues, the Commission’s license renewal regulations in 10 C.F.R. Part 51 and Subpart A, Appendix B, are based on NUREG-1437, “Generic Environmental Impact Statement for License Renewal of Nuclear Plants” (May 1996). In issuing Subpart A, Appendix B to Part 51, the Commission adopted the generic findings of the GEIS regarding the scope and magnitude of the environmental impacts of license renewal. Accordingly, the license renewal regulations only require the agency to prepare a supplement to the GEIS for each license renewal action. 10 C.F.R. § 51.95(c).

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
OPERATING LICENSE RENEWAL PROCEEDING)**

For issues listed in Subpart A, Appendix B of 10 C.F.R. Part 51 as Category 1 issues, the Commission resolved the issues generically for all plants and those issues are not subject to further evaluation in any license renewal proceeding. *See* 61 Fed. Reg. at 28,467, 28,468, 28,470 (1996). Consequently, the Commission’s license renewal regulations also limit the information that the Applicant need include in its environmental report, *see* 10 C.F.R. § 51.71(d), and the matters the agency need consider in draft and final supplemental environmental impact statements to the GEIS. *See id.*; 10 C.F.R. § 51.95(c).

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
OPERATING LICENSE RENEWAL PROCEEDING)**

The remaining issues in 10 C.F.R. Part 51, Subpart A, Appendix B designated as Category 2 issues are site specific and, pursuant to 10 C.F.R. § 51.53(c), must be addressed in various ways by the Applicant in its environmental report. Similarly, pursuant to 10 C.F.R. §§ 51.71(d), 51.95(c), those issues must be addressed in the NRC's draft and final supplemental environmental impact statements for the facility.

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
OPERATING LICENSE RENEWAL PROCEEDING)**

With respect to 10 C.F.R. Part 51, Subpart A, Appendix B, Category 2 issues, those provisions limit the scope of the draft and final supplemental environmental impact statement to the matters that 10 C.F.R. § 51.53(c) requires the Applicant to provide in its environmental report. In turn, section 51.53(c) does not require the Applicant broadly to consider severe accident risks. Rather, it only requires the Applicant to consider "severe accident mitigation alternatives" (SAMA). 10 C.F.R. § 51.53(c)(3)(ii)(L). The Commission, therefore, has left consideration of SAMAs as the only Category 2 issue with respect to severe accidents.

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
OPERATING LICENSE RENEWAL PROCEEDING)**

The Commission has indicated that probabilistic risk assessments are not required for the renewal of an operating license. *See* 60 Fed. Reg. at 22,468; *see also* 56 Fed. Reg. 64,943, 64,949, 64,957 (1991).

**RULES OF PRACTICE: CONTENTIONS (CHALLENGE OF
COMMISSION RULE)**

A contention presents an impermissible challenge to the Commission's regulations by seeking to impose requirements in addition to those set forth in the regulations. *See Shoreham*, CLI-87-12, 26 NRC at 395; *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1656 (1982).

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
OPERATING LICENSE RENEWAL PROCEEDING)**

The impacts associated with spent fuel and high-level waste disposal, low-level waste disposal, mixed waste storage, and onsite spent fuel storage are all

Category 1 issues that are not subject to further evaluation in this license renewal proceeding. *See* 10 C.F.R. Part 51, Subpart A, Appendix B, Table B-1. *Ocone*, CLI-99-11, 49 NRC at 343.

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
OPERATING LICENSE RENEWAL PROCEEDING)**

By seeking to have the Applicant assess the current radiological impacts of the operation of Turkey Point in order to assess the cumulative impacts of extended operation, the contention goes beyond the scope of the information that the Applicant needs to include in its environmental report pursuant to 10 C.F.R. § 51.53(c). Further, offsite radiological impacts are classified as a Category 1 issue in 10 C.F.R. Part 51, Subpart A, Appendix B and, therefore, are excluded from consideration in this renewal proceeding.

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
OPERATING LICENSE RENEWAL PROCEEDING)**

Although 10 C.F.R. Part 51, Subpart A, Appendix B, Category 2 issues may be considered during the license renewal process, all the Category 2 groundwater conflict issues deal with the issue of withdrawal of groundwater by the Applicant when there are competing groundwater uses.

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY;
OPERATING LICENSE RENEWAL PROCEEDING)**

The current licensing basis for Turkey Point includes the design basis of the plants, *see* 10 C.F.R. § 54.3(a), which, in turn, includes resistance to external hazards. Under the Commission's license renewal regulations, issues involving the current licensing basis for the facility are not within the scope of review of license renewal.

**MEMORANDUM AND ORDER
(Ruling on Petitioners' Standing and Contentions)**

On September 11, 2000, the Applicant, Florida Power and Light Company, filed an application pursuant to 10 C.F.R. Part 54 for a 20-year extension of the operating licenses for its Turkey Point Units 3 and 4 located in Miami-Dade County, Florida. After accepting the application for docketing, the NRC Staff issued a notice of opportunity for hearing on October 12, 2000. *See* 65 Fed.

Reg. 60,693 (Oct. 12, 2000). In response to the agency's hearing notice, Mark P. Oncavage filed a timely *pro se* petition to intervene and request for hearing on October 24, 2000.¹ Subsequently, on November 22, 2000, he filed a letter, in effect, amending his petition² after the Applicant and the NRC Staff filed answers opposing his petition on the grounds that he lacked standing to intervene.³ Also, on November 22, 2000, a second *pro se* Petitioner, Joette Lorion, filed an intervention petition and hearing request after obtaining an extension of time for filing her petition from the Commission.⁴ Thereafter, in a November 27, 2000, order containing guidance on the conduct of any proceeding, the Commission referred the intervention petitions to the Atomic Safety and Licensing Board Panel for appropriate action. *See* CLI-00-23, 52 NRC 327 (2000). On November 29, 2000, this Licensing Board was established to rule on the intervention petitions and conduct any necessary proceeding. *See* 65 Fed. Reg. 75,976 (Dec. 5, 2000).

In their answers to Ms. Lorion's petition, neither the Applicant nor the Staff contest her standing to intervene.⁵ Pursuant to the schedule established by the Licensing Board, the Petitioners then supplemented their petitions with their final contentions⁶ and the Applicant and the Staff filed responses in which they each objected to all the Petitioners' proffered contentions.⁷ On January 18, 2001, the Licensing Board held a prehearing conference in Homestead, Florida, to hear arguments on the Petitioners' standing and the admissibility of their proffered contentions.

For the reasons set forth below, the Board finds that, although both parties have standing to intervene, neither Petitioner proffered admissible contentions. Their intervention petitions, therefore, must be denied.

¹ *See* Request for Hearing/Petition for Leave to Intervene of Mark P. Oncavage (Oct. 24, 2000) [hereinafter Oncavage Petition].

² *See* Letter from Mark P. Oncavage, Miami, Florida, to Atomic Safety and Licensing Board (Nov. 22, 2000) [hereinafter Oncavage Amended Petition].

³ *See* FPL's Opposition to Request for Hearing and Petition for Leave to Intervene of Mark P. Oncavage (Nov. 9, 2000) [hereinafter FPL's Opposition]; NRC Staff's Response to Request for Hearing and Petition for Leave to Intervene Filed by Mark P. Oncavage (Nov. 13, 2000) [hereinafter Staff's Response].

⁴ *See* Request for Hearing and Petition for Leave to Intervene of Joette Lorion (Nov. 22, 2000) [hereinafter Lorion Petition].

⁵ *See* FPL's Response to Request for Hearing and Petition for Leave to Intervene of Joette Lorion (Dec. 8, 2000) [hereinafter FPL's Response]; NRC Staff's Response to Request for Hearing and Petition for Leave to Intervene Filed by Joette Lorion (Dec. 8, 2000) [hereinafter Staff's Lorion Response].

⁶ *See* Amended Contentions of Mark P. Oncavage (Dec. 22, 2000) [hereinafter Oncavage Contentions]; Petitioner Lorion's Supplemental Filing of Contentions to Her Request for Hearing and Petition for Leave to Intervene (Dec. 21, 2000) [hereinafter Lorion Contentions].

⁷ *See* FPL's Response to Contentions of Mark P. Oncavage and Joette Lorion (Jan. 8, 2001) [hereinafter FPL's Contention Response]; NRC Staff's Answer to Contentions Filed by Ms. Joette Lorion and Mr. Mark Oncavage (Jan. 9, 2001) [hereinafter Staff's Contention Answer].

I. STANDING

A. Mr. Oncavage's Standing

In his initial intervention petition, Mr. Oncavage asserts that he is a resident of Miami-Dade County and that his home is about 15 miles from the Applicant's Turkey Point facility. He further states that he seeks "[t]he convening of an Atomic Safety and Licensing Board . . . to decide whether the Applicant and the NRC are proposing operations detrimental to the health and safety of the public by considering, for approval, license renewal." Oncavage Petition at 1. After the Applicant and the Staff filed answers opposing his intervention petition on the grounds that he had failed to demonstrate his standing to intervene by showing an injury in fact fairly traceable to the Applicant's renewal request, Mr. Oncavage filed, in effect, an amended petition asserting that his home lies to the southwest of Turkey Point and is often downwind of the facility. Oncavage Amended Petition at 1. In his amended petition, he cites a table from an agency study showing the generic results of a pressurized water reactor core melt accident indicating that there would be tens of thousands of latent fatalities and thousands of square miles of contaminated land from such an event. Mr. Oncavage then asserts that in the event of a core melt accident at Turkey Point, he and his wife likely would be casualties and his property would be contaminated. *Id.* at 1-2. He also references a 1982 Sandia Laboratories report that he characterizes as showing a worst-case accident at Turkey Point causing similar fatalities and land contamination. *Id.* at 3. Finally, Mr. Oncavage claims that "[a] plant operating well beyond its license period of forty years deserves thorough examination by the public, state and local governments, the Atomic Safety and Licensing Board, and all aspects of the NRC. I believe the NRC carries the heaviest burden in proving the safety of the plant . . ." *Id.* at 2.

A petitioner's right to participate in a Commission licensing proceeding stems from section 189a of the Atomic Energy Act which provides in pertinent part that "[i]n any proceeding under this Act, for the granting, suspending, revoking, or amending of any license or construction permit . . . the Commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding." 42 U.S.C. § 2239(a)(1)(A). Paralleling that statutory language, the Commission's regulations provide that "[a]ny person whose interest may be affected by a proceeding" may seek to intervene. 10 C.F.R. § 2.714(a)(1). The regulations further specify that "[t]he petition shall set forth with particularity the interest of the petitioner in the proceeding, [and] how that interest may be affected by the results of the proceeding, including the reasons why petitioner should be permitted to intervene." 10 C.F.R. § 2.714(a)(2). In ascertaining whether a petitioner has set forth a sufficient "interest" to intervene in this proceeding within the meaning of the Atomic Energy Act and the Commission's regulations,

the Commission long ago held that contemporaneous judicial concepts of standing are to be applied. *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 613-14 (1976).

As the Commission has frequently recited, those judicial concepts of standing require a petitioner to assert a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision. See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999); *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 188 (1999); *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998). The injury also must be to an interest arguably within the zone of interests protected by the statutes governing NRC proceedings such as the Atomic Energy Act and the National Environmental Policy Act of 1969 (NEPA). *Yankee*, CLI-98-21, 48 NRC at 195-96; *Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 6 (1998).

As the Applicant and the Staff correctly assert, Mr. Oncavage has failed to demonstrate that he has suffered any concrete and particularized injury that is caused by the license renewal proceeding he seeks to challenge. Rather, he has merely asserted that he owns a home 15 miles downwind from Turkey Point and that agency studies show a hypothetical worst-case core melt accident at Turkey Point would likely be fatal to him and contaminate his property. But his petition fails to articulate how license renewal will cause him harm. Although he alleges dire consequences from a core melt accident, he fails to set out any chain of causation linking those consequences with license renewal as he must to establish his standing. His failure to show the requisite causation link generally would be fatal to his standing claim under judicial standing precepts.

Mr. Oncavage's failure to plead the traditional elements for standing, however, does not end our inquiry. In certain types of proceedings, the agency has recognized a proximity or geographical presumption that presumes a petitioner has standing to intervene without the need specifically to plead injury, causation, and redressability if the petitioner lives within, or otherwise has frequent contacts with, the zone of possible harm from the nuclear reactor or other source of radioactivity. Because the Commission has not previously addressed the proximity presumption in the context of a license renewal proceeding,⁸ it is appropriate to

⁸In the agency's first license renewal proceeding involving the Oconee reactors, the petitioners' standing was uncontested and the Licensing Board found that the petitioners met the traditional standing criteria. See *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), LBP-98-33, 48 NRC 381, 384-85 (1998). In a brief footnote, however, the Licensing Board opined that, although unnecessary to its standing determination, the 50-mile proximity presumption for reactor construction permit and operating license proceedings should also apply to license renewal proceedings because, in effect, there was no difference between what could happen to the reactor during the extended license renewal period and the original operating term. *Id.* at 385 n.1. Upon review, the Commission

(Continued)

consider whether the presumption applies to establish Mr. Oncavage's standing — a Petitioner who lives 15 miles downwind of Turkey Point.

The proximity presumption first appears to have been applied in *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-107, 6 AEC 188, 190 (1973), where, in a reactor operating license proceeding, the Appeal Board found that the proximity of petitioners living 30 to 40 miles from the reactor established their standing to intervene. Thereafter, in *Gulf States Utilities Co.* (River Bend Station, Units 1 and 2), ALAB-183, 7 AEC 222, 226 (1974), the proximity presumption was found applicable in a reactor construction permit proceeding to establish the standing of petitioners whose everyday activities took place within 25 miles of the proposed facility. Then, in *Virginia Electric and Power Co.* (North Anna Nuclear Power Station, Units 1 and 2), ALAB-522, 9 NRC 54, 55-56 (1979) the presumption was found applicable in an operating license amendment proceeding for the expansion of spent fuel pools to establish the standing of a petitioner whose members lived in close proximity to the nuclear plants. Finally, the Appeal Board found that the presumption applied in a Part 30 byproduct materials license renewal proceeding for an irradiation facility where some of the petitioners' members lived as close as 3 to 5 miles to the facility. *Armed Forces Radiobiology Research Institute* (Cobalt-60 Storage Facility), ALAB-682, 16 NRC 150, 154 (1982).

After over a decade and a half of applying the proximity presumption in various proceedings, the Commission characterized the type of proceedings subject to it in a reactor exemption case, stating that

in the past, we have held that living within a specific distance from the plant is enough to confer standing on an individual or group in proceedings for construction permits, operating licenses, or significant amendments thereto such as the expansion of the capacity of a spent fuel pool. However, those cases involved the construction or operation of the reactor itself, with clear implications for the offsite environment, or major alterations of the facility with a clear potential for offsite consequences.

Florida Power & Light Co. (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989) (citations omitted). The Commission then articulated the rule for determining the applicability of the proximity presumption: "Absent situations involving such obvious potential for offsite consequences, a petitioner must allege some specific 'injury in fact . . .'" *Id.* at 329-30.

Subsequent to its *St. Lucie* decision, the Commission has applied the test for determining the applicability of the proximity presumption, or otherwise indicated its applicability, in a variety of contexts, including not only other reactor

stated that "[b]ecause the Petitioners' standing is not an issue on this appeal, the Commission finds it unnecessary to consider the validity of the Board's view on the 50-mile presumption question." *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 333 n.2 (1999).

operating license amendment proceedings, *see, e.g., Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 191 (1999), but also reactor decommissioning proceedings, *see, e.g., Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 247-48 (1996), nonpower research reactor license proceedings, *see, e.g., Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116-17 (1995), and materials license enforcement proceedings, *see, e.g., Sequoyah Fuels Corp.* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994).

These latter decisions are significant because they clearly indicate that, “outside the nuclear power reactor construction permit or operating license context,” *Yankee*, CLI-96-7, 43 NRC at 247, the rule laid down in *St. Lucie* is intended to be applied across the board to all proceedings regardless of type because the rationale underlying the proximity presumption is not based on the type of proceeding per se but on whether “the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences.” *Georgia Tech*, CLI-95-12, 42 NRC at 116. As the Commission explained earlier in *Sequoyah Fuels*,

[t]he determination of how proximate a petitioner must live or have frequent contacts to a source of radioactivity depends on the danger posed by the source at issue. The rule of thumb generally applied in reactor licensing proceedings (a presumption of standing for persons who reside or frequent the area within a 50-mile radius of the facility) is not applied in material cases. However, a presumption based on geographical proximity (albeit at distances much closer than 50 miles) may be applied where there is a determination that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences.

CLI-94-12, 40 NRC at 75 n.22 (citations omitted).

Applying the rationale underlying the proximity presumption to the circumstances of the instant reactor license renewal proceeding where Mr. Oncavage lives 15 miles downwind of the Turkey Point reactors necessarily leads to the conclusion that the presumption applies. Here, the primary source of radioactivity is the reactor core and spent fuel in the fuel pools of the Turkey Point reactors and that source is without question “significant” because it is at least as large as the source leading to the creation of the presumption in the first place in construction permit and initial operating license proceedings. And, because it is the source of radioactivity that produces the obvious potential for offsite consequences, not the type of proceeding involved, it is equally apparent that the same “obvious potential for offsite consequences” that initially led to the creation of the presumption in construction permit and operating license proceedings is also present here. Finally, in the instant case, the distance from the significant source of radioactivity that is presumed to affect the Petitioners logically must be the same

50-mile distance that forms the current basis for the proximity presumption for reactor construction permit and initial operating license proceedings. Because Mr. Oncavage lives considerably less than 50 miles from the Turkey Point facility, however, we need not conjure abstruse reasons why the 50-mile rule of thumb for the presumption is inapplicable but only need to determine if the presumption is applicable to this Petitioner living 15 miles downwind from the reactors. We find that it strains neither credulity nor rationality to conclude that the Petitioner may fairly be presumed to have an interest that may be affected over the course of the extended operating license terms of the Turkey Point reactors located 15 miles upwind of him.

The NRC Staff argues, in effect, that a license renewal action is not the functional equivalent of initial reactor licensing and that the proximity presumption, therefore, should not apply at all. This is so, according to the Staff, because in a renewal action “operating parameters and associated safety findings are unaffected and unchanged, and, by virtue of the rulemaking action associated with the promulgation of 10 C.F.R. Part 54, are beyond the scope of the proceeding except to the very limited extent that they may be affected by aging-management considerations.” Staff Response at 6. The Staff’s argument, however, overlooks the rationale for the presumption as articulated by the Commission in a myriad of instances other than initial reactor licensing actions. The applicability of the presumption is not dependent upon the type of proceeding per se as the Staff would have it but on whether “the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences.” *Sequoyah Fuels*, CLI-94-12, 40 NRC at 75 n.22.

Contrary to the Staff, the Applicant asserts that the appropriate test for determining the applicability of the presumption is whether there is an obvious potential for offsite consequences. It then argues “that in a license renewal proceeding where the NRC has generically determined that severe accident risk is small, and where issues such as the adequacy of plant design, conduct of operations, and emergency planning are beyond the scope of the technical review defined by 10 C.F.R. Part 54, there is not any obvious potential for offsite consequences.” FPL’s Opposition at 3-4 (citation omitted). Although the Applicant is correct that in license renewal actions the matters subject to challenge are severely circumscribed, its argument again overlooks the fact that the rationale for the presumption does not focus on whether or not the type of proceeding involved is highly circumscribed but whether the licensing action involves a significant source of radioactivity producing an obvious potential for offsite consequences. *Sequoyah Fuels*, CLI-94-12, 40 NRC at 75 n.22. Clearly, the significant sources of radioactivity at Turkey Point hold the potential for offsite consequences that are obvious. One of the clearest examples involves the offsite consequences that could result from reactor vessel embrittlement during the extended operating term.

Indeed, in analogous circumstances, the Commission in *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87 (1993), determined, in effect, that the proximity presumption was appropriate to establish the standing of petitioners living 13 and 15 miles from the reactor so it cannot be gainsaid that the presumption is inapplicable to Mr. Oncavage here. Specifically, in clarifying its *Perry* decision in *Sequoyah Fuels*, CLI-94-12, 40 NRC at 75, the Commission indicated that in *Perry* it had merely applied the proximity presumption finding an obvious potential for offsite consequences. *Perry*, of course, involved petitioners living within 15 miles of the reactor who challenged an operating license amendment to remove from the plant's technical specifications the specimen withdrawal schedule used in determining whether a reactor vessel has become embrittled. *See Perry*, CLI-93-21, 38 NRC at 90, 95. It would appear axiomatic that the same result must obtain here because reactor vessel embrittlement is one of the primary and most obvious concerns in extending the operating term of a reactor. And, precisely because the presumption establishes Mr. Oncavage's standing to intervene without the need to establish the standing elements of injury, causation, or redressability, the Petitioner need not raise reactor embrittlement to establish his standing. Accordingly, Mr. Oncavage has standing to intervene.

B. Ms. Lorion's Standing

In light of the rationale for the proximity presumption, there appears to be no reasoned basis to conclude that it does not also apply to establish the standing of Ms. Lorion who lives 20 miles from the Turkey Point reactors. Nevertheless, Ms. Lorion has also established her standing to intervene under the traditional criteria for determining standing of injury, causation, and redressability.

In her petition, Ms. Lorion states that she lives within 20 miles of the Turkey Point nuclear power plant and that, as an environmentalist, she has dedicated many years of her life to protecting and preserving the Florida Everglades and South Florida ecosystem. Lorion Petition at 1. Ms. Lorion asserts that she, her family, and friends all use the South Florida ecosystem for hiking, boating, bird watching, fishing, contemplation, and observation of the diverse plant and animal species that frequent the ecosystem. *Id.* Finally, she claims that extending the licenses of the old and embrittled Turkey Point nuclear units beyond their original license terms could increase the probability and consequences of a nuclear accident at the facility, thereby increasing the threat of injury to her, her family, and property. *Id.* Thus, in her intervention petition, Ms. Lorion has adequately alleged an injury in fact to her health, safety, and property interests fairly traceable to, and remediable by, the license renewal action for Turkey Point that is within the zone of interests protected by the Atomic Energy Act. Accordingly, we find Ms. Lorion has standing to intervene in this proceeding.

II. CONTENTIONS

Under the Commission's Rules of Practice, each of the Petitioners must proffer at least one admissible contention to become a party to the license renewal proceeding. 10 C.F.R. § 2.714(b)(1). The Commission's regulations also set forth specific requirements for contention admissibility. Each contention must specify the issue of law or fact being raised. 10 C.F.R. § 2.714(b)(2). In addition, each contention must contain a brief explanation of the bases for the contention. 10 C.F.R. § 2.714(b)(2)(i). Further, the contention must contain a concise statement of the alleged facts or expert opinion that supports the contention and upon which the Petitioner intends to rely in proving the contention, together with references to specific documents or other sources establishing those facts or expert opinion. 10 C.F.R. § 2.714(b)(2)(ii). Finally, the contention must provide sufficient information to show that a genuine dispute exists on a material issue of law or fact, and this showing must include references to the specific portions of the license application that the Petitioner disputes, along with the reasons for each objection. 10 C.F.R. § 2.714(b)(2)(iii).

Not only must a contention meet the pleading requirements of section 2.714(b)(2), but the subject matter of all contentions is limited to the scope of the proceeding delineated by the Commission in its hearing notice and referral order delegating to the Licensing Board the authority to conduct the proceeding. *See Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 329 (2000); *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790 (1985). A corollary of this fundamental principle of NRC adjudication, of course, is that any contention challenging a Commission regulation, whether directly or indirectly, is always outside the scope of the proceeding and therefore impermissible. *See* 10 C.F.R. § 2.758; *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-8, 29 NRC 399, 416-17 (1989); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-87-12, 26 NRC 383, 395 (1987).

In this license renewal proceeding, the Commission's referral order to the Licensing Board is detailed and direct in setting forth the only subjects open to challenge in the proceeding. Specifically, the Commission stated that

[t]he scope of this proceeding is limited to a review of the plant structures and components that will require an aging management review for the period of extended operation and the plant's systems, structures, and components that are subject to an evaluation of time-limited aging analyses. *See* 10 C.F.R. § 54.21(a) and (c), 54.4; Nuclear Power Plant License Renewal; Revisions, Final Rule, 60 Fed. Reg. 22,461 (1995). In addition, review of environmental issues is limited in accordance with 10 C.F.R. §§ 51.71(d) and 51.95(c). *See* NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants";

Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, Final Rule, 61 Fed. Reg. 28,467 (1996), *amended by* 61 Fed. Reg. 66,537 (1996). The Licensing Board shall be guided by these regulations in determining whether proffered contentions meet the standard in 10 C.F.R. § 2.714(b)(2)(iii).

CLI-00-23, 52 NRC at 329.

In brief, the regulations and lengthy statements of consideration explaining the regulatory provisions referenced in the Commission's referral order are the product of extensive rulemaking proceedings on license renewal. On the basis of those rulemaking activities, the Commission promulgated license renewal regulations that specifically limit the technical and environmental showings that an Applicant need make in its renewal application. Similarly, those regulations limit the safety and environmental review the agency undertakes in determining whether to extend the operating license term.

With respect to technical issues, the renewal regulations, 10 C.F.R. Part 54, are footed on the principle that, with the exception of the detrimental effects of aging and a few other issues related to safety only during the period of extended operations, the agency's existing regulatory processes are sufficient to ensure that the licensing bases of operating plants provide an acceptable level of safety to protect the public health and safety. 60 Fed. Reg. at 22,464. Thus, 10 C.F.R. Part 54 is confined to the small number of issues uniquely determined by the Commission to be relevant for protecting the public health and safety during the renewal term, leaving all other issues to be addressed by the agency's existing regulatory processes. *Id.* at 22,463-64. Accordingly, in 10 C.F.R. § 54.21, the Commission identified the limited matters the Applicant need include in its renewal application. Similarly, in 10 C.F.R. § 54.29, the Commission limited the scope of its safety review for license renewal to (1) managing the effects of aging of certain systems, structures, and components; (2) review of time-limited aging evaluations; and (3) any matters for which the Commission itself has waived the application of these rules. Thus, as the Commission stated, "[t]he scope of Commission review determines the scope of admissible contentions in a renewal hearing absent a Commission finding under 10 C.F.R. 2.758." 60 Fed. Reg. at 22,482 n.2.

With respect to environmental issues, the Commission's license renewal regulations in 10 C.F.R. Part 51 and Subpart A, Appendix B,⁹ are based on NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (May 1996) [hereinafter GEIS]. In issuing Appendix B to Part 51, the Commission adopted the generic findings of the GEIS regarding the scope and magnitude of the environmental impacts of license renewal. Accordingly, the license renewal regulations only require the agency to prepare a supplement

⁹This section will hereinafter be referred to as 10 C.F.R. Part 51, Appendix B, without reference to Subpart A.

to the GEIS for each license renewal action. 10 C.F.R. § 51.95(c). For those issues listed in Appendix B as Category 1 issues, the Commission resolved the issues generically for all plants and those issues are not subject to further evaluation in any license renewal proceeding. *See* 61 Fed. Reg. at 28,468, 28,470. Consequently, the Commission's license renewal regulations also limit the information that the Applicant need include in its environmental report, *see* 10 C.F.R. § 51.71(d), and the matters the agency need consider in draft and final supplemental environmental impact statements to the GEIS. *See id.*; 10 C.F.R. § 51.95(c). The remaining issues in Appendix B designated as Category 2 issues are site specific and, pursuant to 10 C.F.R. § 51.53(c), must be addressed in various ways by the Applicant in its environmental report. Similarly, pursuant to 10 C.F.R. §§ 51.71(d), 51.95(c), those issues must be addressed in the NRC's draft and final supplemental environmental impact statements for the facility at issue.

To determine the admissibility of Ms. Lorion's nine proffered contentions and Mr. Oncavage's two proffered contentions, these regulatory strictures on the permissible subjects for contentions in license renewal proceedings, as well as the Commission's contention pleading requirements, must be applied.

A. Ms. Lorion's Contentions

In her first contention, Ms. Lorion asserts that the "bifurcated, simultaneous NRC Relicensing Process" violates the National Environmental Policy Act (NEPA) by failing to prepare a site-specific supplemental environmental impact statement (SEIS) to evaluate the consequences of this major federal action prior to commencing the relicensing process under 10 C.F.R. Part 54, thereby prejudicing the process and failing to take the "hard look" NEPA requires. Lorion Contentions at 2. As the basis for her contention, Ms. Lorion claims that, under NEPA, the agency must prepare a site-specific SEIS that includes a review of the original Turkey Point environmental impact statement before investing time and resources in the relicensing process. *Id.* at 3. She argues that "the NRC's bifurcated, simultaneous, generic process," commits considerable time and resources to the relicensing process before preparing the SEIS and that this process prejudices the Commission's evaluation of the environmental impact of the relicensing proposal and its analysis of alternatives. *Id.* The Applicant argues that Ms. Lorion's first contention is inadmissible on the grounds that it challenges the Commission's licensing practices, is legally incorrect, and raises no genuine disputed issue. *See* FPL's Contention Response at 18-20. The Staff objects to the contention as an improper challenge to the Commission's regulations. *See* Staff's Contentions Answer at 5-7.

Ms. Lorion's first contention essentially raises two legal issues: first, whether the Commission's license renewal regulations violate NEPA by requiring only the

preparation of a supplement to the GEIS and not the preparation of a site-specific SEIS; and second, whether the agency's practice in license renewal proceedings of conducting its environmental review pursuant to 10 C.F.R. Part 51 in parallel with its technical review under 10 C.F.R. Part 54 violates NEPA. Contentions raising purely legal issues, i.e., "legal contentions," as in the case of fact-based contentions, must raise issues within the allowable scope of the proceeding to be admissible. Unlike the vast majority of licensing proceedings, the Commission's referral order in this, as well as earlier license renewal proceedings, is explicit and precise in limiting the scope of the proceeding. *See Turkey Point*, CLI-00-23, 52 NRC at 329; *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-98-17, 48 NRC 123, 125 (1998). In delegating to the Licensing Board the authority to conduct this proceeding, the Commission simply did not authorize it to determine whether the Commission's license renewal regulations violate NEPA or whether the Commission's review practices in license renewal proceedings violate NEPA as Ms. Lorion argues. Ms. Lorion's first contention raising these two legal issues is, therefore, beyond the scope of the proceeding as set forth in CLI-00-23 and hence inadmissible.

Ms. Lorion's second contention asserts that significant new circumstances and new information require that the NRC conduct a site-specific SEIS on Turkey Point "before 10 C.F.R. Part 54 activities begin." Lorion Contentions at 4. As a basis for the contention, she states that the site-specific SEIS must supplement the original 1972 Turkey Point EIS. *Id.* She further alleges that the original Turkey Point EIS does not address, or inadequately addresses, substantial environmental issues such as the Everglades restoration project, the intense population growth of the area, and the ability to evacuate in the case of a hurricane, the siting of Turkey Point in a hurricane zone in light of Hurricane Andrew, the proposed siting of a commercial airport within 5 miles of the plant, and the siting of a school 2 miles from the plant. *Id.* at 4-5. The Applicant argues Ms. Lorion's second contention presents an impermissible challenge to the Commission's license renewal regulations, *see* FPL's Contention Response at 20-24, while the Staff argues the contention is vague and unsupported. *See* Staff's Contention Answer at 7-8.

In asserting that the NRC must prepare a site-specific supplemental EIS to the original 1972 Turkey Point EIS, Ms. Lorion's second contention impermissibly challenges the Commission's license renewal regulations. Specifically, 10 C.F.R. § 51.95(c) directs the NRC Staff to prepare a supplement to the GEIS, not a site-specific supplement to the original EIS for Turkey Point as Ms. Lorion seeks. Although the Commission's license renewal regulations require that the Applicant's environmental report identify any new and significant information regarding the environmental impacts of license renewal, *see* 10 C.F.R. § 51.53(c)(3)(iv), and require the Staff to consider such information in the supplemental EIS, *see* 10 C.F.R. § 51.95(c)(4), Ms. Lorion can challenge the

Staff's treatment of that information with respect to an environmental impact codified in 10 C.F.R. Part 51, Appendix B as a Category 1 issue only by filing a rulemaking petition pursuant to 10 C.F.R. § 2.802 and such information cannot be challenged in a license renewal proceeding absent a waiver of the renewal rules by the Commission. *See* 61 Fed. Reg. at 28,470. Accordingly, Ms. Lorion's second contention is inadmissible as a challenge to the Commission's license renewal regulations.

In her second contention, Ms. Lorion also requests, pursuant to 10 C.F.R. § 2.758, that the NRC waive its rule on generic environmental impact statements for this proceeding. Lorion Contentions at 6. She asserts that "special circumstances and significant new information . . . cause the application of the rule to not serve its intended purpose of assessing the environmental impacts of the proposed action on the fragile South Florida environment." *Id.* Ms. Lorion's rule waiver request, however, fails to meet the requirements of 10 C.F.R. § 2.758 in either form or substance.

The Commission's waiver rule requires that a petition seeking the waiver of a regulation show "that special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation . . . would not serve the purposes for which the rule or regulation was adopted." 10 C.F.R. § 2.758(b). The waiver rule also mandates that the waiver petition

shall be accompanied by an affidavit that identifies the specific aspect or aspects of the subject matter of the proceeding as to which the application of the rule or regulation . . . would not serve the purposes for which the rule or regulation was adopted, and shall set forth with particularity the special circumstances alleged to justify the waiver or exception requested.

Id. Ms. Lorion filed no affidavit with her rule waiver request as required by section 2.758(b) and her brief, one-sentence request falls far short of the showing required for the Licensing Board to certify the waiver petition to the Commission. *See* 10 C.F.R. § 2.758(d). None of the matters identified by Ms. Lorion in the contention present special circumstances with respect to the GEIS or raise any new issues that have not already been generically considered in NUREG-1437 and 10 C.F.R. Part 51, Appendix B. Further, none of these matters raise any issues that would lead to different impacts from those identified in 10 C.F.R. Part 51, Appendix B. Thus, Ms. Lorion has made no showing that the application of the rule would not serve the purposes for which it was adopted. For example, Ms. Lorion refers to the Everglades restoration effort. Lorion Contentions at 4. She provides absolutely no information, however, showing that the Turkey Point license renewal will affect the project in any way. Similarly, Ms. Lorion refers to intense population growth and the inability to evacuate in the event of a hurricane. *Id.* at 5. Again, Ms. Lorion fails to demonstrate how this information affects any Category I issue or raises a previously unidentified issue that would lead to a

different impact than those in 10 C.F.R. Part 51, Appendix B. Accordingly, Ms. Lorion's rule waiver request is denied.

In her third contention, Ms. Lorion states that, under the Endangered Species Act, the NRC must consult with the Fish and Wildlife Service (FWS) on whether the license renewal adversely impacts threatened and endangered species within 50 miles of Turkey Point. Lorion Contentions at 6. As a basis for the contention, Ms. Lorion asserts that the NRC has not conducted the required consultation with the FWS, and that under the Endangered Species Act the agency cannot limit its review of impacts on threatened and endangered species to the area immediately surrounding the plant. *Id.* at 7. The Applicant opposes the admission of this contention, arguing that it lacks adequate specificity and basis and does not demonstrate any genuine dispute over a material issue. *See* FPL's Contention Response at 25-26. Similarly, the Staff argues that Ms. Lorion's third contention lacks an adequate basis under 10 C.F.R. § 2.714(b). *See* Staff's Contentions Response at 9-10.

The Applicant and the Staff are correct that Ms. Lorion's third contention is inadmissible. To the extent the focus of the contention is on the need for consultation by the NRC with FWS, Ms. Lorion has not shown that there is a genuine dispute over a material issue of law or fact. As the Staff points out, it is currently engaged in the consultation process with FWS as required by the Endangered Species Act so it is premature to assert, as Ms. Lorion does in the contention, that the NRC has not conducted the required consultation. *See id.* at 9. Similarly, because the level of consultation between the NRC and FWS is dependent upon the type of impact on threatened and endangered species that is found, it is also premature to judge that issue until the process has been completed and the Staff conclusions are set forth in its SEIS. Thus, there is no genuine dispute at this time over any material issue about consultation between the NRC and FWS. If Ms. Lorion is aggrieved by some aspect of the actual consultation process after it is completed, she may seek to file a late-filed contention focusing on the consultation process. Any such contention, however, must meet the requirements of 10 C.F.R. § 2.714(a)(1) as well as the contention pleading requirements of 10 C.F.R. § 2.714(b)(2). It should also be noted that, in her contention, Ms. Lorion does not challenge any information in the Applicant's environmental report regarding threatened or endangered species. Having failed timely to contest any of this material or claim that the Applicant has failed to include important information in its report, any subsequent challenge to the Staff determinations in the SEIS based upon the information about threatened or endangered species in the Applicant's environmental report will face an uphill climb meeting the late-filed contention criteria of section 2.714(a)(1). *Cf. Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1045-49 (1983).*

Additionally, the portion of Ms. Lorion's contention alleging that the impact on threatened and endangered species must be measured by using a 50-mile

radius around the plant lacks any basis. The contention provides no information, expert opinion, or fact-based argument demonstrating that the Turkey Point license renewal will have a negative impact on any threatened or endangered species as required by 10 C.F.R. § 2.714(b)(2)(ii). *See Oconee*, CLI-99-11, 49 NRC at 342. Although Ms. Lorion claims broadly that there are over sixty-four threatened or endangered species in the South Florida ecosystem, her contention even fails to identify any particular species of concern. Lorion Contentions at 6. Similarly, her contention provides no expert opinion, studies, or statutory citation supporting her claim that the Endangered Species Act requires a study of endangered species within a 50-mile radius of Turkey Point as required by section 2.714(b)(2)(ii). Although Ms. Lorion cites Appendix G, page G-17, of the Applicant's Environmental Report as support for her claim, that Appendix and the map on page G-17 concern the Coastal Zone Management Act and have no relevance to the Endangered Species Act. Therefore, Ms. Lorion's third contention is inadmissible for failing to comply with the contention pleading requirements of 10 C.F.R. § 2.714(b)(2).

Ms. Lorion's fourth contention asserts that the NRC should require the Applicant to perform a plant-specific analysis of the fracture toughness of the reactor vessels for Turkey Point Units 3 and 4 to prove that an acceptable margin of safety exists for each reactor vessel. Lorion Contentions at 7. As a basis for the contention, she states that plant-specific testing and analysis based on plant-specific operating history may demonstrate that one or both reactor vessels are more embrittled than the Applicant's current analyses indicate. According to Ms. Lorion, the NRC should instruct the Applicant to test weld samples from each reactor vessel to prove adequate margins of safety. *Id.* at 7, 8. In support of her assertions, Ms. Lorion refers, *inter alia*, to a 1985 letter from Dr. George Sih, a Professor of Fracture Mechanics at Lehigh University, asserting that conclusions drawn from Unit 3 reactor vessel data cannot be used to predict the condition of the Unit 4 reactor vessel. *Id.* at 8. The Applicant opposes the admission of the contention, arguing that it impermissibly challenges the Commission's regulations, lacks an adequate basis, and is barred by collateral estoppel. *See FPL's Contention Response* at 26-30. For its part, the Staff asserts that the contention improperly challenges the agency's regulations and is barred by collateral estoppel. *See Staff's Contention Answer* at 11-12 & n.10.

Ms. Lorion's contention that the Applicant must only use plant-specific test data to monitor changes in the fracture toughness properties of each Turkey Point reactor vessel beltline region presents a direct challenge to 10 C.F.R. Part 50, Appendix H, § III.C.1.a. That regulatory provision expressly authorizes integrated surveillance of reactors with similar design and operating features. Ms. Lorion's fourth contention does not assert that the Applicant's integrated surveillance program fails to meet the requirements of Part 50, Appendix H or that the Applicant is not complying with its own program. Rather, the

contention and the supporting letter of Dr. Sih take a position squarely contrary to the Commission's reactor vessel material surveillance program regulation. Accordingly, Ms. Lorion's fourth contention is inadmissible for impermissibly challenging 10 C.F.R. Part 50, Appendix H.

Ms. Lorion's fifth contention alleges that, because age-related degradation at Turkey Point could increase the chance of multiple component failures during a hurricane, thereby increasing the probability of an age-related accident and radiological emergency, the probability of such occurrences should be analyzed and discussed in quantitative terms in the Applicant's license renewal application and a site-specific SEIS to meet the requirements of 10 C.F.R. § 50.4(a)(1). Lorion Contentions at 10. As a basis for the contention, Ms. Lorion quotes the GEIS at page 5-10 to the effect that the potential effects of aging could increase the number of failures of components and structures, resulting in a higher frequency and severity of accidents. *Id.* She then states that neither the Applicant nor the NRC "have analyzed whether the effects of aging will be adequately managed so that the structures and components will be maintained in the event of an external event hurricane, or beyond design basis hurricane, for the period of extended operation." *Id.* The Applicant opposes the contention for raising an issue beyond the scope of the proceeding by improperly challenging the Commission's regulations. It also argues that the contention is inadmissible because it is not supported by any basis demonstrating a genuine dispute concerning a material issue. *See* FPL's Contention Response at 30-35. The Staff argues that the issue raised by the contention is beyond the scope of the proceeding. *See* Staff's Contention Answer at 12-15.

In seeking to require the Applicant and the NRC to prepare probabilistic risk analyses of multiple failures, Ms. Lorion's fifth contention again impermissibly challenges the Commission's regulations. Neither 10 C.F.R. Part 54 nor 10 C.F.R. Part 51 requires such analyses. As previously noted (*see supra* p. 152), the license renewal regulations in Part 54 are confined to the small number of issues that the Commission has determined are uniquely relevant to protecting the public health and safety during the renewal term, and all other issues are to be addressed by the agency's existing regulatory processes, so they are beyond the scope of any license renewal review. *See* 60 Fed. Reg. at 22,463-64. Thus, 10 C.F.R. § 54.21(a)(3) requires an Applicant to demonstrate for each structure and component within the scope of the rule (*see* 10 C.F.R. §§ 54.4, 54.21(a)(1)) "that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB [current licensing basis] for the period of extended operation." Neither that section nor any other rule provision requires the Applicant to prepare a probabilistic risk analysis of multiple failures as sought by Ms. Lorion. Indeed, the Commission has indicated that probabilistic risk assessments are not required for the renewal of an operating license. *See* 60 Fed.

Reg. at 22,468; *see also* 56 Fed. Reg. 64,943, 64,949, 64,957 (Dec. 13, 1991).¹⁰ Similarly, the Commission's environmental regulations in 10 C.F.R. Part 51 do not require probabilistic risk assessments. Section 51.53(c) lists the information the Applicant must include in its environmental report, and a probabilistic risk analysis of multiple failures is not specified. Likewise sections 51.71(d) and 51.95(c) set forth the requirements the agency must follow in preparing the draft and final SEIS for the Turkey Point license renewal, and nowhere do those provisions require the preparation of a probabilistic risk analysis of multiple failures. Accordingly, Ms. Lorion's fifth contention presents an impermissible challenge to the Commission's regulations by seeking to impose requirements in addition to those set forth in the regulations. *See Shoreham*, CLI-87-12, 26 NRC at 395; *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1656 (1982).¹¹

In her sixth contention, Ms. Lorion claims that, because of the rapidly growing South Florida population, the Applicant must prepare a probabilistic risk assessment analyzing the increased risk over the extended license term whether emergency preparedness requirements and dose limits can be met in the event of an accident. Lorion Contentions at 12. The contention also declares that the environmental impacts of a severe accident must be analyzed in a site-specific EIS pursuant to NEPA. *Id.* As a basis for the contention, Ms. Lorion states that, because the South Florida population has increased so dramatically since Turkey Point was built, the NRC must require the Applicant to demonstrate that the appropriate populations can be safely evacuated during the extended license term in the event of an accident. *Id.* Ms. Lorion also asserts that the NRC must prepare a site-specific EIS considering a severe accident at Turkey Point that analyzes aquatic food, shoreline, swimming, air, and surface and groundwater pathways. *Id.* at 14. The Applicant and the Staff both argue that the contention is inadmissible for challenging the Commission's regulations. *See FPL's Contention Response* at 35-38; *Staff's Contention Answer* at 15-16.

Like Ms. Lorion's second, fourth, and fifth contentions, her sixth contention is inadmissible for improperly challenging the Commission's license renewal regulations. As previously discussed (*see supra* p. 158), the Commission's

¹⁰ In revising the license renewal rule in 1995, the Commission indicated that, unless clarified or reevaluated, the materials in the statement of considerations for the 1991 license renewal rule remained valid. 60 Fed. Reg. at 22,463.

¹¹ Ms. Lorion's fifth contention states that a probabilistic risk analysis must be performed in order "to meet the requirements of 10 C.F.R. 50.4(a)(1)." Lorion Contentions at 10. In the basis of her contention, she states that the location of Turkey Point in a hurricane region presents "special circumstances" because the radiological threat from a hurricane-induced accident would be greater due to the inability to evacuate. *Id.* at 11. Next, citing the 1984 *Code of Federal Regulations*, she asserts that "10 C.F.R. 50.4(a)(1) (1984)" provides that the NRC may not issue an operating license without a finding of adequate protective measures in the event of a radiological emergency. *Id.* The provision Ms. Lorion cites, however, both then and now, deals with correspondence and filing requirements and has nothing to do with emergency preparedness. We assume that Ms. Lorion intended to cite 10 C.F.R. § 50.47(a)(1), but that provision deals with the agency's emergency preparedness findings for initial operating licenses and, since 1991, the regulation has expressly excluded renewed operating licenses from its requirements.

license renewal regulations do not require the preparation or use of probabilistic risk assessments. Further, emergency preparedness information is not within the scope of the matters that the Applicant must include in its license renewal application under 10 C.F.R. Part 54 or its environmental report under 10 C.F.R. Part 51. As the Commission stated in promulgating the first license renewal regulations in 10 C.F.R. Part 54,

the Commission's regulations require the routine evaluation of the effectiveness of existing emergency preparedness plans against the 16 planning standards and the modification of emergency preparedness plans when the 16 standards are not met. Through its standards and required exercises, the Commission ensures that existing plans are adequate throughout the life of any plant even in the face of changing demographics and other site-related factors. Thus these drills, performance criteria, and independent evaluations provide a process to ensure continued adequacy of emergency preparedness in light of changes in site characteristics that may occur during the term of the existing operating license, such as transportation systems and demographics. There is no need for a licensing review of emergency planning issues in the context of license renewal.

In conclusion, the Commission has carefully considered the issues raised by commenters on the need to make a finding on the adequacy of existing emergency preparedness plans in order to grant a renewal license. For the reasons stated above, the Commission concludes that the adequacy of existing emergency preparedness plans need not be considered anew as part of issuing a renewed operating license.

56 Fed. Reg. at 64,966-67. Accordingly, the first issue identified in Ms. Lorion's contention is inadmissible.

The second issue in Ms. Lorion's sixth contention seeking an analysis of the impacts of a severe accident at Turkey Point is also inadmissible for challenging the Commission's regulations. Although the Commission generically considered severe accidents in the GEIS and found the consequences small for all plants, *see* NUREG-1437, GEIS, § 5.5.2, it classified severe accidents as a Category 2 issue in 10 C.F.R. Part 51, Appendix B. Therefore, severe accident issues are not automatically excluded from consideration during license renewal.

As the Commission stated in its referral order, however, "review of environmental issues is limited in accordance with 10 C.F.R. §§ 51.71(d) and 51.95(c)." CLI-00-23, 52 NRC at 329. With respect to 10 C.F.R. Part 51, Appendix B, Category 2 issues, those provisions limit the scope of the draft and final SEIS to the matters that 10 C.F.R. § 51.53(c) requires the Applicant to provide in its environmental report. In turn, section 51.53(c) does not require the Applicant broadly to consider severe accident risks. Rather, it only requires the Applicant to consider "severe accident mitigation alternatives" (SAMAs). 10 C.F.R. § 51.53(c)(3)(ii)(L). The Commission, therefore, has left consideration of SAMAs as the only Category 2 issue with respect to severe accidents, but this portion of Ms. Lorion's contention does not seek to raise any issue related

to severe accident mitigation alternatives. Her contention neither identifies any mitigation alternatives that should be considered nor challenges the Applicant's evaluation of SAMAs in its environmental report. Rather, Ms. Lorion's final contention simply claims that a severe accident must be addressed. Accordingly, because the contention goes beyond the limited context in which severe accidents may be considered as a Category 2 issue in 10 C.F.R. Part 51, Appendix B, the second sentence of Ms. Lorion's sixth contention impermissibly challenges the Commission's license renewal regulations and is also inadmissible.

Ms. Lorion's seventh contention asserts that the Applicant must demonstrate that it can permanently and safely store low- and high-level waste off site for the extended period of plant operation. Lorion Contentions at 14. Additionally, the contention claims that the NRC should analyze in a site-specific SEIS the potential environmental impacts from a spent fuel pool accident involving the additional spent fuel from the years of extended operation. *Id.* As a basis for the contention, Ms. Lorion asserts that there currently is not enough storage capacity at Turkey Point to store the high-level waste from extended operation on site and that the current low-level waste repository at Barnwell, South Carolina, may be closed to waste from Florida in the next few years. *Id.* Because the federal government has yet to build a permanent waste repository, she claims the waste will remain on site outside the containment building, and the fact that the facility is in an area of high-hurricane frequency increases the risk and probability that the waste could contaminate the environment. *Id.* at 15. The Applicant and the Staff both argue that the contention is outside the scope of the proceeding and represents a challenge to the agency's rules. *See* FPL's Contention Response at 38-40; Staff's Contention Answer at 16-18.

Ms. Lorion's seventh contention is inadmissible for impermissibly challenging the Commission's regulations. Specifically, 10 C.F.R. § 51.53(c)(2) provides, contrary to Ms. Lorion's contention, that the Applicant need not discuss in its environmental report the storage of spent fuel for its facility. Further, pursuant to section 51.53(c)(3)(i), the Applicant's environmental report is not required to contain any analysis of the environmental impacts identified as Category 1 issues in 10 C.F.R. Part 51, Appendix B. The impacts associated with spent fuel and high-level waste disposal, low-level waste disposal, mixed waste storage, and onsite spent fuel storage are all Category 1 issues that are not subject to further evaluation in this license renewal proceeding. *See* 10 C.F.R. Part 51, Appendix B, Table B-1; *Oconee*, CLI-99-11, 49 NRC at 343. Additionally, Ms. Lorion's contention also presents an impermissible challenge to the Commission's Waste Confidence Rule, 10 C.F.R. § 51.23(a), which states that

[t]he Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or

renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations.

As an improper challenge to the Commission's regulations, Ms. Lorion's seventh contention cannot be admitted.

In her eighth contention, Ms. Lorion states that NEPA requires the Applicant to assess any current impact that radiation may be having on the environment surrounding the plant in order to determine the cumulative impact that may result from extending the operating license term. Lorion Contentions at 15. As a basis for the contention, Ms. Lorion asserts that the impact of the current operation of Turkey Point on the unlined, porous cooling canals and the aquatic and human environment around the plant must be analyzed so that the cumulative impact on extended operations can be assessed. *Id.* at 16. Specifically, she claims that "[t]he impact of radionuclides and any bioaccumulation or biomagnification that may be occurring in the food chain, marine life, plant, and humans from plant emissions and the coastal disposition and dispersion should be analyzed." *Id.* The Applicant and the Staff both oppose the admission of the contention for impermissibly challenging the Commission's regulations. *See* FPL's Contention Response at 40-41; Staff's Contention Answer at 18-19.

Like many of her other contentions, Ms. Lorion's eighth contention is inadmissible because it challenges the NRC's rules. By seeking to have the Applicant assess the current radiological impacts of the operation of Turkey Point in order to assess the cumulative impacts of extended operation, Ms. Lorion's contention goes beyond the scope of the information that the Applicant needs to include in its environmental report pursuant to 10 C.F.R. § 51.53(c). Further, offsite radiological impacts are classified as a Category 1 issue in 10 C.F.R. Part 51, Appendix B, and therefore are excluded from consideration in this proceeding.

Ms. Lorion's final contention, like a portion of the basis of her second contention, claims that, under NEPA, the NRC must assess whether the proposed action conflicts with the federal investment in the Everglades restoration plan. Lorion Contentions at 17. As the basis for her contention, Ms. Lorion asserts that neither the NRC nor the Applicant has addressed the important environmental issue of the Everglades restoration and whether the Turkey Point license renewal is consistent with this \$8 billion federal restoration action. *Id.* According to the contention, an age-related accident at Turkey Point has the potential to negate the restoration project and "the risk and consequences of such an event on this major federal/state government program must be assessed." *Id.* The Applicant argues Ms. Lorion's ninth contention is inadmissible because it is outside the scope of the proceeding. *See* FPL's Contention Response at 41-42. The Staff claims the contention fails to meet the contention pleading requirements of 10 C.F.R. § 2.714(b)(2). *See* Staff's Contention Answer at 19.

Ms. Lorion's ninth and final contention again presents an improper challenge to the Commission's regulations and is, therefore, inadmissible. By seeking to have the NRC and the Applicant specifically consider the environmental impacts of license renewal on the restoration project for the Everglades, the contention goes beyond the information the Applicant needs to provide in its environmental report pursuant to 10 C.F.R. § 51.53(c) and the issues the NRC must consider in preparing the draft and final SEIS in accordance with 10 C.F.R. §§ 51.71(d) and 51.95(c), respectively. Thus, the contention is inadmissible.

Additionally, the basis of Ms. Lorion's contention makes clear that her real concern is that a severe accident at Turkey Point could negate the Everglades restoration effort. As previously discussed (*see supra* p. 160), severe accidents are a 10 C.F.R. Part 51, Appendix B, Category 2 issue that may only be considered in the context of severe accident mitigation alternatives. Ms. Lorion's contention, however, does not seek to raise any issue related to SAMAs. The contention does not identify any mitigation alternatives that should be considered and it does not mention, much less challenge, the Applicant's evaluation of SAMAs in its environmental report. Rather, Ms. Lorion's final contention merely claims that a severe accident at Turkey Point must be addressed. Consequently, the contention is inadmissible for exceeding the scope of the allowable consideration of severe accidents as a Category 2 issue in license renewal proceedings.

B. Mr. Oncavage's Contentions

Mr. Oncavage's first contention alleges that the aquatic resources of Biscayne National Park will become contaminated with radioactive material, chemical wastes, and herbicides during the license renewal term, thereby endangering the health and safety of consumers of food products from the Park and Card Sound. Oncavage Contentions at 1. As a basis for the contention, Mr. Oncavage claims that liquid radioactive wastes are routed from the plant into the cooling canals and that there is massive seepage from the canals into Biscayne Bay and Card Sound. *Id.* Additionally, he alleges that the dumping into the cooling canals of radioactive-laden resins, solvents, and wash water, at much higher levels than in the past, is likely during the renewal term. *Id.* at 2. He also asserts that accidental spills of radioactive materials at Turkey Point will migrate through the groundwater to the Bay and Sound, circumstances that he claims create a Category 2 groundwater conflict issue under 10 C.F.R. Part 51, Appendix B. *Id.* at 1-2. Because of the buildup of radionuclides from Turkey Point in the various biota of Biscayne Bay and Card Sound, Mr. Oncavage argues that the consumers of seafood from these waters are placed at an unacceptable risk and neither the Applicant nor the NRC has studied this problem as part of the license renewal process. *Id.* at 2. The Applicant and the Staff both object to the admission of the contention arguing that it challenges the Commission's license renewal

regulations by exceeding the scope of allowable issues for such proceedings. *See* FPL's Contention Response at 9-12; Staff's Contention Answer at 20-21.

Like many of Ms. Lorion's contentions, Mr. Oncavage's first contention is inadmissible for impermissibly challenging the Commission's licensing renewal regulations. In referring the case to the Licensing Board, the Commission limited the scope of the proceeding with respect to safety issues to a review of the plant structures and components requiring an aging management review for the extended license term in accordance with 10 C.F.R. § 54.21(a) and the plant systems, structures, and components subject to time-limited aging analyses under 10 C.F.R. § 54.21(c). CLI-00-23, 52 NRC at 329. With respect to environmental issues, the Commission limited the scope of the proceeding to the issues the agency must address in the draft and final SEIS pursuant to 10 C.F.R. §§ 51.71(d) and 51.95(c). *Id.* To the extent Mr. Oncavage's first contention purports to raise a health and safety issue, it presents a challenge to 10 C.F.R. § 54.21 because the contention does not raise any aspect of the Applicant's aging management review or evaluation of the plant's systems, structures, and components subject to time-aging analysis. If, on the other hand, Mr. Oncavage's first contention seeks to raise an environmental issue, it presents a challenge to 10 C.F.R. § 51.53(c) and 10 C.F.R. Part 51, Appendix B, by raising issues beyond the limited scope of those provisions. Specifically, section 51.53(c) lists the information that the Applicant must include in its license renewal environmental report and expressly excludes, in 10 C.F.R. § 51.53(c)(3)(i), information on the environmental impacts of any issues identified as Category 1 issues in Appendix B of 10 C.F.R. Part 51. The Appendix, in turn, identifies radiation exposures to the public during the license renewal term as a Category 1 issue. It also identifies the discharge of chlorine and other biocides as well as the discharge of sanitary waste and minor chemical spills as Category 1 issues. As previously discussed (*see supra* p. 153), all Category 1 issues are barred from further consideration in license renewal proceedings. Similarly, Mr. Oncavage's assertion that radioactivity migrating through the groundwater from Turkey Point to Biscayne Bay creates a 10 C.F.R. Part 51, Appendix B, Category 2 groundwater conflict issue does nothing to enhance the contention's admissibility. Although 10 C.F.R. Part 51, Appendix B, Category 2 issues may be considered during the license renewal process, all the Category 2 groundwater conflict issues deal with the issue of withdrawal of groundwater by an Applicant when there are competing groundwater uses — a situation far different from Mr. Oncavage's allegation. Accordingly, the contention impermissibly challenges the Commission's license renewal regulations and is inadmissible.

Mr. Oncavage's second contention has multiple parts. He first asserts that the location of Turkey Point poses unusual challenges to the safe storage of spent fuel. Oncavage Contentions at 2. As a basis for this portion of the contention, he relies upon an agency study concerning permanently shut down reactors and alleges that a catastrophic radiological accident at a spent fuel pool that contains

the additional inventory from extended operation would produce public exposures in excess of 10 C.F.R. Part 100 limits and presents a Category 2 issue. *Id.* The Applicant and the Staff both argue that the first portion of the contention is outside the scope of the proceeding and presents an impermissible challenge to the license renewal regulations. *See* FPL's Contention Response at 12-14; Staff's Contention Answer at 21-22.

Contrary to the assertion in the first portion of Mr. Oncavage's second contention and as previously discussed (*see supra* p. 161), the issue of onsite spent fuel storage is a 10 C.F.R. Part 51, Appendix B, Category 1 issue that cannot be examined further in a license renewal proceeding. Additionally, the contention is barred by the Commission's Waste Confidence Rule, 10 C.F.R. § 51.23(a), in which the Commission found that spent fuel could be stored safely on site during and after the renewal term. *See Oconee*, CLI-99-11, 49 NRC at 343. Further, Mr. Oncavage's allegation that an accident involving spent fuel is a Category 2 issue does not make the contention admissible. As discussed earlier (*see supra* p. 160), only severe accident mitigation alternatives may be considered for license renewal severe accident Category 2 issues, and Mr. Oncavage has not raised any issue involving mitigation alternatives. Accordingly, the first portion of Mr. Oncavage's contention impermissibly challenges the agency's license renewal regulations and is inadmissible.

In Part 2A of his second contention, Mr. Oncavage claims that either wet or dry spent fuel facilities at Turkey Point would be particularly vulnerable to a category 5 hurricane. Oncavage Contentions at 3. As the basis for part 2A of the contention, Mr. Oncavage asserts that hurricanes were excluded from the GEIS as accident initiators and that a category 5 hurricane hitting Turkey Point would produce catastrophic damage to spent fuel facilities due to inadequate construction practices and because there is no defense in depth for spent fuel. *Id.* The Applicant and the Staff both assert that part 2A of the contention is outside the scope of the proceeding. *See* FPL's Contention Response at 12-13, 15; Staff's Contention Answer at 23.

Like the first portion of the contention, part 2A is also inadmissible for challenging the 10 C.F.R. Part 51, Appendix B, Category 1 issue of onsite spent fuel storage, as well as the Commission's Waste Confidence Rule, 10 C.F.R. § 51.23(a). Additionally, contention 2A challenges the design basis of Turkey Point in alleging that the spent fuel pool facility cannot withstand a class 5 hurricane. The current licensing basis for Turkey Point includes the design basis of the plants, *see* 10 C.F.R. § 54.3(a), which, in turn, includes resistance to external hazards. Under the Commission's license renewal regulations, issues involving the current licensing basis for the facility are not within the scope of review of license renewal. Rather, license renewal review only includes issues relating to the management of aging systems, structures, and components, or time-limited aging analyses under 10 C.F.R. Part 54. Because part 2A of the contention speaks

to the former and not the latter, it is beyond the allowable scope of the proceeding. Hence, the contention is inadmissible.

Finally, part 2B of Mr. Oncavage's contention states that the "Safety Evaluation Report" for the Turkey Point license renewal is fatally flawed because it relies upon a June 19, 2000, Safety Assessment by the NRC Staff concerning the development of the nearby former Homestead Air Force Base into a commercial airport. Oncavage Contentions at 3. As the basis for this portion of the contention, Mr. Oncavage states that the U.S. Air Force and the Federal Aviation Administration requested the Staff to examine the safety implications of developing an airport 4.9 miles from the plant site but that the Staff's safety assessment uses an inappropriate aircraft crash probability model, an understated factor for bird aircraft strike hazards, and incomplete information for computing the height of target component for crash probability, thereby rendering the Staff's assessment worthless. *Id.* at 3-4. The Applicant and the Staff both claim that part 2B of the contention is also beyond the scope of the proceeding. *See* FPL's Contention Response at 12-13, 16-17; Staff's Contention Answer at 23-25.

Putting aside the obvious flaw in part 2B of Mr. Oncavage's contention because the Staff has yet to produce its SER for the Turkey Point license renewal, the issue of the effects of aircraft crashes on the Turkey Point spent fuel facilities is inadmissible for presenting a challenge to the Commission's license renewal regulations. Like part 2A of the contention concerning the effects of a class 5 hurricane on the spent fuel facilities, part 2B also impermissibly challenges the 10 C.F.R. Part 51, Appendix B, Category 1 issue of onsite spent fuel storage, as well as the Commission's Waste Confidence Rule, 10 C.F.R. § 51.23(a). Again like part 2A, the contention also impermissibly challenges the design basis for external hazards at Turkey Point. Accordingly, part 2B of Mr. Oncavage's final contention is inadmissible.¹²

III. CONCLUSION

For the reasons set forth in Part I of this Memorandum and Order, we find that both Mr. Oncavage and Ms. Lorion have standing to intervene in this license renewal proceeding. For the reasons detailed in Part II.A, however, we find that all nine of Ms. Lorion's proffered contentions are inadmissible. Further, for the reasons set forth in Part II.B, we find that both of Mr. Oncavage's proffered contentions also are inadmissible. Accordingly, pursuant to 10 C.F.R. § 2.714(b)(1), neither Petitioner is admitted as a party to the proceeding and both

¹² As filed, Mr. Oncavage's final contention included part 2C concerning Cuban air strikes against the Turkey Point spent fuel facilities. *See* Oncavage Contentions at 4-5. Subsequently, Mr. Oncavage withdrew that portion of the contention. Tr. 42.

intervention petitions must be *denied*. Because there are no other intervening parties to the proceeding, the proceeding is hereby *terminated*.

As provided in 10 C.F.R. § 2.714a, the Petitioners, within ten (10) days of service of this Memorandum and Order, may appeal the Order to the Commission by filing a notice of appeal and accompanying brief.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Thomas S. Moore, Chairman
ADMINISTRATIVE JUDGE

Dr. Richard F. Cole
ADMINISTRATIVE JUDGE

Dr. Charles N. Kelber
ADMINISTRATIVE JUDGE

Rockville, Maryland
February 26, 2001

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

Ann Marshall Young, Presiding Officer
Thomas D. Murphy, Special Assistant

In the Matter of

Docket No. SSD 99-27
(ASLBP No. 00-778-06-ML)

GRAYSTAR, INC.
(Suite 103, 200 Valley Road,
Mt. Arlington, NJ 07856)

February 27, 2001

In this Initial Decision, the Presiding Officer upholds the NRC Staff's denial of a certificate of registration for a sealed source using cesium-137 chloride in caked powder form, proposed for use in an irradiator held to be governed by 10 C.F.R. Part 36.

REGULATIONS: SEALED SOURCE REGISTRATION AND LICENSING

Registration of sources and approval of licenses for their use go hand in hand, and NRC approval of an application for registration of a sealed source by a source manufacturer encompasses consideration of both the "basic framework" of the requirements set forth at 10 C.F.R. § 36.21 as well as the many factors unique to a given source that would be reviewed on a case-by-case basis under 10 C.F.R. § 32.210.

REGULATIONS: INTERPRETATION (10 C.F.R. § 36.21(a)(3))

Section 36.21(a)(3) applies to dry-source-storage sealed sources and requires that they use radioactive material that is “as nondispersible as practical.”

REGULATIONS: INTERPRETATION (10 C.F.R. § 36.21(a)(3))

Section 36.21(a)(3) is to be construed to require a high level of justification for the use of any form of cesium in a sealed source, based on the Commission’s Statement of Considerations that accompanied enactment of the regulation.

REGULATIONS: INTERPRETATION (10 C.F.R. § 36.21(a)(3))

In making the “nondispersibility” determination required under 10 C.F.R. § 36.21(a)(3), it is appropriate to consider both methods of preventing leaks and means of mitigating any leaks that occur, to prevent and limit any dispersal of the source.

REGULATIONS: INTERPRETATION (10 C.F.R. §§ 36.21, 32.210(c))

The purpose of the requirements of 10 C.F.R. § 36.21 is to assure the protection of health and safety, and failure to satisfy fully the requirements of 10 C.F.R. § 36.21 cannot be said to provide the “reasonable assurance” required by 10 C.F.R. § 32.210(c).

TECHNICAL ISSUES DISCUSSED

The following technical issues are discussed: Sealed Source Design and Testing, Use of Cesium-137 Sources, Safety Issues Relating to Cesium-137 Sources, Irradiator Design, Irradiator Categories.

INITIAL DECISION

This 10 C.F.R. Part 2, Subpart L matter concerns the NRC Staff’s denial of an application for a certificate of registration for a sealed source under 10 C.F.R. §§ 32.210 and 36.21. GrayStar, Inc. (GrayStar), the developer of the Model GS-42 sealed source (GS-42) at issue, has challenged the Staff’s denial in this proceeding.

The GS-42 was developed for use in GrayStar's Model 1 irradiator,¹ which is intended primarily for use by food producers to irradiate large, pallet-sized quantities of food. The GS-42 as designed would use cesium-137 in the form of cesium chloride "caked powder" as the radiation source. The issues in this proceeding center on whether this use of cesium-137 chloride as a source for the GS-42 is justified. These issues include the following interrelated questions: (A) whether 10 C.F.R. Part 36, regarding "Licenses and Radiation Safety Requirements for Irradiators," and section 36.21(a)(3) in particular, are applicable to the GS-42; if so, (B) whether the GS-42 meets the requirement in section 36.21(a)(3) that a sealed source "use radioactive material that is as nondispersible as practical," and (C) whether the design and testing of the GS-42 meet the double encapsulation and testing requirements of sections 36.21(a)(2) and 36.21(a)(5); and finally, (D) whether GrayStar has "provide[d] reasonable assurance that the radiation safety properties of the source . . . are adequate to protect health and minimize danger to life and property," as required by 10 C.F.R. § 32.210(c).

The Staff contends that 10 C.F.R. Part 36 and section 36.21(a)(3) are applicable to the GS-42; that GrayStar has not justified the use of cesium-137 chloride powder sufficiently to overcome the "qualified ban" of section 36.21(a)(3); and that GrayStar has not performed sufficient testing or otherwise established that the GS-42 meets the requirements of 10 C.F.R. §§ 36.21(a)(2), 36.21(a)(5), and 32.210(c). GrayStar argues that 10 C.F.R. Part 36, and section 36.21(a)(3) in particular, does not apply to the GS-42; that even if they do GrayStar has shown that the cesium-137 chloride in the GS-42 sealed source would be "as nondispersible as practical"; that sufficient testing has been performed on the GS-42 to satisfy section 36.21(a)(2) and (a)(5), assuming the provisions apply; and that GS-42 is otherwise in all respects appropriate for registration under 10 C.F.R. § 32.210(c).

I conclude that the provisions of 10 C.F.R. Part 36, including section 36.21(a)(3), apply to the GS-42 sealed source.² I also conclude that GrayStar has not established that the GS-42 sealed source is designed, filled, and/or tested in a manner sufficient to assure that its cesium-137 chloride source is "material that is as nondispersible as practical," as required under 10 C.F.R. § 36.21(a)(3). I further conclude that GrayStar has not established that the GS-42 meets the double encapsulation and testing requirements of section 36.21(a)(2) and (a)(5). Finally, I conclude that GrayStar has not provided reasonable assurance that the radiation

¹ GrayStar has also applied for registration of the Model 1 irradiator. The Staff has not denied registration of it, but has provided GrayStar with a list of deficiencies to address prior to a final determination on the request for registration. Further review of it is currently suspended, and the parties agreed during an August 15, 2000, telephone conference in this matter that registration of the Model 1 irradiator would not be part of this matter. *See* Transcript at 12-13 (Aug. 15, 2000).

² There is at least one exception to the conclusion that the provisions of 10 C.F.R. Part 36 apply to the GS-42 sealed source. The parties agree that section 36.21(a)(4) does not apply, as it is limited in its terms to sources "for use in irradiator pools," and the Model 1 is designed to be a dry-source-storage irradiator.

safety properties of the GS-42 sealed source are adequate to protect health and minimize danger to life and property, as required by 10 C.F.R. § 32.210(c). Based upon these conclusions, I uphold the Staff's denial of GrayStar's application for a certificate of registration.

I. BACKGROUND

Because this case involves a somewhat complex set of facts, as well as legal issues of first impression, the Background section of this decision includes, in addition to a recounting of general facts and a procedural history of the case, a chronological history of some of the interactions between GrayStar and the Staff that ultimately led up to the Staff's denial of GrayStar's application for a certificate of registration and GrayStar's request for a hearing. This historical recounting provides some additional context for the novel issues involved in this matter, as well as for the starkly opposing viewpoints of GrayStar and the Staff on the applicability and proper interpretation of 10 C.F.R. Part 36 and section 36.21(a)(3), their relationship to 10 C.F.R. § 32.210(c), and whether GrayStar has shown adequate factual and legal justification for using cesium-137 chloride in the GS-42 sealed source.

A. General Facts

Although neither party has submitted its written presentation under oath or affirmation as required by 10 C.F.R. § 2.1233(a), the basic facts in this case are not in dispute. The parties differ on the inferences to be drawn from many of the facts, however, and their written presentations and responses consist largely of argument on the significance and interpretation of such facts. Facts subject to this sort of dispute are discussed below in the Analysis section of this decision, in connection with the issues to which they relate. The following background facts, the significance of most of which is not contested, provide general context for the history and issues analysis portions of this decision.

1. *GrayStar and Food Irradiation*

GrayStar is a privately held company founded in 1989, with headquarters in Mt. Arlington, New Jersey. Its corporate objective is to manufacture and lease its Model 1 irradiator, a dry-source-storage irradiator designed to use the GS-42 sealed source at issue in this matter.³ Each Model 1 would contain sixty-four of

³ See GrayStar, Inc.'s Corrected Brief in Support of Application for Registration of Model GS-42 Sealed Source (Oct. 3, 2000) [hereinafter GrayStar Brief], at 2.

the GS-42 sealed sources, each of which would contain 51,500 Curies (Ci) of cesium-137 chloride in “caked powder” form, encapsulated in double stainless steel tubes, with a total strength of approximately 3 million Ci.⁴ GrayStar presents the Model 1 irradiator, with its GS-42 sealed sources, as a new and unique means of irradiating food products on a wide scale.

The types of radiant energy typically used in food irradiation include microwave and infrared radiation, which heat food; visible light or ultraviolet light, which dries food or kills food surface microorganisms; and ionizing radiation, which penetrates into food without heating it, using cobalt-60, cesium-137, x rays, or electron acceleration.⁵ It is not disputed that ionizing irradiation is an effective means of eliminating pathogenic bacteria, insects, and parasites. It can also reduce spoilage and, in some fruits and vegetables, inhibit sprouting and delay the ripening process. It penetrates into food without significantly raising its temperature, making it radioactive, compromising its nutritional quality, or noticeably changing its taste, texture, or appearance, so long as the radiation is applied properly to suitable products.⁶ The Food and Drug Administration has officially endorsed the use of food irradiation using either cobalt-60 or cesium-137 radioactive sources.⁷

According to GrayStar, cobalt irradiators cannot be used economically to irradiate large quantities of food, are not easily transportable because of their volume and weight, and have other disadvantages including water storage of sources.⁸ In contrast, GrayStar asserts that its Model 1 irradiator, with its self-shielded, dry-source-storage GS-42 sealed sources, would be an economically viable technology that could be transported to and installed at individual food production facilities to irradiate large, pallet-scale volumes of food. GrayStar further asserts that the Model 1 would not require onsite source changing with its attendant risks, because of the longer, 30.2-year half-life of cesium-137, which results in a source strength loss of only 2.3% a year, as compared to cobalt-60’s 5.27-year half-life and strength loss of 12.3% a year.⁹

2. Model 1 Irradiator Design and Operation

Even though registration of the Model 1 irradiator is not at issue in this proceeding, its design and operation as planned by GrayStar are relevant to an understanding of the GS-42 sealed source at issue. The Model 1 is the only

⁴ GrayStar Brief at 19, 20 n.13; NRC Staff’s Initial Written Presentation (Sept. 25, 2000) [hereinafter Staff Presentation], at 6.

⁵ GrayStar Brief at 3.

⁶ *Id.* at 2-3.

⁷ *Id.* at 2-4, 20.

⁸ *See id.* at 17, 22.

⁹ *See id.* at 4, 21, 27.

irradiator in which the GS-42 is designed to be used, and GrayStar argues that aspects of its design and proposed operation help to assure the nondispersibility of the cesium-137 chloride proposed to be used in the GS-42 sealed source.

The Model 1 irradiator design consists of two modular parts, one to be installed below the floor, on and within conventional concrete footings and retaining walls, and one to be installed at floor level above the below-floor part. The part that would be installed below the floor is a 165-ton cask (called a "Graysafe"), 8.5 feet by 10.5 feet by 12 feet high, which would be the storage container for the sources. The upper part would weigh approximately 32 tons, have approximately the same dimensions as the lower part, and have an irradiation chamber into which food to be irradiated would be placed. A power pack and computer console would be attached to the outside of the upper part next to the chamber doors, and three hydraulic cylinders would be attached to each outer side of the upper part.¹⁰ The irradiation chamber is designed to be large enough to contain a 40-inch by 48-inch pallet of food 53 inches high, the size GrayStar asserts the food industry has indicated is necessary if the irradiator is to be commercially practical.¹¹ The two modular parts are designed so that each could be shipped commercially to food producers for use on site, which GrayStar says the industry has indicated is also necessary if the irradiator is to be practical.¹² By comparison, cobalt irradiators are generally built and loaded at the site of operation because of their great size and weight.¹³

The door to the irradiation chamber of the Model 1 irradiator is designed so that it can be open only when the radiation sources are shielded below the floor. The sixty-four cesium sources would be arranged and contained in four panels set flush to the inside wall surfaces of a four-sided steel box (with no fixed top or bottom panel) contained within the Graysafe cask. This steel box (called the "door source") will weigh approximately 105 tons and have walls at least 16 inches thick; the containment of the sources within this box will, it is argued, prevent inadvertent access or exposure to the sources.¹⁴ When this "door source" box containing the sources is in the below-floor position, it and the sources on its inside walls would surround a solid steel center column. After a pallet of food is rolled into the upper chamber, which would be done without an operator entering the chamber,¹⁵ the operator would close the chamber doors (which open to the outside) using two handle keys, one in each door, and then remove the handle keys from the doors, place them into the computer console, rotate them a quarter

¹⁰ See Videotape, "The GrayStar Solution" [hereinafter GrayStar Videotape], filed with GrayStar Reply to NRC Staff's Response Brief (Nov. 15, 2000) [hereinafter GrayStar Reply].

¹¹ See GrayStar Videotape, and Figure 22, also filed with GrayStar Reply; GrayStar Brief at 29.

¹² GrayStar Brief at 29.

¹³ See GrayStar Videotape.

¹⁴ See GrayStar Brief at 22, 24; GrayStar Videotape.

¹⁵ See GrayStar Brief at 22; GrayStar Videotape.

turn, and hold them in place long enough for the four-sided “door source” box containing the sources to rise to its complete upper position.

The six hydraulic cylinders are designed to raise the “door source” box all the way to the top of the upper part of the Model 1 irradiator, until the top of the source box completely surrounds a steel center column above the radiation chamber, and the source panels are centered around all four sides of the irradiation chamber. In this position, the chamber doors would be contained inside the “door source” box and there would be no operator access to open them. The irradiator is designed so that, during the hydraulic lifting process, the source panels will not emerge out of the lower shield until the upper part of the “door source” box surrounds the lower part of the upper steel center column. If the hydraulic cylinders fail or the handle keys are not held properly or are taken out of the console prematurely, the “door source” box is designed to lower itself automatically back into the below-floor storage cask.¹⁶ When the “door source” box rises all the way to the top of the upper part of the Model 1 irradiator, the food on the pallet would be irradiated from four sides, according to preset dose amounts. When this is completed, the “door source” would automatically lower, taking the sources back into the below-floor storage cask.

The unit is designed to prevent radiation leakage by virtue of the steel columns above and below the radiation panels when they are in the operating position, the inability to raise the sources out of the Graysafe cask except when the chamber door is closed, and the four 16-inch-thick walls of the “door source” that contain the sources and prevent access to the chamber door and the internal chamber when the sources are in the raised position.¹⁷

GrayStar plans to have the Model 1 units fabricated at a site such as Babcock and Wilcox’s plant in Indiana, where the steel components would be precision-milled. After assembly, the units would be sent to a government laboratory such as the Hanford site in Washington state or the Savannah River site in South Carolina, for loading of the cesium-137 chloride sources, which would come from material presently stored as high-level radioactive waste. After loading of the sources into the Graysafe, security welding would be done to make the sources inaccessible except for reopening at a source-loading site. The Graysafe and the upper portion of the Model 1 irradiator would be transported separately, by ship, rail, or special truck, much as other overweight items are transported. GrayStar projects that maintenance would be routine only, since no bearings, conveyor belts or similar moving parts are to be used¹⁸; that only minimal, onsite training

¹⁶ See GrayStar Videotape.

¹⁷ See *id.*

¹⁸ See *id.*; GrayStar Brief at 22-23.

of operators would be required; and that some inspection and monitoring would be done by remote access, using a telephone line and a code number.¹⁹

B. Application History

GrayStar submitted its application for registration of the Model 1 irradiator and Model GS-42 sealed source on April 19, 1999. However, communication between GrayStar principals and the NRC Staff had begun as early as September 1996, when GrayStar first requested registration by the NRC of “a unique irradiator design.” Although this request is not in the record, the record does contain the January 27, 1997, response to Martin Stein, President of GrayStar, from Larry W. Camper, Chief of the Medical, Academic, and Commercial Use Safety Branch of the NRC Office of Nuclear Material Safety and Safeguards (NMSS), Division of Industrial and Medical Nuclear Safety. In this letter, Mr. Camper noted the understanding that the first unit was likely to be located at a U.S. Department of Agriculture (USDA) facility near Philadelphia, Pennsylvania, and that there had been discussions between USDA personnel and representatives from NRC’s Region 1 office.

Mr. Camper stressed the need “for a collaborative effort between all parties since this is a unique device design, as such, obstacles may surface during licensing and product registration that may be policy setting and require additional time to resolve.” Noting that the NRC had done a “cursory review of the application to identify areas that we feel require more information or clarification,” Mr. Camper specified fifteen issues in the January 27, 1997, letter, including the following as the first-numbered item:

We are concerned with the choice of cesium-137 chloride from the Department of Energy (DOE) for use in the Gray Star source designs. Note: while 10 CFR Part 36 may not be directly applicable, use of soluble cesium is prohibited by that rule. While Gray Star does not plan to use the DOE supplied [Waste Encapsulation and Storage Facility (WESF)] capsules in the irradiator, the radioactive material purity is in question. Specifically, the [e]ffect of the cesium-137 chloride compound and its impurities on capsule wall integrity may be an issue. DOE reports involving destructive analysis of their source capsules show corrosion from the inside of the source capsule out. We request clarification on how the cesium-137 chloride will be purified, dried, and specifications on the chemical composition. Additionally, we request justification as to why an insoluble and nondispersable form of cesium cannot be used.²⁰

¹⁹ See GrayStar Videotape.

²⁰ Hearing File, Vol. I, Tab I, at 1. The WESF sources were produced at DOE’s Hanford facility and were leased to four commercial irradiators, until a leak occurred in an irradiator using WESF capsules in Georgia and the Commission subsequently required that all such sources be removed and returned to DOE. See 58 Fed. Reg. 7716 (Feb. 9, 1993).

By letter dated February 10, 1997, GrayStar Vice President Russell N. Stein responded to Mr. Camper, addressing the matter quoted above by arguing that since GrayStar's irradiator was not a wet-source-storage irradiator, the requirement relating to insoluble radioactive material was "NOT directly applicable"; Mr. Stein also addressed the issues of source purity and corrosion, and offered to review reports on cesium compounds other than cesium-137 chloride, and to meet with the NRC prior to formalizing the encapsulation program.²¹

Mr. Camper responded to Mr. Stein in a letter dated May 20, 1998, indicating that since "a large amount of significant technical data" was missing, the review process of the application was being terminated, albeit without prejudice to the resubmission of a complete application "fully addressing our concerns." No specific reference is made in this letter to cesium-137 chloride, but there is a reference to GrayStar's having indicated to Mr. Camper that it "would provide further information regarding the development and encapsulation tests of the special form source [GrayStar] intended to use as well as regarding the quality assurance (QA) program and prototype testing for the irradiator."²²

On April 19, 1999, GrayStar submitted a new application dated April 15, 1999.²³ Thereafter, meetings were held with GrayStar on May 11 and July 13, 1999. On July 26, 1999, John P. Jankovich, Senior Engineer with the NMSS Division of Industrial and Medical Nuclear Safety, Materials Safety and Inspection Branch, sent GrayStar a "Request for Additional Information/GrayStar Model 1 Irradiator and Model GS-42 Sources" (RAI).²⁴ In a cover letter, Mr. Jankovich noted that the Model 1 was being evaluated as a Category II irradiator as defined by the American National Standards Institute (ANSI) at Standard N43.10, and that GrayStar's design fell within the scope of 10 C.F.R. Part 36, applicable to "panoramic irradiators that have either dry or wet storage."²⁵ Among the sixty listed information items in the RAI were requests relating to GrayStar's criteria for selecting the form of cesium-137 it had chosen for the GS-42, in the context of the requirement in 10 C.F.R. § 36.21(a)(3) that the "radioactive material [be] as nondispersible as practical"; the amount of cesium-137 chloride to be used in each source; the loading of the source; the failure of the inner seal of the source in testing; the axes used in vibration tests; and source integrity and corrosion issues, including the drying procedure to remove water from source tubes.

On August 11, 1999, a meeting was held at which GrayStar discussed several issues with NRC management, including various reasons GrayStar asserted for classifying the Model 1 as a Category I irradiator, to which the provisions of

²¹ Hearing File, Vol. I, Tab II.A, at 1-2.

²² *Id.*, Tab III.A, at 1.

²³ *Id.*, Tab IV.A *et seq.*

²⁴ Hearing File, Vol. II, Tab V.B.

²⁵ *Id.*, Tab V.A, at 1.

10 C.F.R. Part 36 would not apply.²⁶ Thereafter, on August 12, 1999, GrayStar submitted a written request for additional time to respond, formally requesting that the Model 1 be classified as a Category I irradiator, and noting among other things the ways in which GrayStar contended the Model 1 fell within the criteria for Category I irradiators.²⁷

By letter dated September 10, 1999, from Mr. Jankovich, GrayStar was granted an extension of time and, among other things, notified that NMSS continued to maintain that the Model 1 was a Category II irradiator under ANSI 43.10 and a panoramic irradiator under 10 C.F.R. § 36.2.²⁸ Thereafter, GrayStar continued to assert that the Model 1 was not a panoramic irradiator, but provided information relating to specific issues on the design, testing, filling, and other aspects of the GS-42 sealed source and Model 1 irradiator.²⁹

On May 24, 2000, Mr. Donald A. Cool, Director of the NMSS Division of Industrial and Medical Nuclear Safety, wrote to Mr. Stein, notifying him that GrayStar's request for registration of the GS-42 sealed source was denied and that the remainder of the application was being suspended.³⁰ Mr. Cool's letter states that the Staff found GrayStar's Model GS-42 design "not acceptable for registration and licensing under 10 C.F.R. 32.210 and 10 C.F.R. 36.21," and that GrayStar's application did "not adequately justify [the] choice of cesium-137 chloride powder, a dispersible material." An attachment to the May 24, 2000, letter provided a detailed statement of the basis for denial, which included discussions of dispersibility and testing issues.³¹

In its May 24, 2000, letter, the Staff notified GrayStar of its right to request a hearing under 10 C.F.R. § 2.103(b).³² Thereafter, on June 1, 2000, GrayStar requested reconsideration of the denial and, in the alternative, sought an agency hearing.³³ In a June 8, 2000, letter to Mr. Stein, Mr. Cool declined to reconsider the application, noting that "[t]he proposed Model GS-42 sealed source and the Model 1 irradiator would involve the use of cesium-137 chloride powder, an unacceptably dispersible material," and stating that GrayStar had not adequately

²⁶ Hearing File, Supplemental Documents filed by Staff Sept. 6, 2000, Item 7, Minutes of Meeting with GrayStar, Inc. (Aug. 11, 1999).

²⁷ *Id.*, Item 6, Letter from Stein to Jankovich (Aug. 12, 1999).

²⁸ *Id.*, Item 8, Letter from Jankovich to Stein (Sept. 10, 1999).

²⁹ Hearing File, Vol. II, Tab VI.A, Letter from Stein to Jankovich (Sept. 27, 1999).

³⁰ See Hearing File, Vol. V, Tab VII.A, Letter from Donald A. Cool to Russell N. Stein (May 24, 2000).

³¹ The attachment to the May 24, 2000, letter cited four factors as bases for the Staff's denial: "Dispersibility," "Testing of Sealed Sources," "Sealed Source Construction and Durability," and "The Design Has Not Been Finalized." Hearing File, Vol. V, Tab VII.A. The latter two of these issues were resolved during the course of the proceedings through GrayStar's provision of information that satisfied the Staff's concerns. See NRC Staff's Response to GrayStar's Written Presentation (Oct. 30, 2000) [hereinafter Staff Response] at 26.

³² Section 2.103(b) provides that when the NRC Staff denies an application it must inform the applicant of "(1) [t]he nature of any deficiencies or the reason for the . . . denial, and (2) [t]he right . . . to demand a hearing within twenty (20) days from the date of the notice or such longer period as may be specified in the notice."

³³ Hearing File, Vol. V, Tab VIII.

addressed this point and other matters, “in particular, [by failing] to demonstrate that [the] proposed model designs would adequately protect health and minimize danger to life and property.”³⁴

C. Procedural History

In a Memorandum and Order served June 13, 2000, the Commission referred GrayStar’s request for a hearing to the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel, to designate a member of the Panel to rule on GrayStar’s request for hearing and if necessary to serve as presiding officer to conduct a hearing pursuant to 10 C.F.R. Part 2, Subpart L. On June 16, the Chief Administrative Judge set a deadline for the Staff’s answer to GrayStar’s hearing request. On June 23, the NRC Staff filed an answer indicating that the Staff did not oppose the hearing request of GrayStar.

On July 10, 2000, the Chief Administrative Judge granted the hearing request of GrayStar and issued a Notice of Hearing, which was published in the July 14, 2000, *Federal Register*.³⁵ On July 31, 2000, the Chief Administrative Judge appointed the undersigned to serve as Presiding Officer, and on August 28, 2000, Judge Thomas D. Murphy was appointed as Special Assistant to the Presiding Officer. On August 1, 2000, the Staff filed the Hearing File in the matter, pursuant to 10 C.F.R. § 2.1231. On August 15, 2000, pursuant to an unpublished Order issued August 4, 2000, a telephone conference was held to discuss and clarify the issues to be addressed and determined in this proceeding and to set deadlines for the filing of written presentations by the parties.

Although no intervention petitions have been filed in this matter, prior to the August 15 conference, Donald W. Thayer, Ph.D., Research Leader for the USDA Agricultural Research Service (ARS), indicated some interest on the part of the ARS. Dr. Thayer declared in a letter that the Department’s Eastern Regional Research Center in Wyndmoor, Pennsylvania, had signed a Cooperative Research and Development Agreement with GrayStar, Inc., for the evaluation of the GrayStar irradiator.³⁶ According to Dr. Thayer,

[t]he interest of the ARS is to obtain the use of a unique, pallet-scale, gamma irradiation source with precise irradiation dose and environmental controls for research on 1) a determination of the efficacy of gamma irradiation for the control or elimination of food borne pathogens, and 2) shelf-life extension of various fresh and processed meat, poultry, fruit, and vegetable products.

³⁴ *Id.*, Tab IX.

³⁵ 65 Fed. Reg. 43,789 (July 14, 2000).

³⁶ August 11, 2000, Letter from Donald W. Thayer to Administrative Judge Ann M. Young.

The results of such research were to be published in peer-reviewed journals and were “expected to provide information that will be of value to the food processing industry and to the establishment of regulations by the Food and Drug Administration and the USDA, Food Safety and Inspection Service for the irradiation of foods.” Dr. Thayer stated that the ARS had expended \$642,302.00 for renovation of a building and new laboratory space in anticipation of receiving the GrayStar irradiator.³⁷ Dr. Thayer subsequently indicated that his letter was intended to be treated only as a limited appearance under 10 C.F.R. § 2.1211(a).³⁸

During the August 15, 2000, telephone conference, in addition to discussing the issues in the case and a common outline for addressing them, the parties agreed that the use of cesium-137 chloride was not absolutely foreclosed for use in the Model GS-42 sealed source, provided adequate justification for such use is demonstrated, with the burden being on GrayStar to show that the registration should be granted.³⁹

On September 7, 2000, another telephone conference was held at the request of GrayStar, at which additional issues were raised by both parties, additional documents provided by Staff for the hearing file were noted, and certain deadline extension requests were granted to accommodate these new items.⁴⁰ Thereafter, on September 25, the parties filed their initial written presentations,⁴¹ and on October 30, their responses to each other’s written presentations.⁴² On

³⁷ In his August 11, 2000, letter, Dr. Thayer also declared:

We currently are using a self-contained, dry-storage, irradiator with a rated capacity of 213,000 Ci strength of Cs-137 [, which was] constructed in 1969 and has been in continual use for research on the irradiation of food. The USDA currently has 22 irradiators on its inventory; 13 of these use Cs-137 as the radiation source and are self-contained, dry-storage types. These irradiators have contributed significantly to the progress of agricultural research and the control of insect vectors of disease. Cs-137 is ideally suited for self-contained irradiators because of its 30 year half life. Though the unit described above at this facility has gone through one half-life it is still a very useful system for research. I recently was asked to determine the cost of recharging or replacing a Co-60 unit currently in use at the ARS Plum Island facility and learned that the cost to recharge or replace this unit would be very similar. Because of the 5 year half-life of its Co-60 source the activity of that unit has decayed to the point of being of little value. In order to recharge this irradiator it will have to be decontaminated, removed from the BL4 facility on the island, shipped to the mainland, and then to the Nordion facility in Canada. That unit is used to sterilize meat contaminated with exotic animal diseases such a hoof-an[d]-mouth disease virus or anthrax.

I hope that the value of properly contained Cs-137 sources is not overlooked. Our Cs-137 radiation sources, and I believe all others, are cesium chloride (CsCl) powder doubly encapsulated within stainless steel. The only real limitation of such sources is a lower energy level than that of Co-60. Because of the solubility of the CsCl used in these sources, in the unlikely event of a leak in encapsulation, they probably should only be used in dry-storage irradiators such as the Gray*Star.

³⁸ August 14, 2000, Letter from Donald W. Thayer to Office of the Secretary, NRC.

³⁹ See Presiding Officer’s Order (Setting Schedule for Proceedings and Addressing Other Matters Considered at August 15, 2000, Telephone Conference) (Aug. 17, 2000), at 1 (unpublished); Transcript at 21 (Aug. 15, 2000).

⁴⁰ See Presiding Officer’s Order (Addressing Matters Considered at September 7, 2000, Telephone Conference) (Sept. 14, 2000, unpublished); Transcript at 58-80 (Sept. 7, 2000).

⁴¹ GrayStar, Inc.’s Brief in Support of Application for Registration of Model GS-42 Sealed Source (Sept. 25, 2000) (Corrected GrayStar Brief filed Oct. 3, 2000); Staff Presentation.

⁴² GrayStar, Inc.’s Response to NRC Staff’s Brief Regarding the Application for Registration of Model GS-42 Sealed Source (Oct. 30, 2000) [hereinafter, GrayStar Response]; Staff Response.

November 2, GrayStar filed a request for further proceedings,⁴³ specifically, an additional written filing, along with the presentation of certain visual information illustrating the operation of the Model 1 irradiator and Model GS-42 sealed sources. On November 8, a telephone conference was held to address GrayStar's request.⁴⁴ GrayStar was permitted to file one additional written reply to the NRC Staff, along with photographs and a videotape; the Staff was permitted to file a response;⁴⁵ and these items were timely filed on November 15 and 22, respectively.⁴⁶ Subsequently, the Presiding Officer viewed the videotape in question, and no further proceedings have been deemed necessary in the matter.

II. ANALYSIS

As indicated above, the issues in this proceeding include the following interrelated questions, all of which center on whether the use of cesium-137 chloride as a source for the GS-42 is justified: (A) whether 10 C.F.R. Part 36, and section 36.21(a)(3) in particular, is applicable to the GS-42; if so, (B) whether the GS-42 meets the nondispersibility requirement of section 36.21(a)(3), and (C) whether the design and testing of the GS-42 meet the requirements of 10 C.F.R. § 36.21(a)(2) and (a)(5); and lastly, (D) whether GrayStar has "provide[d] reasonable assurance that the radiation safety properties of the source . . . are adequate to protect health and minimize danger to life and property," as required by 10 C.F.R. § 32.210(c). In resolving these issues, which are addressed below in the order listed, a determination must be made for each whether the Applicant has met its burden of proof,⁴⁷ by a preponderance of the evidence.⁴⁸

Before addressing these issues, it is noted that GrayStar has challenged the Staff's denial not only on its merits, but also on the basis that the Staff has failed to articulate the reasons for the denial. Although the Staff's bases for denial have not always been stated with complete precision, its general position with regard to the matters at issue has been fairly consistent since the first interactions with GrayStar, as illustrated in the chronological history above. In this proceeding, based on its May 24, 2000, denial letter, its September 25, 2000, Written Presentation, and its

⁴³ GrayStar, Inc.'s Request for Further Proceedings Regarding the Application for Registration of Model GS-42 Sealed Source (Nov. 2, 2000).

⁴⁴ See Transcript at 81-155 (Nov. 8, 2000).

⁴⁵ See Presiding Officer's Order (Confirming Matters Addressed at November 8, 2000, Telephone Conference) (Nov. 13, 2000) (unpublished).

⁴⁶ GrayStar Reply; NRC Staff's Reply to GrayStar's November 15 Filing (Nov. 22, 2000) [hereinafter Staff Reply].

⁴⁷ See 10 C.F.R. § 2.1237(b), which provides that "[u]nless otherwise ordered by the presiding officer, the applicant . . . has the burden of proof."

⁴⁸ See *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 720 (1985); *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-99-30, 50 NRC 77, 110 (1999).

October 30 and November 22, 2000, responses to GrayStar's filings, the Staff's asserted reasons for denying approval and registration of the GS-42 are taken to be as follows: (1) The proposed use of cesium-137 chloride caked powder has not been justified under 10 C.F.R. § 36.21(a)(3)⁴⁹ and also does not meet the health and safety requirement of 10 C.F.R. § 32.210(c),⁵⁰ in that (a) GrayStar has not adequately shown how the filling process for the sources would avoid the potential for corrosion inside the source capsules, how the moisture content in the source capsules would be limited to 0.01%, how this would be measured and determined, or what quality control measures would be used to check for internal corrosion and to verify that the moisture content is below 0.01%;⁵¹ (b) GrayStar has not shown that the 6-month frequency of the radiation monitoring it proposes is adequate to identify any leak promptly;⁵² (c) the leak testing of the GS-42 sealed source has not been sufficient to assure that the sources will not leak;⁵³ and (d) GrayStar has not presented a "set of physical parameters" or an adequate safety analysis or probabilistic risk assessment to address the long-term reliability of the GS-42 sealed sources, to identify and analyze the potential failure modes of the GS-42 sealed source, or to support its claim that the caked powder form of cesium-137 chloride it proposes to use is less likely to cause a breach than the block form used in the DOE WESF capsules;⁵⁴ and (2) the heat testing and vibration testing that have been performed on the GS-42 do not meet the double encapsulation and leak-testing requirements of 10 C.F.R. § 36.21(a)(2) and (a)(5), or the health and safety requirements of 10 C.F.R. § 32.210(c).⁵⁵

A. Applicability of Regulatory Provisions

I. 10 C.F.R. Part 36

GrayStar argues that Part 36 is not applicable in this case because it does not by its terms apply to the category of irradiator that best fits the Model 1,⁵⁶ and because GrayStar is seeking not a license under Part 36 but merely a registration under 10 C.F.R. § 32.210.⁵⁷ GrayStar contends that the Model 1 is a Category I irradiator under ANSI Standard N43.10, in that (1) it is a "device" rather than a facility-type irradiator as defined under Categories II, III, and IV of the ANSI standard; and (2) it is self-contained, with sources integral to the shielding, and

⁴⁹ Staff Response at 30-34.

⁵⁰ *Id.* at 24.

⁵¹ *Id.* at 27-29.

⁵² *Id.* at 33.

⁵³ *Id.* at 31.

⁵⁴ Staff Presentation at 9, 20; Staff Response at 32-34.

⁵⁵ Staff Response at 22 n.25, 31, 34-38.

⁵⁶ GrayStar Brief at 68-72.

⁵⁷ GrayStar Response at 2-3.

relies primarily on physical design rather than on operator training and interlocks for safety, as in Category II, III, and IV irradiators. This argument fails, however, because the ANSI definition for Category I irradiators indicates that they are devices in which “[h]uman access to the sealed sources and to the space subject to irradiation is not physically possible.”⁵⁸ Notwithstanding GrayStar’s assertion that it would take conscious effort to gain access, human access to the Model 1 irradiation chamber is possible.

Looking to the terms of Part 36 itself, section 36.1(c) provides that “[t]he regulations in this part do not apply to self-contained dry-source-storage irradiators (those in which both the source and the area subject to irradiation are contained within a device and are not accessible by personnel).” On the other hand, section 36.1(b) provides that the Part 36 requirements do apply to both wet and dry-source-storage “panoramic” irradiators. Section 36.2 includes the following definition:

Panoramic dry-source-storage irradiator means an irradiator in which the irradiations occur in air in areas potentially accessible to personnel and in which the sources are stored in shields made of solid materials. The term includes beam-type dry-source-storage irradiators in which only a narrow beam of radiation is produced for performing irradiations.

Again, even if, as GrayStar argues, it would take some conscious effort for a human being to get or be placed into the irradiation chamber and then be irradiated, the chamber is certainly “potentially accessible to personnel,” and there is nothing in the definition that would except the Model 1. I accordingly find that the Model 1 irradiator is a panoramic irradiator as defined in section 36.2.

GrayStar’s argument that it seeks not a license but merely a registration under section 32.210 has some surface appeal, not only with regard to Part 36 generally but also with regard to section 36.21, the only section of Part 36 at issue in this matter. The title of Part 36 does contain the word “Licenses,” and section 36.21(a)(1) does state that sealed sources installed after July 1, 1993, “[m]ust have a certificate of registration issued under 10 CFR 32.210,” suggesting that registration under section 32.210 is a separate matter from the other requirements under section 36.21. However, the title of Part 36 also contains the words, “and Radiation Safety Requirements for Irradiators,” and the heading for section 36.21 is “Performance criteria for sealed sources.” Also, certain language in the Statement of Considerations (SOC) for the 1993 final rule adopting Part 36 leads to the conclusion that the requirements of sections 32.210 and 36.21 are to be read in conjunction with each other with regard to the performance criteria for sealed sources used in irradiators.

Specifically, in the discussion of section 36.21, the SOC states:

⁵⁸ See 58 Fed. Reg. 7715 (Feb. 9, 1993).

This section lists performance criteria required for sealed sources used in irradiators. Normally the tests used to demonstrate that the criteria can be met are conducted by the source manufacturer, not the irradiator licensee. The manufacturer then applies to the NRC or an Agreement State agency for approval for use in irradiators. If this procedure has been followed, the licensee need only note the manufacturer's name and model of the sources in its license application to demonstrate that the requirement is met.

. . . .

The rule does not specify any requirements for sealed sources installed prior to July 1, 1993. Sources previously installed were approved by NRC on a case-by-case basis under § 32.210, a review which includes consideration of the criteria in American National Standard N542-1977. . . .

Several commenters stated that the performance criteria in this section by themselves are not sufficient to establish the adequacy of the performance of sealed sources in irradiators. The NRC agrees with the comment but notes that the criteria in the section are not the only criteria that the sealed sources must meet. The adequacy of sealed sources is reviewed and approved by NRC under § 32.210 of its regulations. The § 32.210 review is very extensive and considers many factors that could affect the integrity of the sealed sources, including their manufacture and conditions of use, on a case-by-case basis. Because of the large number of factors that must be considered and the special circumstances that could arise, it is not possible to establish specific criteria beyond the basic framework in § 36.21. The NRC believes that this method of sealed source review is adequate. Therefore, no additional changes in § 36.21 were necessary.⁵⁹

The first quoted paragraph suggests that the critical approval of a sealed source occurs when the manufacturer seeks approval, which is taken to mean registration as in this case, as distinguished from the licensing that is subsequently applied for by one other than the manufacturer, most logically the user. The first paragraph also suggests that once the approval is granted to the manufacturer, approval of the registered sealed source in a subsequent licensing proceeding would involve little if any substantive examination of the sealed source (barring user-specific problems),⁶⁰ at least insofar as the requirements at issue are concerned. Thus, registration of the source and approval of a license for its use go hand in hand.

Following the same analysis, GrayStar's argument that section 36.21 does not apply to the GS-42 because it has not yet been installed is also found to have no merit.⁶¹ In light of the quoted language from the SOC, this argument — in effect that GrayStar, the manufacturer of the GS-42, should not be required to address the same requirements applicable to a subsequent purchaser once GS-42 sources have been installed in the Model 1 irradiator, which GrayStar is also constructing — is baseless. Finally, the last quoted paragraph of the 1993 SOC, when read in conjunction with the first, suggests that NRC approval of an application for registration of a sealed source by a source manufacturer (such as GrayStar) would

⁵⁹ 58 Fed. Reg. at 7718.

⁶⁰ GrayStar Reply at 9.

⁶¹ See GrayStar Brief at 11 n.7; GrayStar Response at 6 n.2.

encompass consideration of both the “basic framework” of requirements set forth at section 36.21, as well as the many factors unique to a given source that would be reviewed on a case-by-case basis under section 32.210.

Based upon the preceding analysis, I conclude that Part 36 does apply to the Model 1 irradiator and GS-42 sealed source, except where provisions are clearly limited in their application to wet-source-storage irradiators.

2. *Applicability of 10 C.F.R. § 36.21(a)(3)*

GrayStar’s first argument with regard to section 36.21(a)(3) is that it does not apply to the GS-42 as it would be used in the Model 1 irradiator, because according to its plain meaning the section applies only to wet-source-storage or wet-source-change irradiators.⁶² The provision states:

(a) *Requirements.* Sealed sources installed after July 1, 1993:

. . . .

(3) Must use radioactive material that is as nondispersible as practical and that is as insoluble as practical if the source is used in a wet-source-storage or wet-source-change irradiator;

. . . .

The plain meaning of this language is that *all* irradiators subject to the rule must use radioactive material that is as nondispersible as practical, and that, if the source is used in a wet-source-storage or wet-source-change irradiator, it must use radioactive material that is also as insoluble as practical. As the Staff argues, for the provision to have the meaning GrayStar would give it, it would instead have to read, “Must use radioactive material that is as nondispersible and insoluble as practical, if the source is used in a wet-source-storage or wet-source-change irradiator.”⁶³

Despite the plain meaning of the regulation’s wording, however, there are some NRC guidance documents containing essentially the interpretation argued by GrayStar. Specifically, in NUREG-1550, it is stated:

Persons specifically licensed to use sealed sources in irradiators are only authorized to use sealed sources that meet the requirements of 10 CFR 36.21. One such requirement is that the licensed material be as insoluble and nondispersible as practicable if used in a wet-source-storage or wet-source-change irradiator.⁶⁴

⁶² GrayStar Brief at 73; GrayStar Response at 7-8; GrayStar Reply at 3.

⁶³ Staff Response at 14.

⁶⁴ NUREG-1550, “Standard Review Plan for Applications for Sealed Source and Device Evaluations and Registrations” (Nov. 1996), at 16.

The same language also appears in NUREG-1556.⁶⁵ Additionally, the following language is found in Draft Regulatory Guide DG-0003:

In general, the use of cesium-137 chloride is not acceptable in pool (Category III and Category IV) irradiators or (Category II) dry-source-storage irradiators that load or unload sources under water at the irradiator because it does not meet the requirements of 10 CFR 36.21(a)(3).⁶⁶

GrayStar also relies on some of the regulatory history preceding the adoption of section 36.21(a)(3) to support its reading of the section, including comments by Commissioner Greta Dicus and then-Chairman Ivan Selin. During a 1991 meeting, Commissioner Dicus recommended that cesium-137 chloride not be excluded as a source material “so long as it is appropriately encapsulated in appropriate form for the kind of irradiator that it is going to be used in.”⁶⁷ And in a 1992 meeting, then-Chairman Selin stated as follows:

The effective prohibition of the use of radioactive cesium as a source material (except on a case-by-case basis) applies for both wet and dry irradiator applications. The justification for this is primarily the recent incident involving a leaking cesium source in a pool facility in Georgia. The justification for this requirement for dry irradiator facilities should be discussed in the rulemaking package.⁶⁸

GrayStar argues that the Staff’s failure to follow up by providing justification for the requirement for dry irradiators in the final rule, which was changed from the originally proposed, “[m]ust use radioactive material that is as insoluble and nondispersible as practical,” to the present reading, supports its reading of the rule.

Although the language quoted above from the guidance documents illustrates some confusion around the issue of the applicability of section 36.21(a)(3) to dry-source-storage irradiators, and although no justification for or clarification of the prohibition for dry-source-storage irradiators was discussed in the 1993 SOC for Part 36 as directed by Chairman Selin, there has been no showing that interpreting the regulation according to its plain meaning would produce an absurd or similar undesirable result. Moreover, interpretation from such guidance

⁶⁵ NUREG-1556, Vol. 3, “Consolidated Guidance About Materials Licenses — Applications for Sealed Source and Device Evaluation and Registration” (Sept. 1997), at 4-9.

⁶⁶ Draft Regulatory Guide DG-0003, “Guide for the Preparation of Applications for Licenses for Non-Self-Contained Irradiators,” at 3-5.

⁶⁷ Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation Meeting “Licenses and Radiation Safety Requirements for Large Irradiators,” Transcript at 52 (Feb. 12, 1991).

⁶⁸ SRM-921027, Staff Requirements-Affirmation Session/Discussion and Vote, 10:30 a.m., Oct. 27, 1992, encl. 3, at 1 (“Chairman Selin’s Comments on SECY-92-323”).

and history “may not conflict with the plain meaning of the wording used in [a] regulation,” which in the end “of course must prevail.”⁶⁹

Based upon the preceding analysis, I find GrayStar’s arguments to be without merit, and conclude that 10 C.F.R. § 36.21(a)(3) does apply to the GS-42 sealed source. GrayStar must therefore establish, under section 36.21(a)(3), that the GS-42 sealed source will use “radioactive material that is as nondispersible as practical.”

With regard to what is required in making such a showing, the Staff argues that “[i]t is not the sealed source encapsulations which must be as nondispersible as practical. Rather, the regulation requires that sealed sources installed after July 1, 1993, must use ‘radioactive material that is as nondispersible as practical.’”⁷⁰ However, the Staff has agreed that the use of cesium-137 chloride is not absolutely foreclosed for use in the GS-42 sealed source, provided adequate justification for such use is demonstrated by GrayStar.⁷¹ The Staff has given examples, in a telephone conference, of circumstances that might in its view constitute adequate justification for the use of cesium-137 chloride: first, if cobalt became unavailable because there was no cobalt to be found; and second, if a single irradiator needed replacement sources, in a limited circumstance.⁷²

The Staff has also cited language in the 1993 SOC for Part 36 to the effect that “[t]he NRC has decided not to approve further use of cesium sources, although the term ‘as practical’ would allow the NRC to make an exception where justified to the NRC.”⁷³ This language, although perhaps not the first interpretation of section 36.21(a)(3) that would spring to mind based upon its actual words, is not inconsistent with the words of the section. Therefore, having been endorsed by the Commission in its 1993 SOC, it is entitled to “special weight” under relevant case law.⁷⁴ As such, it supports the Staff’s argument to the effect that section 36.21(a)(3) is to be construed to require a high level of justification for the use of any form of cesium — a “very strong presentation . . . that it would be safe

⁶⁹ See *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 288-90 (1988), *review declined*, CLI-88-11, 28 NRC 603 (1988). It is noted that the Staff filed with its Oct. 30, 2000, Response, the affidavit of Stephen A. McGuire, who according to the affidavit was the principal author of Part 36, the SOC for it, and the 1994 Draft Regulatory Guide DG-0003, and who states that the statement in DG-0003 is “not accurate.” McGuire further states in his affidavit that he does not recall why he included this statement in the Guide; that his erroneous statement was not included in Volume 6 of NUREG-1556, “Consolidated Guidance About Materials Licenses — Program-Specific Guidance About Materials Licenses, Final Report” (Jan. 1999), which states at page 8-5 that, for any sealed source not yet installed in an irradiator, the source “must meet the requirements” of 10 C.F.R. § 36.21; and that he views this statement as correcting his 1994 error. Although the corrective nature of this later statement is not completely self-evident, the words of the rule must prevail over all such guidance in any event, as indicated in the text.

⁷⁰ Staff Response at 21 (emphasis supplied by Staff).

⁷¹ Transcript at 21 (Aug. 15, 2000).

⁷² Transcript at 119-20, 129 (Nov. 8, 2000).

⁷³ 58 Fed. Reg. at 7718.

⁷⁴ *Shoreham*, ALAB-900, 28 NRC at 290-91.

to use cesium chloride powder” in the GS-42.⁷⁵ At the same time, the use of the word “practical” in section 36.21(a)(3) suggests that considerations of the sealed source form, proposed usage, and encapsulation design, along with other relevant factors, are also appropriate in determining whether a sealed source meets the requirement of the section.

B. Whether the GS-42 Sealed Source Meets the “as Nondispersible as Practical” Requirement of 10 C.F.R. § 36.21(a)(3)

GrayStar proposes that, as the source material for the GS-42, it will use cesium-137 chloride caked powder. Thus, as indicated above, it must meet a rigorous standard of showing that such use of cesium-137 chloride would be safe, and “as nondispersible as practical.” Whether or not the standard of justification should be quite so stringent as illustrated by the Staff’s two examples, the Staff’s view that the primary concern is the hazard that would be posed by any leak of cesium-137 chloride because of its dispersibility⁷⁶ is found to be persuasive, especially in view of the very high radiological content of each GS-42 sealed source and of the Model 1 irradiator as designed, with its sixty-four sealed sources. Therefore, as the Staff contends,⁷⁷ in making the “nondispersibility” determination required under section 36.21(a)(3), it is appropriate to consider not only methods of preventing leaks in the GS-42, but also the manner in which any leak that did occur would be mitigated to prevent and limit any dispersion of the source.

GrayStar asserts that the cesium-137 chloride to be used in the GS-42 meets the nondispersibility requirement of section 36.21(a)(3) by virtue of several factors. These may be grouped into two categories: (1) the properties of cesium-137 chloride caked powder as compared to other source materials; and (2) design features of the GS-42 sealed source. GrayStar’s argument on both of these categories is presented in the context of the above-described design features of the Model 1 irradiator, which are asserted by GrayStar to assure the nondispersibility and safety of the cesium-137 chloride in the GS-42 even further.

1. GrayStar’s Reasons for Choosing Cesium-137 Chloride for GS-42 Sealed Sources

GrayStar states that it chose cesium-137 chloride as the source for its irradiator over cobalt-60, which occurs as a solid metal and is used in irradiators in the form of metal rods (or, in times past, pieces of metal wire), “in order to obtain

⁷⁵ See Transcript at 9 (Aug. 15, 2000).

⁷⁶ See Staff Response at 23.

⁷⁷ *Id.* at 33.

the health and safety advantages inherent in [the] Model 1 irradiator's modular, standardized design approach."⁷⁸ Because it emits gamma rays with lower energy than cobalt-60 (0.662 MeV as compared to an average 1.25 MeV), cesium-137 does not require as much heavy shielding and can be more easily transported than any irradiator using cobalt. In this regard, GrayStar asserts that the 167-ton weight of the GraySafe using cesium-137 chloride — as compared to an estimated 300-ton weight if the Model 1 used cobalt-60 — is the upper limit of what is commercially transportable to food producers on a practical basis.⁷⁹ In addition, cesium-137 was chosen because, as noted above, its longer half-life avoids the need for either frequent onsite loading of new sources or frequent transporting of the irradiator to be reloaded, both of which GrayStar argues would involve increased risk of radiation exposure to workers and the public in violation of the NRC's as low as reasonably achievable (ALARA) policy, as well as undermine the commercial utility and practicality of the irradiator.⁸⁰

According to GrayStar, most injuries involving exposure to radiation in cobalt irradiators have occurred when a person walked into an irradiation chamber when the sources were exposed because interlock protection systems had failed. In contrast, says GrayStar, the Model 1 is "designed to make such accidents physically impossible," by making the sources integral with the shielding, so that they cannot be moved independently of the shielding material, and cannot physically be raised into the chamber when the chamber door is open.⁸¹ GrayStar asserts that the only way that a human being could be exposed to the radiation sources in the Model 1 irradiator would be for a person to go or be placed into the chamber and for another person then intentionally to close the chamber doors, put the handle keys into the console and turn them to raise the "door source" box and sources until the sources surrounded and irradiated the chamber. As compared to a large cobalt-60 facility-type irradiator, because of the Model 1's small size there would be no way for an operator to miss seeing a person inside its irradiation chamber, no easy entry by a person at any time, and no room for such entry while a food product was in the chamber to be irradiated.⁸²

In comparing cesium-137 chloride to cobalt as a source, GrayStar also cites NUREG/CR-6642 for the proposition that "[t]he accident risk for the Co-60 device is larger than that for the Cs-137 device because of the larger assumed source strength. While the form of the Cs-137 is more prone to spreading contamination if the encapsulation fails, this is not a major risk contributor."⁸³

⁷⁸ GrayStar Brief at 27.

⁷⁹ *Id.* at 22, 27-30.

⁸⁰ *Id.* at 30.

⁸¹ *Id.* at 25-26.

⁸² *Id.* at 23.

⁸³ GrayStar Response at 19; NUREG/CR-6642, "Risk Analysis and Evaluation of Regulatory Options for Nuclear Byproduct Material Systems," Section 3.0, Vol. 2, SCIE-NRC-379-99, at 3-446 (Feb. 2000).

However, this statement is made in the context of evaluating cobalt systems with a typical source strength value of 9000 Ci and cesium-137 chloride systems with a typical source strength value of 2000 Ci. This is far lower than the 51,500 Ci strength of the GS-42 sealed source (double the highest licensed source strength of 22,500 Ci cited in the report),⁸⁴ which is proposed to be used in an irradiator with a total strength of approximately 3 million Ci. Therefore, the quoted statement cannot be given great weight in the context of this case, given that the consequences of a GS-42 capsule failure would be significantly greater than a failure of a 2000 Ci source or even a 22,500 Ci source.

GrayStar also chose to design an irradiator that uses cesium-137 as the source rather than one using either electron beam or x-ray radiation. According to GrayStar, it did not choose to use electron beams because they have limited ability to penetrate food, thus limiting the amount of food that could be irradiated at one time. Further, GrayStar determined that the use of x-ray technology is prohibitively costly.⁸⁵

What GrayStar has chosen to use as a source, as indicated above, is cesium-137 chloride, which is used in some already-licensed irradiators. GrayStar chose to use this salt form over other forms of cesium, and also chose to use a particular form of cesium-137 chloride. Cesium is a metallic element that occurs naturally in the form of monovalent cesium salts and oxides; it does not, according to GrayStar, ever take the form of a solid metal.⁸⁶ Most forms of cesium are water soluble. At least one form — cesium dispersed in glass by vitrification — is not water soluble, but GrayStar chose not to use this because it would require a greater amount of material to achieve the same irradiation levels as cesium-137 chloride. This would, in turn, cause greater heat generation, resulting in thermal stresses on source encapsulations, operating temperatures beyond the Model 1 design basis, and possible shattering of the glass upon cooling with resulting small fragments available for leakage. Also, GrayStar states that the complexity of producing compounds other than cesium-137 chloride would cause “major difficulties and complexities in hot cell operations for source preparation.”⁸⁷

Cesium chloride takes the form of a crystalline solid, which can range in form from a block to coarse crystals to a fine powder.⁸⁸ The block form of cesium-137 chloride (formed by a melt-cast process) has been shown to swell with increased temperature, thereby placing potentially significant stress on steel encapsulation containers and actually causing a breach in one such container (the

⁸⁴ NUREG/CR-6642, Vol. 2 at 3-440, 3-444.

⁸⁵ GrayStar Brief at 28.

⁸⁶ *Id.* at 14.

⁸⁷ *Id.* at 32.

⁸⁸ *Id.* at 14-15.

DOE WESF cannister⁸⁹) in the 1980s. Based on these factors, GrayStar chose not to use the block form of cesium-137 chloride. Instead, it proposes to use cesium-137 chloride in a “caked powder” form, which, it argues, would be more “deformable” or flexible than the block form and have other advantages as well.

This caked-powder form would be produced by creating a cesium-137 chloride and distilled water solution and then evaporating the water by heating the solution in the source container, a doubly-encapsulated stainless steel tube that is described below in greater detail. GrayStar asserts that because this cake form would have the ability to flow and conform within the encapsulation, it would avoid the stresses caused by the block form of cesium-137 chloride used in the 1980s.⁹⁰ GrayStar argues that the solid cake form would also be less likely to be dispersed from any container breach or rupture than would occur with a granular crystal salt (in a state similar to table salt). It notes as well that even cobalt-60 sources can leak and thus be dispersed.⁹¹ In addition, GrayStar states that any stressing temperature changes will be avoided by maintaining the sources in the GS-42 at a consistent temperature, in part through the dry-storage aspect of the design, which will prevent the sort of thermal cycling involved in water storage of sources with attendant cooling (and shrinking) of the source while in the water and heating up (and swelling) of the source while out of the water for irradiation. Dry storage is also asserted to exclude the potential for dispersal in water, and to reduce the potential for corrosion of the source capsules.⁹² According to GrayStar, periodic radiation surveys, proposed to occur every 6 months, would detect any leakage that did occur and allow for remedial action to be taken.⁹³

2. *Staff Concerns on Use of Cesium-137 Chloride*

The Staff acknowledges the drawbacks in the need for heavier shielding and more frequent source changes with cobalt irradiators as compared to irradiators using cesium, but contends that the Commission was aware of these factors and the weight-transportability issue with cobalt irradiators when it established the performance criteria of 10 C.F.R. § 36.21 in 1993, including its “qualified ban on any new use — in panoramic irradiators [such as the Model 1] — of sealed sources

⁸⁹ See 58 Fed. Reg. at 7716. In the SOC for Part 36, the Commission discusses the failure of the WESF capsule (*see also* note 20 above), the subsequent removal of all such sources from irradiators, and concludes the discussion of this subject by noting that, “[a]s a consequence, this final rule was written to require that irradiators use radioactive materials that are as insoluble and nondispersible as practical (typically cobalt-60).” *Id.*

⁹⁰ See GrayStar Brief at 15-16.

⁹¹ See *id.* at 15-17. GrayStar cites NUREG-1345, “Review of Events at Large Pool-Type Irradiators” (Mar. 1989), at 11 for its reference to “several source leakage events [that] have been reported for cobalt-60 sources used in water pool irradiators.” *Id.* at 14 n.10.

⁹² *Id.* at 16-17, 21, 23-24.

⁹³ *Id.* at 18.

containing dispersible cesium [without] substantial justification.’’⁹⁴ According to the Staff, ‘‘[t]he Commission determined that the safety hazards associated with leaks of dispersible cesium chloride, even though the leaks were infrequent, justified restricting its use.’’⁹⁵ The Staff asserts that GrayStar has not justified its proposed use of the dispersible cesium-137 chloride caked powder, stating that the primary safety concern with the use of cesium-137 chloride ‘‘is its dispersibility once a leak occurs, rather than [its] potential to *cause* a leak.’’⁹⁶

The Staff argues that the longer half-life and decay time of cesium-137, combined with its dispersibility, could actually present an increased risk in comparison with cobalt-60 if a leak or other safety problem occurred, including the possible increased risks associated with a proliferation of smaller (noncobalt) irradiators ‘‘in the vicinity of food processors, whose personnel have no previous training or experience with radiation safety.’’⁹⁷ The Staff has also questioned the adequacy of GrayStar’s safety analysis and probability risk assessment, arguing that it has failed adequately to address the long-term reliability of the GS-42 sealed source, to identify and analyze potential failure modes, and to present a set of physical parameters in quantified terms to support its claim that the caked powder form of cesium-137 chloride would be less likely to cause a breach than the block form used in the WESF capsules.⁹⁸ And the Staff asserts that the 6-month radiation monitoring schedule is not frequent enough to detect and address promptly any leaks that might occur.⁹⁹

The Staff contends that, notwithstanding all the factors GrayStar asserts to justify using cesium-137 chloride in the GS-42, cesium-137 chloride powder — even in its ‘‘caked’’ form — is dispersible, not only in water but also in air, by physical forces such as air turbulence, physical contact, fire, or explosion, should there be a leak in any of the source capsules.¹⁰⁰ Indeed, the Staff asserts, the caked powder form of cesium is more likely to leak out of a breach than is the block form used in the WESF sealed sources, identified by the Commission as a safety concern in 1993 when Part 36 was adopted.¹⁰¹ The Staff asserts that the Commission’s nondispersibility requirement ‘‘reflects its general defense-in-

⁹⁴ Staff Presentation at 8-9; *see also* Staff Response at 30.

⁹⁵ Staff Response at 31. The Staff’s assertions that GrayStar’s arguments comparing cesium sources to cobalt are in effect a challenge to the regulations, *see* Staff Presentation at 9-10, Staff Response at 31, need not be addressed in this decision, as GrayStar’s arguments are taken as challenging not the rule itself but rather the applicability of it to the GS-42 and, more specifically, as raising issues of what constitutes appropriate justification for the use of cesium-137 chloride under the ‘‘as nondispersible as practical’’ language of section 36.21(a)(3). To the degree GrayStar’s arguments challenge the NRC interpretation of the rule as expressed in the SOC for Part 36, this may be raised with the Commission in any appeal that may be taken from this decision.

⁹⁶ Staff Response at 32 (emphasis in original).

⁹⁷ Staff Presentation at 9 n.4.

⁹⁸ *Id.* at 9, 20; Staff Response at 32-34.

⁹⁹ *Id.* at 9, 20; Staff Response at 32-34.

¹⁰⁰ Staff Response at 2-3.

¹⁰¹ *Id.* at 32; *see also* 58 Fed. Reg. at 7716; Staff Response at 4; *supra* note 89.

depth philosophy, in that it assumes sealed sources will leak, and guards against the consequences caused by the spread of radioactive material *after a breach occurs*.”¹⁰²

GrayStar’s argument that the irradiator could be moved off site in its own cask if there were a radiation leak, and that this is a mitigating factor, is also viewed by the Staff as inadequate justification for using cesium-137 chloride because of the uncertainty of whether any leak would necessarily be confined to the irradiator, and of whether transportation of an irradiator with a leaking source could in fact be safely undertaken.¹⁰³ GrayStar has stated that the design of the Model 1 would allow for a leak to be addressed on site, off site, or both, as necessary,¹⁰⁴ but has not provided any specifics of how this would be accomplished.

3. Size of GS-42 Sealed Sources and Model 1 Irradiator

The issue of the size of the Model 1 and the GS-42 sealed sources and their radiological content in comparison with smaller cesium irradiators is a central issue for the Staff. As indicated above, each Model 1 irradiator is designed to contain sixty-four individually sealed cesium-137 chloride sources, each encapsulated in double stainless steel tubes, with a total strength of 3 million Ci.¹⁰⁵ One example of the currently existing smaller NRC-licensed irradiators that use cesium-137 chloride (also in dry storage) is that used by the USDA/ARS in Pennsylvania, which has a total licensed strength of 250,000 Ci.¹⁰⁶ Most smaller irradiators that use cesium-137 as a source contain 30 Ci per source, much less than the 51,500 Ci per source contemplated for the GS-42.¹⁰⁷

Declaring that it has studied the operational history of existing and past irradiators that use cesium-137 as a source, GrayStar asserts that the GS-42 has been designed to take advantage of some of the better design features of smaller cesium irradiators, including making the sources integral parts of the irradiator devices, using self-shielding, and using a smaller irradiation chamber than cobalt irradiators use. GrayStar asserts that, just as with smaller cesium irradiators, any leak in a source in the GS-42 would be localized to that source alone, and the solid cake form of the source would prevent dispersal of the source.¹⁰⁸ According to GrayStar, there are no everyday mechanisms “with the obvious potential to cause

¹⁰² Staff Response at 32 (emphasis in original).

¹⁰³ Staff Presentation at 13.

¹⁰⁴ GrayStar Response at 16-17.

¹⁰⁵ GrayStar Brief at 19, 20 n.13.

¹⁰⁶ *Id.* at 18-19 (citing USDA Materials License (NRC), Amendment 55, Docket No. 030-06923).

¹⁰⁷ Staff Presentation at 6 (citing Staff’s May 24, 2000, Denial Letter, Attachment 1, Hearing File Vol. V, Tab VII.A).

¹⁰⁸ GrayStar Brief at 19.

a large breach or rupture'' of multiple sources,¹⁰⁹ as evidenced by the hundreds of cesium chloride irradiators that have operated without problems for more than 30 years. Moreover, GrayStar contends, with the WESF sources, there was only one leak out of 766 sources in four irradiators with water storage of sources that were used for many years, and this leak ultimately released 8 Ci out of a source containing over 50,000 Ci in water, which was much less severe than several leaks in cobalt sources.¹¹⁰

While not discounting the importance of the operational history of smaller cesium irradiators, the Staff argues that it is not transferable to the GS-42, given the large difference between the 30 Ci sources generally utilized in the smaller irradiators, and the 51,500 Ci radiological activity of one GS-42 sealed source.¹¹¹ According to the Staff, because each GS-42 capsule would contain substantially more radioactive material than sources in the smaller cesium irradiators, ''the potential exists that more material would disperse'' from a single GS-42 capsule than from a single smaller source capsule.¹¹² The Staff points out that the amount of material that leaks in any given situation also depends upon circumstances such as the size of a breach in a capsule; heat and pressure buildup in a defective source; the existence of air turbulence, fire, or explosion in the irradiation chamber to disperse the material; and how long it takes before a leak is identified.¹¹³

GrayStar, however, contends that the encapsulation design for the GS-42 renders the cesium-137 chloride that is proposed to be used in it ''as nondispersible as practical.'' It is thus appropriate to consider in some detail this design.

4. Design of GS-42 Capsules

Each GS-42 sealed source is designed to be encapsulated in a stainless steel tube that is in turn encapsulated in another, slightly larger stainless steel tube. The overall length of the tubes would be either 46.47 inches or 38.47 inches long; the Model 1 irradiator would contain thirty-two capsule tubes of each size.¹¹⁴ The shape of a cross section of each of these tubes is an elongated oval, with flat sides. The inner tube is approximately 2.75 inches across the long dimension of its cross section, and approximately 1 inch across the short dimension. The flat sides of the long dimension of the inner tube extend approximately 1.75 inches before rounding at each end into a curve with a radius of slightly less than 0.5 inch. The outer tube is approximately 3 inches across the long dimension of its

¹⁰⁹ *Id.*

¹¹⁰ GrayStar Response at 18.

¹¹¹ Staff Presentation at 7.

¹¹² Staff Response at 34.

¹¹³ *Id.* at 33.

¹¹⁴ Hearing File, Vol. V, Tab VI.F.1, September 1999 Application for Sealed Source and Device Evaluation and Registration, Revision 01, at 10.

cross section, and approximately 1.25 inches across the short dimension. The flat sides of the outer tube, corresponding with the flat sides of the inner tube, extend approximately 2 inches before rounding at each end into a curve with a radius of slightly more than 0.5 inch.¹¹⁵ The thickness of the stainless steel of which the tubes are made is 0.049 inch.¹¹⁶

According to GrayStar, although the elongated oval tubes are more expensive and difficult to manufacture than are the cylindrical capsules that are traditionally used for irradiator sources, they are more efficient than cylindrical capsules, for the following reasons: (1) the radioactive material in the center of a cylindrical capsule is significantly shielded by the rest of the source material and thus more source material must be used to achieve the same levels of radiation; (2) there is more of the source material to leak out of a cylindrical capsule in the event of a breach in the capsule; and (3) increased decay heat buildup can lead to increased thermal stress and potential source failure in a cylindrical capsule. In contrast, the shape of the GS-42 capsules serves to decrease the amount of self-shielding, reduce the operating temperature, and reduce the total amount of source material required to provide a given level of radiation.¹¹⁷

GrayStar also contends that the endcaps for the capsule tubes are designed to minimize any transfer of stress to the source tubes, first, by making the endcaps the sole load-bearing point of the encapsulations and the only part of the capsule designed to retain the source, and second, by dovetailing the endcaps with the source racks, thereby preventing the capsules from coming loose and falling from the racks.¹¹⁸ These factors, together with the dry-source storage and elimination of significant thermal cycling, the isolation of sources and containment of sources in their own shipping cask (the “Graysafe”) as described above, the use of stainless steel 316L even when not required for dry-source storage irradiators, and the GrayStar source filling methods described below, are asserted to make the cesium-137 chloride source in the GS-42 “as nondispersible as practical.”¹¹⁹

The assembling and filling process planned for the GS-42 capsules may be summarized as follows: All seams between the tubes and their respective endcaps are welded, leaving only two small threaded penetrations, one through an endcap of the inner capsule and one through the corresponding endcap of the outer capsule. Weld inspection is performed using nondestructive examination methods such as dye-penetrant testing, under “full NQA-1 Quality Assurance requirements [as requested by NRC Staff] to further ensure the nondispersibility of the cesium-137 chloride.”¹²⁰ After testing has been performed, the capsules

¹¹⁵ Hearing File, Vol. II, Tab IV.J.

¹¹⁶ GrayStar Brief, Attachment A at 9.

¹¹⁷ GrayStar Brief at 37-38.

¹¹⁸ *Id.* at 38-39.

¹¹⁹ *Id.* at 34-45.

¹²⁰ *Id.* at 34-36.

are to be introduced into a “hot cell” at a government laboratory, where they would be filled using a mechanism designed so that no radioactive material would come in contact with the threads of either of the penetrations left open, or with any part of the annulus between the two tubes.¹²¹ The GS-42 capsules are to be partially, or “low density,” filled, to allow for accommodation of any expansion of the cesium-137 chloride. The cesium-137 chloride solution would next be evaporated through a heat and vacuum process; GrayStar’s quality assurance plan, designated as “ASME-NQA-1,” is asserted to ensure a maximum moisture content of 0.01% by weight.¹²² The sources would then be purged with dry helium to remove any elements of ambient air that might interact with the cesium-137 chloride. Helium’s heat transfer properties are asserted to reduce material operating temperatures even further.¹²³ Two mechanical seals would then be “torqued down with high pressure to ensure the plug is permanent,”¹²⁴ followed by “an additional redundant step of adding a seal weld around the outside mechanical seal.”¹²⁵

GrayStar asserts that its examination, testing, and filling procedures will ensure source capsule integrity, and that its double-encapsulation design will meet the NRC’s defense-in-depth approach.¹²⁶ GrayStar further supports the safety of the GS-42 by pointing out that the GS-42 was designed in accordance with the IAEA Safety Standards, Safety Series No. 6, 1985 Edition (As Amended 1990), which states “[s]pecial form radioactive material shall mean either an indispersible solid radioactive material or a sealed capsule containing radioactive material.”¹²⁷ Finally, GrayStar notes that its quality assurance program for “radioactive material packages” has been approved by the NRC.¹²⁸

5. Staff Concerns Related to Design of GS-42 Sealed Source

Acknowledging that “GrayStar made a ‘good faith’ effort to design its sources so that leaks are unlikely,” the Staff nonetheless maintains that because all sources are required to be designed so that leaks are unlikely, its design process

¹²¹ *Id.* at 34-36, 41.

¹²² *Id.* at 62.

¹²³ *Id.* at 39-40.

¹²⁴ *Id.* at 36.

¹²⁵ *Id.* at 37.

¹²⁶ *Id.* at 34-35, 39-40.

¹²⁷ GrayStar Response at 14 (citing IAEA ¶¶ 502-504). GrayStar has also noted IAEA Safety Series No. 107, Radiation Safety of Gamma and Electron Irradiation Facilities (1992), which defines “sealed source” as “[r]adioactive material sealed in a capsule that is strong enough to prevent dispersion of the radioactive material under the conditions for which it was designed,” and argues, vis a vis the Staff’s position in the alternative that the fact of using cesium-137 chloride itself makes compliance with the nondispersibility requirements of 10 C.F.R. § 36.21(a)(3) essentially impossible, that “to regulate the use of CsCl based solely on the material itself and not the encapsulation defies the whole purpose of ‘sealed source’ designation.” GrayStar Reply at 2-3 n.1.

¹²⁸ GrayStar Response at 15.

for the GS-42 does not relieve GrayStar from justifying “the use of dispersible cesium-137 chloride material.”¹²⁹ According to the Staff, no matter how well designed the GS-42 sealed source is, problems associated with the proposed use of cesium-137 chloride in it mandate that the requested registration be denied. In addition to problems of dispersibility in air if a leak occurred, radiation surveys that are too infrequent, and inadequate safety analysis and probability risk assessment, the Staff raises questions about the testing of the sources, and the potential for corrosion inside the capsules.¹³⁰

Testing issues are discussed below. With regard to potential corrosion, the Staff challenges the filling process, noting that introducing a solution of chloride ions, which are corrosive, into stainless steel capsules “has the potential to compromise the structural integrity of the encapsulation.”¹³¹ Even though GrayStar proposes to analyze the moisture content in simulated encapsulations prior to filling of the actual capsules,¹³² the Staff asserts that GrayStar has not established that there would be adequate quality control measures to assure that there would be no internal corrosion and that moisture content would be below 0.01%.¹³³

6. *Conclusions on Whether GS-42 Meets Requirement of 10 C.F.R. § 36.21(a)(3)*

GrayStar has not justified the use of caked powder cesium-137 chloride in the GS-42 sealed source. This conclusion is based on GrayStar’s failure to establish by a preponderance of the evidence that the cesium-137 chloride, as proposed to be used in the GS-42 sealed sources, is “as nondispersible as practical.” First, GrayStar has not established by a preponderance of the evidence that there would be adequate quality control measures to assure that moisture in the capsules would be within the 0.01% limit. As argued by the Staff, absent such measures, the potential for corrosion within a capsule, which could occur if there is moisture in the capsules and which would increase the risk of a leak, is an unresolved issue directly related to dispersibility.

Second, GrayStar has not established by a preponderance of the evidence that the probability risk assessment it has done adequately addresses the unique circumstances related to the risks associated with the GS-42 as it would be used in the Model 1 irradiator. Specifically, GrayStar has not sufficiently addressed the concerns raised by the Staff relating to the use of cesium-137 chloride caked powder, the factors that could influence the dispersibility in air of the cesium-137

¹²⁹ See Staff Response at 34.

¹³⁰ *Id.* at 22 n.25, 26, 29.

¹³¹ *Id.* at 27, 29.

¹³² GrayStar Brief at 63.

¹³³ Staff Presentation at 17 *et seq.*; Staff Response at 29.

chloride powder if a breach occurred, the size and radiological strength of the GS-42 and the Model 1 irradiator in which it will be used, and the design of the GS-42 as related to source-filling and testing.

Third, GrayStar has not established by a preponderance of the evidence that radiation monitoring would be frequent enough to detect adequately and/or most effectively mitigate any leaks that might occur. It is evident that if a capsule failure did occur, cesium-137 chloride could leak out, even at a very slow rate, over the course of 6 months. Finally, although questions relating to testing of the sources are addressed in the next section, the findings and conclusions drawn therein are also relevant to the justification issue under section 36.21(a)(3), in that they relate to the potential for leaks and mitigation of any leak that could occur. In this regard, GrayStar has not established by a preponderance of the evidence that adequate testing has been completed to justify the use of cesium-137 chloride in the GS-42.

All of the preceding conclusions are reached in the context of the very high radiological content of the GS-42 sealed sources as they are proposed to be used in the Model 1 irradiator, and of the proposed usage of the Model 1 irradiators in many food production facilities by relatively untrained personnel. In this context, although GrayStar has developed an innovative and unique design, it is appropriate to require a high standard of justification for the use of cesium, especially in the inherently dispersible form chosen by GrayStar. Although I do not conclude herein that the GS-42 could never meet such a high standard, I do conclude that GrayStar has not made such a showing in this proceeding.

C. Whether the Design and Testing of the GS-42 Meet the Requirements of 10 C.F.R. § 36.21(a)(2) and (a)(5)

Section 36.21(a)(2) provides that sealed sources installed after July 1, 1993, “must be doubly encapsulated.” Section 36.21(a)(5) provides that sealed sources “[i]n prototype testing . . . must have been leak tested and found leak-free after each of the tests described in paragraphs (b) through (g) of [section 36.21].” Paragraph (b) of section 36.21 concerns temperature testing, including a thermal shock test; paragraph (e) has to do with vibration testing. The Staff questions two aspects of GrayStar’s testing of the GS-42 sealed source: (1) the failure of the inner seal plug of the GS-42 capsule during part of the thermal shock testing, which was not followed up by a correction to assure that the inner seal plug was leak-free after testing, and which the Staff asserts does not fulfill the requirements of subsections (a)(2) and (a)(5) of section 36.21; and (2) the failure to do vibration

testing on the third axis of the capsule tubes, which the Staff asserts does not fulfill the requirement of section 36.21(a)(5).¹³⁴

GrayStar has had various tests performed on the GS-42 sealed source capsules, including parameters for temperature, pressure, impact, vibration, puncture, and bending.¹³⁵ The temperature and vibration parts of the testing were conducted by Smithers Scientific Services, Inc., of Akron, Ohio, or by its subcontractor, Peterson Heat Treating of Kent, Ohio.¹³⁶

1. Temperature Testing

During the heat testing of the GS-42 sealed sources, two outer capsule leaks developed, and one inner capsule failure occurred. The leaks in the outer tubes occurred during tests performed by Peterson Heat Treating. Prior to testing, stainless steel plugs were welded in the outer blind endcap test holes. A very large calibrated gas fire furnace was used to heat two source assemblies to 800°C. The source assemblies were stacked on top of each other in a horizontal configuration similar to the vertical position designed for the Model 1 irradiator. After 1 hour at temperature the assemblies were removed to cool prior to integrity testing. No leaks were detected at this point, despite some anticipated ballooning; the nonradioactive cesium chloride used during the test had become molten and flowed to the bottom of the source capsules where it solidified upon cooling. Plugs were again seal-welded into the outer blind endcap test holes, and the assemblies were reheated to 600°C for a thermal shock test designated as TRS-005. After holding at temperature for 15 minutes, the assemblies were removed and lowered into water at ambient temperature within 10 seconds; no bubbles were observed coming from the tubes while in the water. After the assemblies were allowed to cool, however, helium leaks were detected in the seal surfaces of both outer encapsulations. At this point there were no leaks in the inner capsules.¹³⁷

Smithers Scientific Services did an additional integrity check to help determine the cause of the leaks in the outer capsules. After torquing in seal plugs and making sure that there were no leaks, the items were placed into a furnace, brought up to a temperature of 600°C, and then dropped into ambient temperature water within a few seconds. A leak was found on the inner seal plug. It was determined that the cause of the leaks in the thermal shock test “had to do with the seal itself”,¹³⁸ however, whether this reference is to the inner or outer seal plug, or both, is not specified. Two new test specimens were then prepared for additional testing by

¹³⁴ Staff Presentation at 14-16; Staff Response at 34-38.

¹³⁵ GrayStar Brief at 50.

¹³⁶ Hearing File, Vol. I, Tab IV.E, “Exhibit 3 — Prototype Testing — Source,” at page 7 of unnumbered pages.

¹³⁷ *Id.* at 10-11.

¹³⁸ *Id.* at 12.

having their outer seals welded. Peterson Heating then redid the thermal shock test described above, and both specimens passed the leak test for both the inner and outer capsules. It was noted that there appeared to be no distortion between the outer endcaps, indicating that no unusual loads would have occurred to cause source assembly distortion, had the capsules been mounted in a source rack.¹³⁹

The conclusion drawn by GrayStar from this and additional leak testing was that only thermal test TSR-005 produced a helium leak in the outer encapsulation at the seal plug, but that after applying a seal weld to the outside of the outer seal plug, the source assemblies had passed the test. Thus, weld sealing of the outer plug was recommended, and it was concluded that “there is reason to believe that production GS-42 source assemblies will satisfy all of the performance specifications.”¹⁴⁰

The Staff asserts that the leaks in the seals of the outer and inner capsules indicate design deficiencies in the GS-42 and other violations of section 36.21 requirements, irrespective of the use of cesium-137 chloride, arguing as well that by virtue of its plans to use the dispersible cesium-137 chloride in the GS-42 sealed source, GrayStar must “demonstrate that a leak is substantially less likely for its sources, than would be the case for sources containing nondispersible material.”¹⁴¹ The Staff argues that the leak in the inner capsule, without subsequent modification, constitutes a failure to meet not only the requirement of 10 C.F.R. § 36.21(a)(5) that a source “must have been leak tested and found leak-free after each of the tests,” but also the double encapsulation requirement of 10 C.F.R. § 36.21(a)(2).¹⁴²

GrayStar asserts that the fact that the final testing yielded no failures in either the inner or outer source establishes that it met the requirement of the rule, citing ANSI Standard N43.6 (1997) 4.1.1, which states that “[a] source with more than one encapsulation shall be deemed to have complied with a test if it can be demonstrated that at least one encapsulation has maintained its integrity after the test.”¹⁴³ The Staff, however, notes that this standard is “applicable only to sources containing a maximum activity level of 30 curies for cesium-137”

¹³⁹ *Id.* at 12-13.

¹⁴⁰ *Id.* at 13.

¹⁴¹ Staff Presentation at 15; *see also* Staff Response at 35.

¹⁴² Staff Response at 35-36. Noting that the testing was done using nonradioactive cesium, the Staff has also stated that it “has not yet taken a position on whether the use of non-radioactive cesium for testing purposes would be acceptable in this case.” Staff Presentation at 15-16. In response, GrayStar points out dangers in using radioactive materials in testing and notes that 10 C.F.R. § 71.75 provides that “[e]ach solid radioactive material or capsule specimen to be tested must be manufactured or fabricated so that it is representative of the actual solid material or capsule that will be transported, with the proposed radioactive content duplicated as closely as practicable.” GrayStar Response at 22. As noted by GrayStar, section 71.75 goes on to state, “Any differences between the material to be transported and the test material, such as the use of non-radioactive contents, must be taken into account in determining whether the test requirements have been met.” *Id.* No ruling is made on this issue, however, as the Staff has not alleged any deficiency in this regard.

¹⁴³ GrayStar Brief at 51.

under ANSI Standard N43.6-1997, Tables 2 and 3, making it inapplicable to the GS-42 sources.¹⁴⁴ The Staff argues that, even were the standard cited by GrayStar applicable, corrective action would still be needed for the inner seal in light of the test result showing a possible defect in it, given the “specific safety concern raised by the Commission with respect to the use of dispersible material.”¹⁴⁵ The Staff disagrees with GrayStar’s statement that “it is physically impossible for the inner seal plug . . . to be thermally shocked because the outer capsule thermally insulates the inner capsule,”¹⁴⁶ noting that since the inner cap is designed to be nested inside the outer endcap with direct metal-to-metal contact between the caps without thermal insulation, a thermal shock to the outer endcap could be directly transmitted to the inner endcap and to the seal plug. The air gap between the inner and outer plugs would not necessarily provide isolation or complete thermal protection for the inner seal cap and seal plug, according to the Staff.¹⁴⁷

2. *Vibration Testing*

The Staff also argues that relevant standards found in ANSI/HPS Standard N43.6-1997 require that sources like the GS-42 should be tested along three axes, rather than the two that were tested by GrayStar’s contractor.¹⁴⁸ GrayStar does not contest the relevancy of these standards, but argues that it has met these requirements. Section 7.5.2 of this document requires that “each axis” be tested, with a note stating that “[a] spherical source has one axis taken at random. A source with an oval or disc-type cross-section has two axes: one of revolution and one taken at random in a plane perpendicular to the axis of revolution. Other sources have three axes taken parallel to the significant overall dimensions.”¹⁴⁹

The testing contracted by GrayStar was done on two axes of the source capsules, “in the longitudinal axis direction and in the operational vertical axis direction,”¹⁵⁰ which is taken to mean that the long axis perpendicular to the axis of revolution (along the length of the tube) was tested, and the longer axis of the cross section was tested, but that the shorter cross-section axis, i.e., from one flat side to the other flat side, was not tested. GrayStar argues that it was not necessary to test the sources across the shorter cross-section axis, because the GS-42 has “an oval or disc-type cross-section,”¹⁵¹ which require only testing of two axes. The Staff contends that the shape of the GS-42 is not an “oval or

¹⁴⁴ Staff Response at 36.

¹⁴⁵ *Id.* at 37.

¹⁴⁶ GrayStar Brief at 52.

¹⁴⁷ Staff Response at 37.

¹⁴⁸ Staff Presentation at 16, Exhibit II.

¹⁴⁹ *Id.*

¹⁵⁰ Hearing File, Vol. II, Tab VI.B, at 13.

¹⁵¹ Hearing File, Vol. II, Tab VI.B, GrayStar Application, Amendment 1-Vol. 1, at 13.

disc-type cross-section,” because of its flat sides — that it falls rather into the “other” category, requiring testing along three axes.

3. *Conclusions on Temperature and Vibration Testing of GS-42*

GrayStar has failed to establish, by a preponderance of the evidence, that the thermal shock testing of the GS-42 satisfies 10 C.F.R. § 36.21(a)(5). This conclusion is based on GrayStar’s failure to modify or correct the inner capsule seal plug after a leak was discovered in it during part of the testing. Although the outer seal failures were corrected, the failure of the inner seal was not, and thus it was not leak-free after each test. GrayStar’s argument that the whole double capsule assembly passed the test that was performed after the inner seal plug failure occurred fails to take into account that, should there ever be a breach in the outer capsule, from whatever cause, it would then be possible for the inner seal plug to fail for the same reason it failed in the test. In addition, as the Staff points out, heat could be transferred to the inner endcap through the contact it has with the outer endcap. This could also potentially cause the inner capsule to fail within the outer capsule, which could result in eventual failure of the entire assembly. It is reasonable to require GrayStar to complete this part of the testing as Staff has suggested, particularly given the relatively large radiological content of each proposed GS-42 sealed source and the use to which it will be put.

I also conclude that, by virtue of the inner seal plug leak, GrayStar has failed to establish, by a preponderance of the evidence, that the GS-42 meets the double encapsulation requirement of section 36.21(a)(2). If the inner seal plug has not been tested sufficiently to ensure that it will withstand relevant testing on its own, it stands to reason that what remains is a single capsule that has passed relevant testing requirements, i.e., only the outer capsule.

I further conclude that GrayStar has failed to establish, by a preponderance of the evidence, that the vibration testing of the GS-42 was sufficient to meet the requirements of section 36.21(a)(5). Although GrayStar argues that the cross section of the GS-42 capsule is an oval or disc-type cross-section, it is found that the two flat sides of the cross section make it not just a simple oval, but another shape, subject to the requirement to test in three axes. GrayStar, not having completed testing on all three axes, has therefore not met the requirement of section 36.21(a)(5) that “each of the tests” described in section 36.21(b) through (g), including subsection (e), be completed.

D. Whether the GS-42 Meets the Requirements of 10 C.F.R. § 32.210(c)

Section 32.210(c) provides that a “request for review of a sealed source . . . must include sufficient information about the design, manufacture, prototype

testing, quality control program, labeling, proposed uses and leak testing . . . to provide reasonable assurance that the radiation safety properties of the source or device are adequate to protect health and minimize danger to life and property.” The Staff asserts that, due to the problems, discussed above, associated with the proposed use of cesium-137 chloride caked powder, and due to the heat and vibration test deficiencies, GrayStar has failed to provide the reasonable assurance required by 10 C.F.R. § 32.210(c).¹⁵²

By virtue of my previous conclusions (1) that GrayStar has not justified the use of cesium-137 chloride in the GS-42 sufficiently to fulfill the requirement of 10 C.F.R. § 36.21(a)(3), and (2) that GrayStar has failed to establish that the heat and vibration testing of the GS-42 fulfill the requirements of 10 C.F.R. § 36.21(a)(2) and (a)(5), I further conclude that GrayStar has failed to provide, by a preponderance of the evidence, the reasonable health and safety assurance required by 10 C.F.R. § 32.210(c). The purpose of the justification and testing at issue is to assure such protection of health and safety, and any omission to satisfy fully the requirements of section 36.21 thus cannot be said to provide the “reasonable assurance” section 32.210(c) requires.

III. CONCLUSION

Although GrayStar has spent a great deal of time and resources developing an innovative design for its Model 1 irradiator and GS-42 sealed source, the dispersibility in air of the cesium-137 chloride caked powder proposed for use in the GS-42 presents significant health and safety issues. Notwithstanding the potential benefits presented by GrayStar, a potential for harm also exists, should there be weaknesses that are not fully addressed prior to any manufacture of the Model 1 and the GS-42 sealed sources. Any hazard would be multiplied by the planned use of the irradiators in many locations across the country within food producers’ own sites, by operators who will likely not be as well trained as are others who work with radiation. Therefore, as the Staff has argued, a high standard of justification for the use of cesium-137 chloride is appropriate and, in keeping with the NRC’s defense-in-depth philosophy and primary concern with safety, all of the requirements of applicable rules must be fully satisfied.

In this context, and based on the failure of GrayStar to establish by a preponderance of the evidence, (1) that its proposed use of cesium-137 chloride is justified in the GS-42 sealed source under 10 C.F.R. § 36.21(a)(3); (2) that the testing and double encapsulation requirements of subsections (a)(5) and (a)(2) of section 36.21 have been met; and (3) that the health and safety requirements of

¹⁵² Staff Response at 22 n.25.

section 32.210(c) have been fulfilled, I conclude that the Staff's denial of approval and registration of the GS-42 sealed source must be upheld.

For the foregoing reasons, it is, this 27th day of February 2001, ORDERED that:

1. The registration of the GS-42 sealed source is denied.
2. This proceeding is terminated.
3. In accordance with the provisions of 10 C.F.R. §§ 2.1251 and 2.1253, this Initial Decision may be appealed to the Commission by filing an appeal statement that complies with the provisions of 10 C.F.R. § 2.786(b). To be timely, an appeal statement must be filed within 15 days after this Initial Decision is served (i.e., on or before Monday, March 19, 2001.)

BY THE PRESIDING OFFICER¹⁵³

Ann Marshall Young
ADMINISTRATIVE JUDGE

Rockville, Maryland
February 27, 2001

¹⁵³ Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to all participants or counsel for participants.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

Ann Marshall Young, Presiding Officer
Charles N. Kelber, Special Assistant

In the Matter of

Docket No. 40-8681-MLA-8
(ASLBP No. 00-782-08-MLA)
(Source Material
License Amendment)

INTERNATIONAL URANIUM (USA)
CORPORATION
(White Mesa Uranium Mill)

February 28, 2001

In this Memorandum and Order, the Presiding Officer rules that the Petitioner in this Subpart L proceeding, who lives and works one block from the transportation route for alternate feed material that is the subject of Applicant International Uranium (USA) Corporation's license amendment request to permit its White Mesa uranium recovery mill to receive and process the material, has not shown standing to be admitted as a party in the proceeding.

RULES OF PRACTICE: STAY OF AGENCY ACTION

Pursuant to 10 C.F.R. §§ 2.788, 2.1263, a request to stay an NRC Staff license grant must be denied when the movant fails to show that (1) she is likely to prevail on the merits, (2) she would be irreparably injured unless a stay is granted, (3) the public interest would lie with the granting of the stay, and (4) granting the stay would not harm the interest of the Applicant in pursuing its business.

RULES OF PRACTICE: AREAS OF CONCERN (INFORMAL PROCEEDINGS)

Transportation of material sought to be licensed may be a germane area of concern where adverse effects are alleged and the Petitioner's residence is close to the transportation route.

RULES OF PRACTICE: STANDING (INFORMAL PROCEEDINGS — PROXIMITY IN MATERIALS CASES)

Proximity alone does not suffice to show standing in materials licensing cases, and would apply only in actions involving a significant source of radioactivity producing an obvious potential for offsite consequences.

RULES OF PRACTICE: STANDING (INFORMAL PROCEEDINGS — LICENSE AMENDMENT CASE)

To show standing in a license amendment case, a Petitioner must show some new or increased harm, threat, injury, or risk resulting from the amendment, separate and apart from continuing activities under the existing license and amendments.

RULES OF PRACTICE: FILING REQUIREMENTS (INFORMAL PROCEEDINGS)

While the late filing of documents is not condoned, a Petitioner acting *pro se* is not always expected to meet the same high standards to which the Commission holds entities represented by lawyers.

**MEMORANDUM AND ORDER
(Denying Hearing Request)**

This 10 C.F.R. Part 2, Subpart L matter concerns *pro se* Petitioner Sarah M. Fields' request for a hearing challenging a source material license amendment application of International Uranium (USA) Corporation (IUSA). IUSA seeks to amend NRC Source Material License SUA-1358 to allow it to receive and process at its White Mesa Uranium Mill near Blanding, Utah, up to 2000 cubic yards of alternate feed material from the Heritage Minerals Site in Lakehurst, New Jersey. The mill is regulated by the NRC pursuant to the Atomic Energy Act of 1954, as amended; the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA),

as amended; and related NRC regulations set forth at 10 C.F.R. Part 40. All waste from the processing of material at the mill falls within the definition of “11e(2) byproduct material” under section 11e(2) of the Atomic Energy Act.¹

Petitioner Fields lives and works in Moab, Utah, within one block of Utah State Highway 191, over which the material at issue in this proceeding is proposed to be transported to the mill by truck, after having been shipped to a transfer point by rail. The material at issue is “monazite sand” that has already been processed by Heritage Minerals, Inc., to remove heavy minerals (primarily titanium mineral ilmenite), but which still contains uranium and thorium.

IUSA opposes Petitioner Fields’ hearing request, asserting among other things that the Petitioner has not, either in her original request or in a late-filed supplement, established standing by showing any concrete and particularized injury, or demonstrated any concerns that are germane to the proposed license amendment.

Although the Petitioner filed a timely request for hearing and has presented one area of concern germane to the subject matter of this proceeding, I conclude that she has not established standing to intervene as a party in this case under relevant law. Therefore, for the reasons stated below, Petitioner Fields’ request for hearing is denied and this proceeding is terminated.

I. BACKGROUND

A. Procedural History and Ruling on Request for Stay

The IUSA application to amend that is at issue in this case was announced in a July 2000 *Federal Register* notice.² Pursuant to the Notice of Hearing set forth therein, Petitioner Fields filed her Hearing Request on August 9, 2000. IUSA filed its Opposition to the Request on August 24, 2000. On August 29, 2000, the Commission referred the matter to the Atomic Safety and Licensing Board Panel, and on August 31, 2000, the Chief Administrative Judge appointed the undersigned as Presiding Officer. Judge Charles N. Kelber was appointed to serve as Special Assistant in the case. By letter dated September 7, 2000, counsel for the NRC Staff indicated that the Staff did not plan to participate as a party in this matter.³

On September 14, 2000, a telephone conference was held, during which the procedural status and substantive aspects of the case were reviewed, including in particular a discussion of the issue of standing, and Petitioner Fields was given the

¹ 42 U.S.C. § 2014(e)(2). (“The term ‘byproduct material’ means . . . the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.”)

² 65 Fed. Reg. 44,078 (July 17, 2000).

³ See 10 C.F.R. § 2.1213.

opportunity to ask any questions about the proceedings.⁴ Thereafter, the Petitioner was permitted to file a supplemental petition, and various documents have been filed by both parties, some timely, some not; some with and some without specific permission to file; and one at the request of the Presiding Officer, after the Petitioner filed her “First Supplement to Petitioner’s August 9, 2000, Request for Hearing” (First Supplement).⁵ Even though this First Supplement was not timely filed, because of the unusual nature of some information provided with it⁶ further inquiry was deemed appropriate notwithstanding its lateness, on the issue, raised by the Petitioner, whether the monazite sand material presented a unique new sort of radiological threat of harm.⁷ As a result, on November 13, 2000, IUSA filed the requested information, which is discussed in some detail below. Since that time, additional documents have been submitted by both parties, the final ones being filed February 20, 2001, pursuant to an Order issued February 6, 2001, permitting and setting deadlines for final filings on the issue of the Petitioner’s standing.⁸

While in no way condoning the late filing of any documents, it has been recognized in this proceeding that, because the Petitioner is acting *pro se*, she

⁴ See Transcript at 7-8 (Sept. 14, 2000). A request by the Petitioner to hold this conference in Utah had previously been denied as not being necessary or appropriate, but in the interest of openness, any other persons who so wished were permitted to be present by telephone for the purpose of observing/listening to the proceedings. Pursuant to this arrangement, in addition to the Petitioner and representatives of IUSA, Mr. John Darke was present by telephone and was permitted to make a limited appearance statement during the conference. See *id.* at 45, 53-55; 10 C.F.R. § 2.1211(a).

⁵ First Supplement to Petitioner’s August 9, 2000, Request for Hearing (Oct. 18, 2000) [hereinafter First Supplement].

⁶ In addition to various information about the radiological activity of thorium and of monazite sands, the supplement contained as an attachment a copy of a September 27, 1990, letter to the NRC from Attorney Anthony J. Thompson, currently counsel for IUSA, then counsel for Heritage Minerals, Inc., referring among other things to the “unacceptable alternative” of the NRC requiring Heritage to dispose of what is apparently the same material at issue in this matter in a facility “in the Western United States,” which would involve transportation that would “entail increased risk of human exposure to the monazite, as well as an increased risk of accidents and spillage.” See Petitioner’s First Supplement, Exh. G at unnumbered page 2. In a footnote to its November 13, 2000, Response to the Presiding Officer’s Request for Information, see Presiding Officer’s Order (Requesting Information and Permitting Response to Petitioner’s October 18, 2000, Filing) (Oct. 26, 2000) (unpublished), IUSA explains Attorney Thompson’s 1990 statement by observing that “trucking the monazite sand over great distances entails some risk as compared to on-site disposal [which Attorney Thompson was discussing in the 1990 letter], but not in relation to trucking similar radiologically active materials or such materials as gasoline or any other potentially hazardous substance. . . . The fact that everyday activities pose multiple risks to each of us does not impart to each of us standing to challenge each of these activities. If an individual’s general distaste for an activity were sufficient to confer standing to challenge the activity, commerce rapidly would grind to a halt.” See International Uranium (USA) Corporation’s Response to the Presiding Officer’s October 26, 2000 Request for Information (Nov. 13, 2000), at 5-6 n.8.

⁷ See First Supplement at 44-46.

⁸ These documents include the Petitioner’s Second, Third, and Fourth Supplements, filed respectively on December 5, 2000, February 2 and 20, 2001; Petitioner’s Request that the Presiding Officer Reconsider November 24, 2000, Order (Denying Petitioner’s Requests to File Additional Materials), filed with her Second Supplement on December 5, 2000; IUSA’s Opposition to Sarah M. Fields’ Request for Reconsideration, filed January 9, 2001, along with its own attached affidavit and exhibits; and IUSA’s Opposition to Sarah M. Fields’ Third Supplement to Request for Hearing, filed February 20, 2001. The November 24, 2000, Presiding Officer’s Order (Denying Petitioner’s Requests to File Additional Materials) (unpublished) recounts in some detail the procedural history and some of the unique circumstances of the case up to that point. See also Presiding Officer’s Order (Setting Deadlines for Final Filings on Standing) (Feb. 6, 2001) (unpublished).

has not always been expected to meet the same high standards to which the Commission holds entities represented by lawyers.⁹ It is also noted that both the Petitioner and IUSA have been permitted some leeway, in order that the record with regard to standing could be as complete as possible. In all events, the information in all the documents filed by both participants in this case having been read and considered, including that found in all of the Petitioner's filings, and none having been found to contain information that would change the result reached herein,¹⁰ any rulings on any outstanding requests and oppositions contained within these documents are moot and unnecessary at this point given the conclusions reached herein, with one exception relating to the Petitioner's request in her Fourth Supplement for a stay of the licensing action at issue herein.

With regard to this request, it is noted that the license amendment applied for by IUSA in this proceeding was granted by the Staff, as Amendment 18 to Materials License SUA-1358, on December 29, 2000.¹¹ The Petitioner had previously, in her original request for hearing, requested that "any licensing action be delayed" in this proceeding, but had not pursued this or provided any grounds for such a delay, until the filing of her February 20, 2001, Fourth Supplement, in which she specifically requests a stay of the licensing action under 10 C.F.R. §§ 2.1263 and 2.788.

⁹ See *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 201 (1998).

¹⁰ Although, as indicated, all of the filings have been considered, some of the issues and information presented by the participants may not be specifically addressed in this Memorandum and Order, where not deemed relevant or necessary to the decision herein. With specific regard, however, to some of the matters raised by the Petitioner — including the appropriate calculations of the radiological activity found in the monazite sand material from various isotopes of thorium and their progeny; the meaning of a reference in IUSA's chart that is attached hereto as Attachment A, to "other portions" of the Heritage Minerals material; the total thorium content in the monazite sand material; and how Becquerels per gram (Bq/g) compare to picocuries per gram (pCi/g) (all of which were raised in her December 5, 2000, Second Supplement) — in the interest of clarity the following observations are made:

Regarding radioactivity calculations, as illustrated in the text of this Memorandum and Order, the 4000 pCi/g figure provided by the Petitioner in her First Supplement was considered in making comparisons between the radiological activity of the Heritage Minerals material and other materials transported through Moab and processed at the White Mesa mill. On the "other portion" question, based upon a reading of the January 9, 1992, memorandum of John D. Kinneman to John E. Glenn, see Petitioner's First Supplement, Exh. D2, it appears the references to different "portions" of the Heritage Minerals material now at issue may be based on the material consisting of different (possibly now combined) portions of monazite sands that vary in their radiological activity, which when averaged result in a figure lower than the 4000 pCi/g figure for all of the material; in any event, the license amendment would not permit anything other than that which is described in the application, namely monazite sands, to be received and processed at the mill.

As to the total thorium content, it appears that the figures provided by IUSA in the chart at Attachment A may not, according to the affidavit of Douglas Chambers, Ph.D., filed with IUSA's Opposition to the Petitioner's Request for Reconsideration (Jan. 9, 2001) [hereinafter Chambers Affidavit], include all the various thorium isotopes contained in the various materials, because the figures in the table are based on different definitions of total uranium and total thorium, see *id.* at 12-13. In any event, however, as indicated above, the highest figures provided by the Petitioner and Dr. Chambers for the radiological activity of the thorium isotopes contained in the Heritage Minerals material have been considered in making relevant comparisons, which minimizes or negates the significance of any differing definitions underlying the calculations in Attachment A. With regard to the use of Becquerels per gram, 1 picocurie is equal to 0.037 Becquerel, a standard international unit of radioactivity.

¹¹ See 10 C.F.R. § 2.1205(m), which provides that "[t]he filing or granting of a request for a hearing or petition for leave to intervene need not delay NRC staff action regarding an application for a licensing action covered by this subpart."

Although the Petitioner has shown notable facility with NRC regulations and procedures given her *pro se* status, she has not provided sufficient grounds to establish that her request for a stay should be granted, under the requirements of sections 2.1263 and 2.788. Addressing the criteria found at subsection (e) of section 2.788, I find that the Petitioner has failed to make a “strong showing that [she] is likely to prevail on the merits” of this proceeding; nor has she shown that she would be irreparably injured unless a stay is granted, or that the public interest would lie with the granting of a stay. In addition, it would obviously harm the interest of the Applicant in pursuing its business to grant a stay. Balancing all of these considerations, it is concluded that a stay is not appropriate and the same is therefore denied.

B. Facts

The White Mesa Mill in Blanding, Utah, has been operated by IUSA and previous owners since 1980 under the authority granted in NRC Source Material License SUA-1358, which has been renewed in 1985 and 1997. The mill is a uranium recovery facility; it processes uranium-bearing ore and other materials called “alternate feed materials” to extract uranium, as well as vanadium and other metals.¹² Each time IUSA proposes to process an alternate feed material from a new source, it must first apply to the NRC for an amendment to its license for the mill. In the license amendment application now at issue, IUSA has proposed to process the Heritage Minerals monazite sand pile material in a manner similar to its normal processing of conventional ore, either alone or in combination with other approved alternate feed materials.¹³

After feed materials are processed, IUSA disposes of all residual waste “tailings” in an NRC-licensed lined “cell” or impoundment at the mill site, which currently contains approximately 4 million tons of tailings.¹⁴ According to the *Federal Register* notice for the license amendment request, IUSA has proposed that it will be a condition of the license that the mill shall not accept any of the Heritage Minerals material at the site unless and until the mill’s Safety and Environmental Review Panel has determined that the mill has sufficient licensed tailings capacity to store all byproduct material from the processing of all the Heritage Minerals material, as well as all other ores and alternate materials

¹² See November 10, 2000, Affidavit of Ron F. Hochstein ¶3, attached to International Uranium (USA) Corporation’s Response to the Presiding Officer’s October 26, 2000 Request for Information (Nov. 13, 2000) [hereinafter Hochstein Affidavit].

¹³ See 65 Fed. Reg. 44,078 (July 17, 2000).

¹⁴ See Hochstein Affidavit ¶ 3.

on site, and all other materials required to be disposed of in the mill's tailings impoundment pursuant to the mill's reclamation plan.¹⁵

Also according to the *Federal Register* notice, the Heritage Minerals material is to be removed from its present location in New Jersey pursuant to a Decommissioning Plan under NRC Source Material License SMB-1541.¹⁶ The material would then be shipped to the White Mesa mill by rail and truck in exclusive "intermodal containers," as "low specific activity" (LSA) Hazard Class 7 Hazardous Material as defined by U.S. Department of Transportation regulations.¹⁷

As indicated above, Petitioner Fields lives in Moab, through which the Heritage Minerals material is proposed to be transported, on Utah State Highway 191. Petitioner Fields lives one block west of Highway 191, and works one block east of the highway, which becomes Main Street as it goes through Moab. She often walks, drives, or rides a bicycle on and across this road, and argues that she will be prevented from doing this if IUSA is permitted to transport the Heritage Minerals material over the road through Moab.

According to the undisputed statements of IUSA, truck traffic to the White Mesa Mill for all mill activities during the hauling of the Heritage Minerals materials is expected to average fewer than 30 trucks per day, or some 200 per week. Of this number, only 10 trucks per week would be carrying the Heritage Minerals material through Moab, for a period of 1 to 3 months as a result of the proposed license amendment. Additional context is provided in the statements of IUSA that the Utah Department of Transportation has estimated at various times that approximately 2000 trucks already travel this route every week, with up to approximately 385 traveling it every day.¹⁸

¹⁵ See 65 Fed. Reg. at 44,078. As noted by the Petitioner in her Third Supplement at 10, a December 21, 2000, Technical Evaluation Report (TER) for the December 29, 2000, license amendment issuance, referred to a "separate TER and license amendment by NRC letter dated July 21, 2000," relating to "available cell space." The Petitioner has not, however, asserted any basis for standing with regard to this license amendment, which involves the issue of cell space at the mill location itself and not any contemplated transportation through Moab, and it is not at issue herein.

¹⁶ See 65 Fed. Reg. at 44,078.

¹⁷ *Id.*

¹⁸ See IUSA Opposition to the Request for Hearing of Sarah M. Fields (Aug. 24, 2000), at 6 n.11; IUSA Response to the Presiding Officer's October 26, 2000 Request for Information (Nov. 13, 2000), at 4 & n.4. It is noted that in IUSA's August 24, 2000, Opposition to the Petitioner's Hearing Request, it is stated (at 8 n.18) that the 1979 Final Environmental Statement (FES) prepared in support of the mill's original license application stated that IUSA expected, on average, approximately 85 trucks per day to be associated with mill operations. Although this was initially considered pertinent to the issue of what new harm was posed by trucks carrying the Heritage Minerals material through Moab if they were within the number of trucks effectively authorized by the original license, an assumption confirmed by IUSA counsel, see Transcript at 30, 33-34, according to the 1979 FES, at page 4-20, the references to the truck traffic predicted for the mine at that time do not appear to include much traffic through Moab, and they are therefore now found to be irrelevant to the inquiry herein. The information provided in Attachment A to this Memorandum and Order [hereinafter Attachment A] provides more specific current information on materials transported through Moab, in any event.

To date, the NRC has granted IUSA a number of license amendments to process a variety of alternate feed materials at the mill.¹⁹ As illustrated in a table provided by IUSA in response to a request for information from the Presiding Officer (reprinted as Attachment A to this Memorandum and Order), feed materials processed at the White Mesa mill have varied widely in mineral composition and level of radiological activity. According to this table and supporting documents, the materials that have been transported to and from the mill through Moab pursuant to IUSA's license for the mill, or NRC-approved amendments to it, include:

- (1) the majority of 14,153 tons of uranium yellowcake processed by the mill, the estimated average radiological activity of which (from uranium isotopes) is 482,400 picocuries per gram (pCi/g), and the total radiological inventory of which is over 6000 Curies (Ci);
- (2) 363 tons of Nevada test site "Cotter Concentrate," with an estimated average radiological activity from uranium and thorium isotopes of 735,226 pCi/g, of which 628,026 pCi/g are from thorium isotopes, and the total radiological inventory of which is approximately 242 Ci;
- (3) 1526 tons of Allied Signal KOH (potassium hydroxide) solution recovery material, with an estimated average radiological activity from uranium isotopes of 179,560 pCi/g, and a total radiological inventory of approximately 248.6 Ci;
- (4) four materials with five-digit total picocurie-per-gram figures, ranging in average radiological activity from thorium isotopes alone from 3170 to 16,472 pCi/g, with tonnages ranging from 557 to 2343 tons, and total radiological inventories ranging from approximately 27 Ci to 120 Ci;
- (5) "Ashland 2 Soil," with an average radiological activity from uranium and thorium isotopes of 7017 pCi/g, of which 6950 pCi/g are from thorium isotopes, and the total radiological inventory of which is approximately 280 Ci;
- (6) some portion of 3,846,667 tons of natural ores, with an average radiological activity from uranium and thorium isotopes of 3101 pCi/g, of which 1024 pCi/g are from thorium isotopes, and the total radiological inventory of which is approximately 10,821.5 Ci; and
- (7) three other source materials with lower picocurie-per-gram levels, a combined tonnage of 266,038, and total radiological inventories ranging from approximately 42 Ci to 64.8 Ci. In addition, 10 tons of Cameco "UF4 with filter ash" material, with an estimated total radiological activity from uranium isotopes of 435,500 pCi/g and a total

¹⁹ See Hochstein Affidavit ¶ 5.

estimated radiological inventory of 4 Ci, is expected to be transported to the mill under a separate license amendment.²⁰

IUSA estimates that the weighted average uranium and thorium activity levels of licensed feed materials and products shipped to or produced at the mill is 4809 pCi/g,²¹ and that the total radiological inventory for all materials processed to date is approximately 18,258 Ci.²² In contrast, IUSA estimates that the average total radiological activity from the uranium and thorium contained in the Heritage Minerals monazite sand pile material is 1525 pCi/g, of which 1190 pCi/g is from the thorium isotopes contained in it.²³ In the Petitioner's "First Supplement," she provides various figures for the radiological activity of the monazite sands and the thorium contained in it, ranging from 1190 pCi/g to 4000 pCi/g. Using IUSA's figure, the total radiological inventory of uranium and thorium isotopes in the Heritage Minerals material would be approximately 4 Ci. Using the Petitioner's high figure of 4000 pCi/g, the total radiological inventory would be approximately 11.4 Ci, which is approximately 0.06% of the total 18,258 Ci radiological inventory already processed at the mill, most of which was transported through Moab, Utah.

A higher figure for the Heritage Minerals material, of 0.1% of the total radiological inventory of materials transported to and from the White Mesa mill, has been provided by Douglas Chambers, Ph.D., in an affidavit submitted by IUSA. Also, according to Dr. Chambers, a "nominal value of between 2000 and 4000 pCi/g of total thorium in the HMI monazite sands is a reasonable assumption."²⁴ Adding to this, Dr. Chambers' estimated uranium activity of 372 pCi/g results in a total of 2372 to 4372 pCi/g for the monazite sand material. According to Dr. Chambers, this is equivalent to 6372 pCi/g of natural uranium.

Dr. Chambers also, however, points out that these figures "would result in incremental exposure that is trivial and a very small fraction of natural background radiation in the area," which in the area of Moab averages approximately 90 millirad (mrad) per year, as compared to the national average of approximately 40 mrad per year.²⁵ Dr. Chambers calculates that a pedestrian standing by the side of the road over which the trucks carrying the Heritage Minerals material will travel would receive only approximately 4/1000 of the dose he or she would receive from natural background radiation, from the trucks that will be carrying the material. Further, according to Dr. Chambers, a "pedestrian could stand by the

²⁰ See Attachment A.

²¹ See Hochstein Affidavit ¶ 8.

²² See Attachment A. The total radiological inventory figure was arrived at by taking the estimated total provided by IUSA in Attachment A, and subtracting out the 8 total Ci IUSA estimates for the Cameco and Heritage Minerals materials.

²³ See Hochstein Affidavit ¶ 8; Attachment A.

²⁴ Chambers Affidavit at 12.

²⁵ *Id.* at 6, 8. The national average includes exposures of about 23 mrad per year in coastal areas, according to Dr. Chambers. *Id.* at 6.

side of the road during the passage of some 34,600 trucks loaded with monazite sand . . . before he or she would receive the same dose as he or she would receive from natural background” radiation.²⁶ In contrast, Dr. Chambers states that 1 ton of the Nevada test site material would emit more than 100 times the gamma radiation that would be emitted by a ton of the Heritage Minerals material.²⁷ Also, according to Dr. Chambers, the Heritage Minerals material presents no “new or unusual hazard.”²⁸

Dr. Chambers states that transportation of the Heritage Minerals material poses no significant radiological exposure pathway, because of the shielding of the material from persons in the street and the short duration during which there would be any exposure at all. He states that, even in the event of a worst-case scenario — a spill of the Heritage material with its high thorium content — “there is no significant or acute potential health hazard,” based on the NRC’s conclusion in NUREG-0706 that “long and sustained exposure to radioactivity in [an entire uranium] tailings pile would be required to produce any significant chance of adverse effect.”²⁹ In the event of such a spill, there would be cleanup procedures, as there would be for any spill of uranium-bearing material, which would involve “negligible” exposure to the public.³⁰

II. ANALYSIS

In a Subpart L case such as this, a petitioner is required to

describe in detail—

- (1) [t]he interest of the requestor in the proceeding;
- (2) [h]ow the interests may be affected by the results of the proceeding, including the reasons why the requestor should be permitted a hearing, with particular reference to the factors set out in paragraph (h) of this section;
- (3) [t]he requestor’s areas of concern about the licensing activity that is the subject matter of the proceeding; and
- (4) [t]he circumstances establishing that the request for a hearing is timely . . .³¹

²⁶ *Id.* at 17.

²⁷ *See id.* at 15. Dr. Chambers, who is Director of Risk and Radioactivity Studies for SENES Consultants, Ltd., of Ontario, Canada, has worked in the area of environmental radioactivity and risk assessment for more than 25 years. His work includes the development of probabilistic tools for pathways analysis and risk assessment for uranium mill tailings and of a regulatory guide for UF₆ dispersion models for the NRC. He has also served in a number of capacities for various organizations, including as Chair of the Canadian Standards Association Committee on Environmental Radiation Protection, member of the U.S. National Council on Radiological Protection and Measurements Scientific Committee 85 on the Risk of Lung Cancer from Radon, and member of the (Canadian) Atomic Energy Control Board’s Advisory Committee on Radiological Protection. He was the recipient of the 1997 W.B. Lewis award of the Canadian Nuclear Society for his achievements in environmental radioactivity. *See id.* at 1-3. His expertise is found to warrant giving credence to the statements in his affidavit.

²⁸ *Id.* at 17.

²⁹ *Id.* at 7; NUREG-0706, “Final Generic Environmental Statement in Uranium Milling,” Vol. 1, at 12-31 (Sept. 1980).

³⁰ Chambers Affidavit at 14.

³¹ 10 C.F.R. § 2.1205(e).

In ruling on a request for a hearing, a presiding officer is required to make determinations on whether specified areas of concern are germane to the subject matter of the proceeding, whether the petition is timely, and whether “the requestor meets the judicial standards for standing.”³²

A. Timeliness

Having been filed within 30 days of the publication of the notice of IUSA’s license amendment application, Petitioner Fields’ hearing request was timely under 10 C.F.R. § 2.1205(d)(1).

B. Areas of Concern

Petitioner Fields states three areas of concern in her August 9, 2000, hearing request: (1) “that IUSA is not authorized by the Atomic Energy Act of 1954, as amended, to receive, process, or dispose of the HMI materials”; (2) that the application “did not adequately consider the transportation corridor through Moab”; and (3) that “there has been no NRC programmatic Environmental Assessment with respect the [*sic*] remediation of such facilities [as required by applicable law, which] does not permit such an incremental isolated review of a programmatically impacted licensing action.”³³

As previously noted in another Subpart L proceeding involving a petitioner from Moab, Utah,

the Commission has indicated [that] “areas of concern” specified in support of a hearing request under Subpart L “need not be extensive, but [they] must be sufficient to establish that the issues the requester wants to raise fall generally within the range of matters that properly are subject to challenge in such a proceeding.”³⁴

Just as a 10 C.F.R. Part 2, Subpart G formal hearing petition must under 10 C.F.R. § 2.714(a)(2) define the

“specific aspect or aspects of the subject matter of the proceeding as to which petitioner wishes to intervene,” . . . the Subpart L direction to define “areas of concern” is only intended to ensure that the matters the petitioner wishes to discuss in his or her written presentation are generally within the scope of the proceeding.³⁵

³² 10 C.F.R. § 2.1205(h).

³³ See Petitioner’s Hearing Request at 3-4.

³⁴ *Atlas Corp.* (Moab, Utah Facility), LBP-97-9, 45 NRC 414, 422 (1997) (citing 54 Fed. Reg. 8269, 8272 (1989)), *aff’d*, CLI-97-8, 46 NRC 21 (1997).

³⁵ *Id.* at 422-23.

For the reasons set forth below, I conclude that the Petitioner's first and third stated areas of concern are not germane to this proceeding, but that her second stated area of concern is germane to the proceeding.

Petitioner Fields' first stated area of concern, "that IUSA is not authorized by the Atomic Energy Act of 1954, as amended, to receive, process, or dispose of the HMI materials," is, as conceded by IUSA, "of course, germane in the sense that *that is the reason that IUSA is requesting the subject license amendment.*"³⁶ However, it is quite general and unsupported by any specific argument, apart from the Petitioner's assertion in the September 14, 2000, telephone conference that the material at issue herein "is not 11e(2) byproduct material."³⁷ This issue, however, has been resolved by the Commission in its decision in another case³⁸ involving IUSA and the "Ashland 2" material listed in Attachment A to this Memorandum and Order. In an in-depth analysis of the issue, the Commission concluded that the determinative factor on whether material is 11e(2) byproduct material is whether the material will in fact be processed to extract uranium from it.³⁹

In this case there appears to be no question that the material at issue is in fact intended to be processed for its uranium content. Therefore, there is no meaningful dispute regarding this asserted area of concern. No other specific part of the Act being cited by the Petitioner, her first area of concern lacks sufficient specific content to render it germane to the proceeding in any meaningful way.

The Petitioner's third stated area of concern, that to the best of her knowledge "there has been no NRC programmatic Environmental Assessment with respect [to] the remediation of such facilities" as the Heritage Minerals site, is also found not to be germane to this proceeding. Her argument regarding an "incremental isolated review of a programmatically impacted licensing action" is similar to the concept of "segmentation" of an overall plan into smaller parts with less significant environmental effects, discussed in case law.⁴⁰ Even assuming, however, that this argument might render the third area of concern germane to a proceeding relating directly to the Heritage Minerals site, it is only remotely relevant to this proceeding.

The Petitioner's second area of concern, that IUSA's license application "did not adequately consider the transportation corridor through Moab, Utah," is less specific than it might optimally be. It is also recognized that under 10 C.F.R. § 71.12 an NRC licensee is given a general license to ship or transport material

³⁶ See International Uranium (USA) Corporation's Opposition to the Request for Hearing of Sarah M. Fields (Aug. 24, 2000), at 4 n.4 (emphasis in original).

³⁷ See Transcript at 37 (Sept. 14, 2000).

³⁸ *International Uranium (USA) Corp.*, CLI-00-1, 51 NRC 9 (2000).

³⁹ *Id.* at 15-23.

⁴⁰ See *Kleppe v. Sierra Club*, 427 U.S. 390 (1976); *City of West Chicago v. NRC*, 701 F.2d 632, 650 (7th Cir. 1983).

subject to NRC license in an NRC-approved package without approval by the Commission, provided the licensee complies with all applicable Department of Transportation regulations.⁴¹ Nonetheless, in the context of the Petitioner's Hearing Request, in which she alleges "possible adverse effects . . . by the transportation of the HMI materials through Moab," on a route that lies one block from her residence and workplace, it is found that she asserts an area of concern that is germane to the proceeding, and which does not appear to have been decided in prior litigation.⁴²

C. Standing to Intervene

Having stated an area of concern that is germane to this proceeding, Petitioner Fields must still establish standing to intervene in order to be admitted as a party in this proceeding. This is more problematic for the Petitioner.

In her original August 9, 2000, Hearing Request, Petitioner Fields states that her interest in IUSA's license amendment application arises out of her residing one block west and working one block east of Highway 191 in Moab, Utah, through which IUSA proposes to transport the alternative feed material from the Heritage Minerals site. The Petitioner states that since she crosses Highway 191 every day, "[t]here is a high probability that [she] would be affected by the transport of the material that is proposed to be transported to, and received and processed at, the White Mesa Mill."⁴³ She refers further to her "right not to be unnecessarily affected by the transport of the HMI material," and to "[a]ny possible adverse effects" of such transport.⁴⁴ In addition to raising various issues of alleged risk and harm to herself that might result from the proposed license amendment, the Petitioner has questioned the good faith of IUSA, as well as various information it has provided, and has asserted that the monazite sand material presents particular new health, safety, and environmental hazards.⁴⁵

IUSA argues that the Petitioner's concerns about being affected by the transport of the HMI materials through Moab are "vague and generalized" and state no particular "injury in fact"⁴⁶ that is "concrete and particularized"⁴⁷ or "threatened,

⁴¹ See *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-94-3, 39 NRC 95, 101-02 (1994).

⁴² See *International Uranium (USA) Corp.* (Receipt of Material from Tonawanda, New York), LBP-98-21, 48 NRC 137, 146-47 (1998).

⁴³ Hearing Request at 2 (filed Aug. 9, 2000).

⁴⁴ *Id.* at 3 (filed Aug. 9, 2000).

⁴⁵ See, e.g., First Supplement at 5-48.

⁴⁶ See *International Uranium (USA) Corporation's Opposition to the Request for Hearing of Sarah M. Fields*, at 5 (filed Aug. 24, 2000) (citing *Northern States Power Co.* (Independent Spent Fuel Storage Installation), LPB-96-22, 44 NRC 138, 140-41 (1996)).

⁴⁷ See *id.* (citing *Florida Audubon Society v. Bentsen*, 94 F.3d 658, 663 (D.C. Cir. 1996) (en banc)).

certainly impending, and real and immediate.’’⁴⁸ Specifically, IUSA argues that the Petitioner fails to state why there is a ‘‘high probability’’ she would be affected by the proposed license amendment, how she would be affected by it, and how any such effect would injure her. IUSA further argues that the Petitioner has failed to explain what harm may result from her areas of concern, particularly when the material and activity to be authorized under the proposed license amendment are well within the limits already authorized by its license for the mill and amendments thereto.

In determining standing under 10 C.F.R. § 2.1205(e) and (h), a presiding officer is required to consider,

among other factors—

- (1) [t]he nature of the requestor’s right under the Act to be made a party to the proceeding;
- (2) [t]he nature and extent of the requestor’s property, financial, or other interest in the proceeding; and
- (3) [t]he possible effect of any order that may be entered in the proceeding upon the requestor’s interest.⁴⁹

Under relevant case law interpreting these requirements, a presiding officer must, in considering whether the requisite showings have been made under the rules cited above, look to whether a petitioner has demonstrated that: (1) she has suffered or will potentially suffer a distinct and palpable ‘‘injury in fact’’ within the ‘‘zone of interests’’ arguably protected by the statutes governing the proceeding; (2) the injury is fairly traceable to the challenged action; and (3) the injury is likely to be redressed by a favorable decision.⁵⁰

Also, while a petitioner bears the burden of establishing standing, Commission case law provides that in making a standing determination a presiding officer is to ‘‘construe the petition in favor of the petitioner.’’⁵¹ Further, ‘‘[r]elative to a threshold standing determination, . . . even minor radiological exposures resulting from a proposed licensee activity can be enough to create the requisite injury in fact.’’⁵²

Finally, in a case such as this in which a proposed license amendment is challenged, it is also necessary to determine whether the activities authorized under the present license amendment application could cause a ‘‘distinct new

⁴⁸ See *id.* (citing *Babcock and Wilcox* (Apollo, Pennsylvania Fuel Fabrication Facility), LPB-93-4, 37 NRC 72, 81 (1993)).

⁴⁹ 10 C.F.R. § 2.1205(h).

⁵⁰ See *Atlas Corp.* LBP-97-9, 45 NRC at 423-24 (citing *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996)).

⁵¹ *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995), cited in *Atlas Corp.*, LBP-97-9, 45 NRC at 424.

⁵² *General Public Utilities Nuclear Corp.* (Oyster Creek Nuclear Generating Station), LBP-96-23, 44 NRC 143, 158 (1996), cited in *Atlas Corp.*, LBP-97-9, 45 NRC at 425.

harm or threat'⁵³ or injury to the Petitioner "resulting from the amendment, as contrasted with continuing operations of the mill under its existing license,"⁵⁴ or an "increased health or safety hazard" or "increased risk over already licensed activities."⁵⁵ If the new proposed activities would cause such a distinct new or increased harm, threat, injury or risk above and beyond that which could be caused by activities already authorized under IUSA's existing license and any previous amendments thereto, it might be concluded that the Petitioner has established standing in this case. If, on the other hand, as argued by IUSA, transportation of the materials at issue through Moab would not cause any new or increased harm, threat, injury, or risk above and beyond that which the Petitioner might arguably suffer as a result of already authorized activities, this would suggest that the Petitioner has not established standing to be made a party to this proceeding.

Looking at the information and argument presented in this matter and construing the petition in Petitioner Fields' favor, it is clear that, because she lives and works within one block of the route over which IUSA will transport the Heritage Minerals material to the White Mesa mill, any accident of or spill from a truck carrying this material that occurred near her home or workplace could result in some impact, even if minor, to the Petitioner should she be in the vicinity at the time of any such accidental release. Whether such impact would result in any radiological exposure sufficient to establish standing is not so clear, however. As the Commission has stated, "proximity alone does not suffice for standing in materials licensing cases,"⁵⁶ and would apply only in actions involving a "significant source of radioactivity producing an obvious potential for offsite consequences."⁵⁷

The information provided by Dr. Chambers is to the effect that any radiological exposure to the Petitioner as a result of the transportation of the Heritage Minerals material constitutes no new or unusual hazard, that indeed it would be a small fraction of background level in normal circumstances, and that, even if there were an accident and spill, the effect on the Petitioner would be "negligible." Petitioner Fields questions Dr. Chambers' conclusions, claiming that they are contradicted by information contained in an IUSA document on "Standard Operating Procedures [for] High Thorium Content Ore Management."⁵⁸

This document addresses ore receiving and dumping at the White Mesa Mill and contains various requirements for performing these functions, including safety

⁵³ *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 192 (1999).

⁵⁴ *International Uranium (USA) Corp.* (White Mesa Uranium Mill), LBP-97-12, 46 NRC 1, 8 (1997), *aff'd*, CLI-98-6, 47 NRC 116 (1998).

⁵⁵ *International Uranium (USA) Corp.* (White Mesa Uranium Mill), LBP-97-14, 46 NRC 55, 56, 58 (1997), *aff'd*, CLI-98-6, 47 NRC 116 (1998); *see also International Uranium (USA) Corp.* (Receipt of Material from St. Louis, Missouri), LBP-99-24, 49 NRC 495, 496 (1999).

⁵⁶ *International Uranium (USA) Corp.*, CLI-98-6, 47 NRC at 117 n.1.

⁵⁷ *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994).

⁵⁸ *See* Petitioner's Third Supplement at 17, Fourth Supplement at 26.

measures for personnel performing them. Although the precautions enumerated and required in the document indicate that material containing thorium does present “radiological dangers” and the need for “special procedures,” the nature of the functions addressed in this document — relating to personnel who work with the material — places them in a different context than that of a person residing near or walking on the road over which trucks will travel, even in the event of a spill.⁵⁹ Such personnel will be involved in “long and sustained exposure” to the material, in contrast to pedestrians, whose potential exposure would be very brief, as pointed out by Dr. Chambers.⁶⁰ Therefore this document is not found to contradict Dr. Chambers’ statements.

The Petitioner states that she intends, as a result of her concerns about the radiological exposure she might receive from trucks carrying the Heritage Minerals material, to avoid the road over which the trucks would travel, citing various sources, many on the dangers of radiation to persons who work with radioactive materials.⁶¹ While the Petitioner (who does not work with radioactive materials) may choose to do this, she has provided no relevant information that would contradict the information provided by Dr. Chambers.

Based on the information provided by Dr. Chambers, to the effect that any radiological exposure to the Petitioner as a result of the transportation of the Heritage Minerals material through Moab would be “negligible” at most, I conclude that the source of radioactivity at issue herein is not significant such that it would produce an “obvious potential for offsite consequences” during its transportation through Moab. Therefore, Petitioner Fields’ proximity to the transportation route is not sufficient on its own to grant her standing in this case.

With regard to the broader question whether the Petitioner has shown any injury arising out of the amendment at issue in this proceeding, the ten trucks per week that will transport the Heritage Minerals material through Moab for a period of 1 to 3 months constitute a small portion of the total truck traffic to the White Mesa Mill for *all* mill activities during the time in question, and will involve material with a small fraction of the radiological content of other materials transported to the mill. As stated by IUSA in its Response to the Petitioner’s “First Supplement,” IUSA has transported, and will continue to transport, larger quantities of similar or more radiologically active feeds through

⁵⁹ See Third Supplement, Exh. A at 1-2 of 8.

⁶⁰ See Chambers Affidavit at 7.

⁶¹ See Petitioner’s Fourth Supplement at 15-17, 26-27. It is noted that the Petitioner in several of her (often voluminous and somewhat rambling) filings has cited a variety of sources on radiation and its effects. But with few exceptions (such as the letter from Attorney Thompson discussed at note 6, *supra*), none of the sources relied on by the Petitioner have been found to be of a nature to affect the possible outcome of this proceeding, and many are irrelevant to the matters actually at issue in this proceeding, notwithstanding the Petitioner’s resourcefulness in finding them despite her evident lack of expert assistance in this proceeding.

Moab in accordance with existing licenses.⁶² It is noted that the Petitioner has made references to an accident involving transportation of materials to the White Mesa Mill, and to some trucks having been found to have “high radiation readings.”⁶³ There has been no indication or showing, however, of any particulars or of any pattern that would suggest any greater likelihood of any additional such incidents occurring with the trucks that would transport the Heritage Minerals material to the mill. Moreover, given the information provided by Dr. Chambers, the very low radiological inventory and activity of the material in question herein leads to a conclusion that, even in the event of a similar incident, the likelihood of any exposure significantly above background levels would be negligible.

Construing the petition in the Petitioner’s favor, the question becomes: whether a negligible likelihood of any radiological exposure that would be significantly above background level is sufficient to establish an “injury in fact,” resulting from the amendment at issue in this case. I find, in the circumstances of this case, that such a negligible likelihood has not been shown to constitute a *new or increased* harm, threat, injury, or risk as a result of the proposed license amendment, over and above the risk or threat of injury already arising from continuing activities under the mill’s existing license and amendments. And based upon this finding, I further conclude that the Petitioner has not demonstrated in this proceeding the requisite injury in fact, traceable to the proposed license amendment and likely to be redressed by a favorable decision, to establish standing to be admitted as a party in the proceeding. Any challenge to continuing activities under IUSA’s license, which appear to be Petitioner Fields’ main concern, would have to be brought pursuant to a request for action under 10 C.F.R. § 2.206.

III. CONCLUSION

In conclusion, although her sincerity in her concerns is unquestionable, and although her Hearing Request was timely and presents one germane area of concern, Petitioner Fields has not demonstrated the requisite injury in fact needed to establish standing under 10 C.F.R. § 2.1205(e) and (h) and relevant case law. Her request for hearing must therefore be denied. In addition, as noted above, her request for stay is denied.

For the foregoing reasons, it is, this 28th day of February 2001, ORDERED that:

⁶² International Uranium (USA) Corporation’s Response to the Presiding Officer’s October 26, 2000 Request for Information (Nov. 13, 2000), at 2.

⁶³ Transcript at 25-26 (Sept. 14, 2000).

1. The August 9, 2000, hearing request of Petitioner Sarah M. Fields is denied and this proceeding is terminated.

2. In accordance with the provisions of 10 C.F.R. § 2.1205(o), as it rules upon a hearing request, this Memorandum and Order may be appealed to the Commission by filing an appeal statement that succinctly sets out, with supporting arguments, the errors alleged. To be timely, an appeal statement must be filed within 10 days after this Memorandum and Order is served (i.e., on or before Thursday, March 15, 2001.)

BY THE PRESIDING OFFICER⁶⁴

Ann Marshall Young
ADMINISTRATIVE JUDGE

Rockville, Maryland
February 28, 2001

⁶⁴Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to all participants or counsel for participants.

ATTACHMENT A
Uranium and Thorium Activities in Licensed Ores and Products

Mill Feed & Production	Description	Tons	Uranium Isotopes Average (Wt% U)	Uranium Isotopes Activity Average (pCi/g)	Total Uranium Inventory (Ci)	Thorium Isotopes Activity Average (pCi/g)	Thorium Inventory* (Ci)	Estimated Total Activity of U and Th (pCi/g)	Estimated Total Inventory of U and Th (Ci)
Linde (2)	Soil	140,400	0.07%	469	59.8	40	5	509	65
Ashland 1 (3)	Soil	108,810	0.06%	402	39.7	238	24	640	63
Heritage (4)(5)	Monazite Sands	2,910	0.05%	335	0.89	1,190	3.1	1,525	4
Cabot (6)	Tantalum residues	16,828	0.343%	2,298	35.1	473.0	7.23	2,771	42
Natural Ores (7)(8)(9)(10)	Mill Inception to Date	3,846,667	0.310%	2,077	7,254	1,024	3,576	3,101	10,830
Ashland 2 (11)	Soil	43,981	0.01%	67	2.7	6,950	278	7,017	280
Cameco (12)	KF Product	1,966	4.6%	30,800	55.0	3,170	5.7	33,970	61
Allied Signal (13)(14)	Calcium Fluoride	2,343	3.0%	20,100	43	14,448	30.74	34,548	74
Cameco (15)	Phosph. regen. product	557	8.0%	53,600	27.1	-	-	53,600	27
Cameco (16)	Calcined product	2,197	6.53%	43,751	87.3	16,472	32.86	60,223	120
Allied Signal (17)	KOH solution recovery	1,526	26.8%	179,560	249	-	-	179,560	249
Rhone-Poulenc (18)(19)	Uranyl nitrate hexahydrate	17	50%	335,000	5.0	0.10	0.00	335,000	5
Cameco (20)	UF4 with filter ash	10	65%	435,500	3.9	0.10	0.00	435,500	4
Uranium Product (21)	Yellowcake	14,153	72%	482,400	6,199	-	-	482,400	6,199
Nev. Test Site (22)	Cotter Concentrate	363	16.00%	107,200	35.3	628,062	207	735,226	242
Current Estimated Feed Total		4,182,728			14,097		4,169		18,266
Current Estimated Weighted Average				3,712		1,098		4,809	

* Total thorium activity is stated to the degree the information is available.

Notes:

- (1) Appendix A includes general calculations for conversion of units.
- (2) Based on Linde Amendment Application, IT pre-excavation field data 7/00, and RMPR (See Appendix B)
- (3) Tonnage based on current estimates from the Ashland site, other information based on License Amendment Application, IT pre-excavation field data and RMPR (See Appendix C).
- (4) Based on Heritage License Amendment Application and RMPR (See Appendix D).
- (5) Thorium estimates provided by S. Fields of 4,000 pCi/g is for only a portion of the material being sent to IUC. The value quoted is the estimated average value for all the material sent to IUC.
- (6) Cabot information included in Appendix E.
- (7) Tons and wt% based on Mill production logs (See Appendix F)
- (8) Thorium values estimated by the Mill's Radiation Safety Officer (See Appendix F)
- (9) Mill head grades typically range from 0.11% to 0.86% uranium or 1,100 to 8,603 pCi/g.
- (10) Only a portion of the natural ores were transported through Moab, Utah.
- (11) Production based on Mill production report, uranium and thorium information contained in Appendix G.
- (12) KF data is included in Appendix H.
- (13) Data from Mill production logs only for production in 1996 and 1999, data from previous runs is not available (See Appendix I).
- (14) Thorium content based on discussions with generator (See Appendix I)
- (15) Tonnage based on Mill receipts. Uranium based on License Amendment information (See Appendix J)
- (16) Tonnage based on Mill production and receipts. Head grade based on actual production estimates. (See Appendix K)
- (17) Tonnage and assays based on Mill production. Thorium content based on information from generator. (See Appendix L).
- (18) Based on USNRC Technical Evaluation Report for Energy Fuels Nuclear License Amendment #41 and Rhone Poulenc Data (12/21/94). See Appendix M.
- (19) This material was not trucked through Moab, Utah.
- (20) No material has been received at the Mill to date. The information is based on the License Amendment information (See Appendix J).
- (21) Tonnage based on actual Mill production logs and average grade based on Mill data (See Appendix F). A majority of the yellowcake is shipped through the Moab area.
- (22) Values calculated by K. Schiager in letter of 7/10/97 and tonnage based on actual Mill receipts. (See Appendix N.)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
Edward McGaffigan, Jr.
Jeffrey S. Merrifield

In the Matter of

**Docket Nos. 50-003-LT
50-247-LT
(consolidated)**

**CONSOLIDATED EDISON COMPANY
OF NEW YORK and
ENERGY NUCLEAR INDIAN
POINT 2, LLC, and
ENERGY NUCLEAR OPERATIONS, INC.
(Indian Point, Units 1 and 2)**

March 6, 2001

This proceeding concerns an application for Commission approval of a license transfer for the Indian Point 1 and 2 nuclear power plants. Two Petitioners to intervene (Citizens Awareness Network (CAN) and the Town of Cortlandt) seek either a suspension or revocation of the proceeding, or alternatively a grant of access to the proprietary version of the license transfer application and additional time within which to frame and submit Petitioners' issues. The Commission declines to suspend or terminate the proceeding, but instead directs Applicants to give Petitioners access to an unredacted version of the transfer application within 7 days, pursuant to confidentiality arrangements. The Commission also grants Petitioners an additional 20 days, after obtaining the unredacted application, to submit (or revise) issues.

LICENSE TRANSFER: SUSPENSION OF PROCEEDING; STAY

RULES OF PRACTICE: SUSPENSION OF PROCEEDING; STAY

The Commission historically has been reluctant to suspend pending adjudications to await developments in other proceedings, particularly in the license transfer area, where transactions frequently are time-sensitive, where related proceedings are common, and where the Commission has announced publicly its commitment to expeditious decisionmaking. *See Niagara Mohawk Power Corp.* (Nine Mile Point Nuclear Station, Units 1 and 2), CLI-99-30, 50 NRC 333, 343 (1999). Situations may arise where efficiencies might be gained from suspending an adjudication due to the presence of overlapping issues in multiple NRC proceedings; in that instance, suspension of the proceeding would be consistent with our policy to expedite proceedings. For example, in this situation, the *Indian Point 3* proceeding is much further along than is the instant case. If Intervenor believed that resolution of an issue in that proceeding would fully resolve one of their admitted issues here, it would not make sense to force relitigation of the issue here. However, at this time, we are much too early in the proceeding to even consider the matter of overlapping issues, since we have yet to evaluate the admissibility of any issue. Simply put, the mere possibility that the outcome of the IP3 proceeding may relate to future admissible issues in this proceeding provides no basis for delaying the filing of issues, for the simple reason that we must know what the issues are before we can make a determination about whether they overlap.

The Commission has also stated that a petition filed under 10 C.F.R. § 2.206 may not be used to avoid an existing forum in which an issue is being or is about to be litigated. *See Consolidated Edison Co. of New York* (Indian Point, Units 1, 2, and 3), CLI-75-8, 2 NRC 173, 177 (1975); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-81-6, 13 NRC 443, 446 (1981). If CAN believes an issue is relevant to the ongoing adjudicatory proceeding, CAN should raise this issue following the schedule and process set forth for admission of issues into the license transfer proceeding — as opposed to seeking a suspension or revocation of this proceeding pending the conclusion of the NRC Staff's review of a section 2.206 petition.

Our license transfer rules allow petitioners to submit late-filed issues, where appropriate. *See* 10 C.F.R. § 2.1308(b). Our late-filing rule, not a suspension of proceedings, is the best means for handling newly arising issues.

It is true, as CAN stresses, that multiple simultaneous proceedings place burdens on the parties. But litigation inevitably results in the parties' loss of both time and money. We cannot postpone cases for many weeks or months simply because going forward will prove difficult for litigants or their lawyers. *Nine Mile Point*, 50 NRC at 343-44.

**LICENSE TRANSFER: FINANCIAL QUALIFICATIONS;
EXTENSION OF TIME; ACCESS TO UNREDACTED
VERSION OF APPLICATION**

The Commission grants the requests by CAN and Cortlandt for access to the unredacted version of the application and for an extension of time within which to raise issues regarding that application.

MEMORANDUM AND ORDER

This proceeding involves an application seeking the Commission's authorization for Consolidated Edison Company of New York ("ConEd") to transfer its ownership interest in, and operating/maintenance responsibility for, the Indian Point Nuclear Generating Unit Nos. 1 and 2 ("the Indian Point plant") to Entergy Nuclear Indian Point 2, LLC ("Entergy Indian Point 2") and Entergy Nuclear Operations, Inc. ("Entergy Nuclear Operations"), respectively. The Indian Point plant is located in Westchester County, New York, beside the Hudson River. Its property lies partially within the Town of Cortlandt and entirely within the Hendrick Hudson School District. ConEd and the Entergy companies (collectively "Applicants") submitted both a redacted and an unredacted version of their application to the Commission on December 12, 2000, pursuant to section 184 of the Atomic Energy Act of 1954 ("AEA"), 42 U.S.C. § 2234, and section 50.80 of the Commission's regulations.¹ The redacted version omitted financial information relevant to the expected costs of the plant's operation and maintenance.

On January 29, 2001, the Commission published in the *Federal Register* a notice of the Indian Point 2 application. *See* 66 Fed. Reg. 8122. In response to this notice, the Commission received petitions to intervene and requests for hearing from two entities wishing to oppose the license transfer application. The Petitioners are Citizens Awareness Network ("CAN") and the Town of Cortlandt together with the Hendrick Hudson School District (collectively "Cortlandt"). Petitioners CAN and Cortlandt, as well as Entergy Nuclear Operations, have participated as parties in the Commission's still-pending license transfer proceeding involving the Indian Point 3 reactor. *See Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 NRC 266 (2000) (hereinafter referred to as "*Indian Point 3*").

¹ *See* 42 U.S.C. § 2234 (precluding the transfer of any NRC license unless the Commission both finds the transfer in accordance with the AEA and gives its consent in writing). *See also* 10 C.F.R. § 50.80, which reiterates the requirements of AEA § 184, sets forth the filing requirements for a license transfer application, and establishes the following test for approval of such an application: (1) the proposed transferee is qualified to hold the license and (2) the transfer is otherwise consistent with law, regulations, and Commission orders.

CAN, pointing to a lack of access to the complete transfer application and to a delay in access to the redacted application, presents no specific issues for consideration but instead alludes only generally to certain concerns regarding the financial and technical qualifications of the Entergy companies. CAN makes two threshold procedural requests. First, it seeks the suspension or revocation of the instant proceeding, pending further developments in matters CAN deems related. In the alternative, if the Commission refuses to suspend or terminate proceedings, CAN seeks access to the unredacted version of the license transfer application and additional time to frame issues. Cortlandt, although it has already presented several issues, likewise seeks access to the unredacted application, and more time to frame additional issues.

For the reasons set forth below, we decline to suspend or terminate the proceeding, but we do direct ConEd and Entergy to give CAN and Cortlandt access to an unredacted version of the transfer application within 7 days, pursuant to confidentiality arrangements similar to those agreed to in the *Indian Point 3* case. We also grant CAN and Cortlandt an additional 20 days, after obtaining the unredacted application, to submit (or revise) issues. To obtain a hearing, Petitioners must meet the standards set out in 10 C.F.R. § 2.1306. We will rule on Petitioners' standing and on the admissibility of their issues after we have all pleadings in hand.

A. CAN's Motion for Suspension or Revocation of This Proceeding

CAN seeks a suspension or revocation of the proceeding until the Commission completes the *Indian Point 3* license transfer proceeding, and also until the NRC completes consideration of CAN's Petition for Enforcement Action pursuant to 10 C.F.R. § 2.206 concerning ConEd's alleged regulatory violations at Indian Point 2.² CAN argues that neither the financial nor technical qualifications of the Entergy companies can be adequately evaluated until completion of the ongoing reviews of the design and licensing bases of the reactor (in the section 2.206 review) and the financial qualifications of Entergy Indian Point 2's affiliate companies (in the *Indian Point 3* adjudication).³ CAN also maintains that continuation of the present proceeding, in view of CAN's concurrent participation in other proceedings (including the *Indian Point 3* hearing), would stretch its resources so tightly that it would constitute a *de facto* barrier to meaningful participation in this case.

²CAN also points out that the Public Citizens' Critical Mass Energy Project has filed a separate petition pursuant to section 2.206, also challenging the licensing basis of Indian Point 2, albeit on grounds different from those in CAN's section 2.206 petition.

³Although CAN is hardly clear on this point, we assume that it refers here to Entergy Nuclear Operations and/or the two Entergy affiliates (Entergy Global Investments and Entergy International Ltd.) that are offering supplemental financial guarantees to Entergy Indian Point 2.

Concerning CAN's first argument, the Commission historically has been reluctant to suspend pending adjudications to await developments in other proceedings, particularly in the license transfer area, where transactions frequently are time-sensitive, where related proceedings are common, and where the Commission has announced publicly its commitment to expeditious decisionmaking. *See Niagara Mohawk Power Corp.* (Nine Mile Point Nuclear Station, Units 1 and 2), CLI-99-30, 50 NRC 333, 343 (1999). Situations may arise where efficiencies might be gained from suspending an adjudication due to the presence of overlapping issues in multiple NRC proceedings; in that instance, suspension of the proceeding would be consistent with our policy to expedite proceedings. For example, in this situation, the *Indian Point 3* proceeding is much further along than is the instant case. If intervenors believed that resolution of an issue in that proceeding would fully resolve one of their admitted issues here, it would not make sense to force relitigation of the issue here. However, at this time we are much too early in the proceeding to even consider the matter of overlapping issues, since we have yet to evaluate the admissibility of any issue — CAN has not even submitted issues. Simply put, the mere possibility that the outcome of the IP3 proceeding may relate to future admissible issues in this proceeding provides no basis for delaying the filing of issues, for the simple reason that we must know what the issues are before we can make a determination about whether they overlap.

The Commission has also stated that a petition filed under 10 C.F.R. § 2.206 may not be used to avoid an existing forum in which an issue is being or is about to be litigated. *See Consolidated Edison Co. of New York* (Indian Point, Units 1, 2, and 3), CLI-75-8, 2 NRC 173, 177 (1975); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-81-6, 13 NRC 443, 446 (1981). If CAN believes an issue is relevant to the ongoing adjudicatory proceeding, CAN should raise this issue following the schedule and process set forth for admission of issues into the license transfer proceeding — as opposed to seeking a suspension or revocation of this proceeding pending the conclusion of the NRC Staff's review of a section 2.206 petition.

For these reasons, we see no basis for delaying the present license transfer case indefinitely on CAN's theory that new and material information may arise out of collateral matters such as the pending hearing in *Indian Point 3* or the pending 2.206 petition in *Indian Point 2*. Our license transfer rules allow petitioners to submit late-filed issues, where appropriate. *See* 10 C.F.R. § 2.1308(b). Our late-filing rule, not a suspension of proceedings, is the best means for handling newly arising issues.

Turning to CAN's second argument, it is true, as CAN stresses, that multiple simultaneous proceedings place burdens on the parties. But litigation inevitably results in the parties' loss of both time and money. We cannot postpone cases for many weeks or months simply because going forward will prove difficult for

litigants or their lawyers. In *Nine Mile Point*, we rejected an argument for delay all but identical to CAN's:

[W]e decline to adopt the co-owners' suggestion that we further suspend this proceeding until conclusion of the proceeding currently pending before the New York Public Service Commission. In support of this suggestion, the co-owners allege that simultaneous litigation in multiple forums imposes a "tremendous burden" on all parties. . . . We fail to see how the burden on the co-owners is any greater than that placed on numerous other parties in our proceedings — parties who are regularly participants in proceedings concurrently conducted by other state and federal agencies.

* * * *

[C]o-owners have not explained why suspension of our proceeding pending completion of the New York Public Service Commission's case would reduce the financial burden that this litigation places on the parties. The burden would appear the same, whether incurred simultaneously or sequentially. . . . For all these reasons, we deny co-owners' request that we suspend this proceeding pending conclusion of the New York Public Service Commission's proceeding.

50 NRC at 343-44. We find the reasoning in *Nine Mile Point* equally applicable here.

B. CAN's and Cortlandt's Motions for Extension of Time

CAN and Cortlandt each seek an extension of time within which to file its respective issues. CAN claims that it needs access to the unredacted version of the Indian Point 2 license transfer application if CAN is to prepare sufficiently specific and supported issues regarding the Entergy companies' qualifications to own and operate the plant. CAN asserts that it was unable until just before its original February 20th filing deadline to obtain a copy of even the redacted version — due to difficulties with the Commission's automated document retrieval system ("ADAMS") — and that, even then, CAN was only able to gain access to a partial copy of the redacted version. Cortlandt, while it apparently obtained the redacted application in sufficient time to frame some issues, also seeks access to the unredacted application to frame additional issues.

The Commission grants the requests by CAN and Cortlandt for access to the unredacted version of the application and for an extension of time within which to raise issues regarding that application. We have granted similar requests in the past, and both the terms of and reasons for those grants apply equally to the instant proceeding.⁴ As we indicated recently in the *Indian Point 3* case:

⁴ See, CLI-00-22, 52 NRC at 291-92 (granting access to unredacted application in *Indian Point 3* case); *Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), Docket Nos. 50-333-LT and 50-286-LT, two unpublished Commission orders dated July 18 and 20, 2000 (granting extensions of time due to unavailability of documents on ADAMS).

Subpart M calls for “specificity” in pleadings. *See Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Units 1, 2, and 3), CLI-00-18, 52 NRC 129, 131-32 (2000). However, in the unusual setting here, where critical information has been submitted to the NRC under a claim of confidentiality and was not available to Petitioners when framing their issues, it is appropriate to defer ruling on the admissibility of an issue until the petitioner has had an opportunity to review this information and submit a properly documented issue.

CLI-00-22, 52 NRC at 300 n.23. Moreover, because CAN and Cortlandt also lacked access to a complete copy of the redacted application, we grant them each an extension of time within which to submit (or revise) any issues bearing on even nonconfidential portions of the application.

Accordingly, within 7 days after the issuance date of this Order, the Applicants and Petitioners should enter into a confidentiality agreement along the same general lines as the one into which the parties entered in the *Indian Point 3* case, and the complete, unredacted application shall then be made available to Petitioners. If a confidentiality agreement proves impracticable, the Applicants and Petitioners shall notify the Commission by the end of that same 7-day period, describe the obstacles to agreement, and propose terms for entry of a suitable protective order.

Within 20 days of the parties’ entry into a confidentiality agreement giving Petitioners access to the complete application, Petitioners may each submit new or revised issues challenging the Entergy companies’ financial or technical qualifications to own and/or operate the Indian Point 1 and 2 facilities.⁵ New or revised responses and replies shall be filed on the schedule specified in 10 C.F.R. § 2.1307. References in pleadings to confidential information shall be filed under seal.

IT IS SO ORDERED.

For the Commission⁶

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 6th day of March 2001.

⁵Our rules establish a general 20-day period for submitting issues in license transfer cases. *See* 10 C.F.R. § 2.1306(c)(1). We see no basis for granting Cortlandt’s request for 30 (or more) days for submitting issues.

⁶Commissioner Merrifield was not present at the affirmation of this Memorandum and Order. Had he been present, he would have affirmed his prior vote to approve this Memorandum and Order.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
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 12, 2001

RULES OF PRACTICE: EVIDENCE

In the absence of evidence to the contrary, the NRC does not presume that a licensee will violate agency regulations wherever the opportunity arises. *See GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000).

LICENSE CONDITIONS

It is not true that all licensee commitments must be converted into express license conditions to be enforceable.

EMERGENCY PLANS: ENFORCEMENT ACTION

The Applicant's inclusion in its emergency plan of its promises to train and employ a certain number of firefighters ensures that the facility will have adequate firefighting personnel without the need to incorporate these promises into the license. NRC regulations require the licensee to "follow and maintain in effect an emergency plan that is approved by the Commission." 10 C.F.R.

§ 72.44(f). PFS may not change its plan in any manner that could “decrease the effectiveness of the plan” without prior Commission notice and approval. *Id.* Failure to obtain the required approval is a violation of NRC regulations and subject to enforcement.

EMERGENCY PLANS: CONTENT (SUFFICIENCY)

NRC regulations require that the emergency plan provide “a brief description of the means of mitigating the consequences of each type of accident.” *See* 10 C.F.R. § 72.32(a)(5). Implementing details are not required in the emergency plan. *See, e.g., Curators of the University of Missouri, CLI-95-1, 41 NRC 71, 140-42 (1995).*

MEMORANDUM AND ORDER

The State of Utah has asked the Commission’s review of a recent partial initial decision by the Licensing Board. *See* LBP-00-35, 52 NRC 364 (2000) (Contention Utah R, Emergency Plan). That decision found that the Applicant, Private Fuel Storage, L.L.C., had met the applicable regulatory criteria with respect to emergency planning at its proposed independent spent fuel storage installation (ISFSI).

Utah sought in Contention R to raise various emergency planning issues, which were eventually whittled away through summary disposition until only the firefighting aspects of the Emergency Plan were left to be addressed at the Board’s June 19, 2000 hearing. Utah claims that the Board departed from governing precedent and raised a substantial policy question by refusing to require that PFS’s various fire safety commitments, advanced during the hearing process, be reduced to license conditions. In addition, Utah claims that the Board abused its discretion in finding that it was not necessary for PFS to describe how it would respond to a particular serious accident, i.e., a potential cask tip-over.

Utah also asks that emergency planning issues related to a proposed intermodal transfer point (ITP) be deferred until such time, if ever, that the Commission considers whether the ITP needs an NRC license.¹ The Board found that the ITP did not need an NRC license; therefore, all contentions relating to the ITP were dismissed, no hearing was held on those issues, and the partial initial decision did not discuss them.

¹The intermodal transfer point refers to the end of the railroad line, where casks would have to be moved from rail cars onto heavy-haul trucks and transported 25 miles to the ISFSI. The Applicant’s preferred transportation alternative, however, would be to build a rail spur to accommodate the ISFSI.

Our regulations provide standards governing the decision whether to accept review of such matters. The Commission can, in its discretion, accept review, after “giving due weight to the existence of a substantial question with respect to the following considerations:

- (i) A finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding;
- (ii) A necessary legal conclusion is without governing precedent or is a departure from or contrary to established law;
- (iii) A substantial and important question of law, policy or discretion has been raised;
- (iv) The conduct of the proceeding involved a prejudicial procedural error; or
- (v) Any other consideration which the Commission may deem to be in the public interest.

See 10 C.F.R. § 2.786(b)(4).

For the reasons set forth below, we find that this standard has not been met here, and thus, we deny the petition for review. We agree with Utah, however, that the time for raising emergency planning issues relating to the ITP would properly be when all issues relating to the ITP are under review.

I. BOARD’S REFUSAL TO INCORPORATE COMMITMENTS AS LICENSE CONDITIONS

Utah complains that the Licensing Board erred in denying its request to have certain fire safety commitments expressly incorporated as conditions of PFS’s license. Specifically, Utah asked that PFS’s promise to satisfy various National Fire Protection Association (NFPA) standards with respect to its fire brigade be imposed as license conditions. During the Board proceedings, PFS agreed to train eleven employees to applicable NFPA firefighting standards, at least five of whom will be on call at any given time. *See* LBP-00-35, 52 NRC at 404-05.

Utah contends that license conditions are needed because PFS has a new financing scheme which, if it fails to bring in sufficient revenue, could encourage PFS to cut operating costs by reducing the number of trained employees at the site. It contends that PFS is “trying to do too much with too few people” by adding firefighting duties to the job descriptions of otherwise assigned employees. Utah cites an earlier Commission decision in this proceeding that required certain financial commitments to be spelled out in PFS’s license. *See* CLI-00-13, 52 NRC 23 (2000).

We reject Utah’s argument that PFS’s new financing arrangements require license conditions on emergency planning. First, while an underfinanced facility theoretically might take safety-imperiling cost-cutting measures,² the PFS facility

² *See, e.g., Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43 (1994).

will not be licensed unless the Commission finds PFS's financing arrangements sufficient to meet NRC financial qualifications policy. The adequacy of PFS's proposed financing scheme is an issue in this litigation, but it is not before us on this appeal. Further, in the absence of evidence to the contrary, the NRC does not presume that a licensee will violate agency regulations wherever the opportunity arises. *See GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000). Therefore, we will neither assume that PFS will operate without sufficient financing, nor will we assume that an unexpected funding shortfall will induce PFS to ignore its responsibility to train and employ a sufficient number of firefighters. Finally, even were Utah correct that PFS will shirk its duty to protect health and safety, the State fails to show how imposing a license condition would prevent this. If PFS ultimately receives NRC approval of its proposed facility, PFS will be expected to meet all NRC rules and all safety commitments, subject to Commission oversight and enforcement.

Our earlier decision with respect to financial conditions (CLI-00-13) does not support the proposition that all licensee commitments must be converted into express license conditions to be enforceable. Rather, the Commission there ruled that, where PFS sought to establish its financial qualifications through service contracts from its customers (who are also its members), certain provisions should be spelled out in the license to simplify Staff review of compliance. Otherwise, the Staff could be put in a position of making factual and legal judgments simply to determine whether the licensee had complied with its financial qualifications commitments. Our financial qualifications decision sought to reduce post-license verification to an essentially ministerial act. *See* 52 NRC at 34. That decision should not be read to suggest that promises and representations made to NRC Staff and NRC hearing boards are meaningless if they are not reiterated in the license.

No license condition is necessary to confirm PFS's commitments to fire-fighting. PFS's incorporation into its emergency plan of the promise to train eleven firefighters and keep five on call will ensure that PFS will have adequate firefighting personnel.³ *See* LBP-00-35, 52 NRC at 410-11. Our regulations require that the Licensee "follow and maintain in effect an emergency plan that is approved by the Commission." 10 C.F.R. § 72.44(f). PFS may not change its plan in any manner that could "decrease the effectiveness of the plan" without

³The plan provides:

A minimum of five PFSF staff personnel is required to fully staff a PFSF fire brigade. As a minimum, personnel in Instrument/Electrical Maintenance, Mechanical Maintenance/Operations, and Radiation Protection (11 persons, as shown in Figure 4-1) shall receive fire brigade training. The fire brigade will be organized, operated, trained, and equipped in accordance with NFPA 600 (Reference 12).

prior Commission notice and approval. *Id.* Failure to obtain the required approval is a violation of NRC regulations and subject to enforcement.⁴

The Board found that the PFS's representations in its Emergency Plan — that it would train eleven employees in firefighting and have five firefighters on call at all times — were not the type of commitments that need further elaboration in the license itself. We agree. As the Board rightly pointed out, were it to attempt to incorporate every litigation commitment expressly in the license, it might create the impression that anything left out is merely an empty promise. *See* LBP-00-35, 52 NRC at 410 n.7.

We find no basis for Utah's claim that the Board's refusal to impose certain license conditions was legal error.

II. FAILURE TO DESCRIBE RESPONSE TO PARTICULAR ACCIDENT: CASK TIP-OVER

Utah also claims that the Board erred in not admitting as a basis for Utah R the issue whether PFS must describe its response to a potential cask tip-over accident. The State argues that the Board's refusal of this basis was an inappropriate exercise of policy judgment.

PFS proposes to use ventilated casks at its site, which could overheat if they were tipped over, blocking the vents. According to the Emergency Plan, cask temperatures could exceed design criteria within 33 hours if there were a complete blockage of all vents. Utah claims that, because the casks would weigh 175 tons, PFS should explain where and how it would get a crane capable of uprighting the casks to the site within 33 hours.

PFS and NRC Staff argue that NRC regulations do not require this level of detail in an emergency plan.

NRC regulations require that the emergency plan provide "a brief description of the means of mitigating the consequences of each type of accident." *See* 10 C.F.R. § 72.32(a)(5). Implementing details, such as where PFS will obtain a crane capable of uprighting the casks, are not required in the emergency plan. *See, e.g., Curators of the University of Missouri*, CLI-95-1, 41 NRC 71, 140-42 (1995) (Emergency Plan not defective for failing to describe dimensions of room containing nuclear materials, location of firefighting equipment, training of firefighters, and information to be given to offsite emergency response organizations, for the plan "is not intended to be a detailed road map setting

⁴Our regulations were designed to give the Licensee a degree of flexibility in how it meets the requirement to protect health and safety. *See* 10 C.F.R. § 72.44(f). Although the State could object that this regulation gives PFS room to argue that a certain change did not decrease the plan's effectiveness when it in fact did so, we note that even changes that the Licensee contends do not decrease effectiveness must be brought to the Commission's attention and therefore would not escape the Staff's review.

forth all the minutiae of emergency response’). The Board’s decision was not an imprudent exercise of policy judgment but a reasonable application of agency regulations.

III. TIMING OF APPEAL ON ISSUES RELATING TO INTERMODAL TRANSFER POINT

Utah has also asked the Commission’s approval of its intention to defer any emergency planning issues that relate to the intermodal transfer point (ITP) until such time as an appeal on all issues relating to the ITP is ripe. In its Contention Utah B (License Needed for Intermodal Transfer Facility), the State claimed that PFS’s application is incomplete because the ITP is a *de facto* interim storage facility that should be required to meet the requirements of 10 C.F.R. Part 72. In 1999, the Board dismissed Contention Utah B, finding that ITP is governed by regulations on the transportation of spent nuclear fuel,⁵ not Part 72. *See* LBP-99-34, 50 NRC 168 (1999). Based on its ruling on Contention Utah B, the Board later dismissed that portion of Utah R that dealt with emergency planning at the ITP. *See* LBP-99-39, 50 NRC 232, 236 (1999).

Utah maintains that it is not possible to raise emergency planning issues relating to the ITP without also attacking the Board’s dismissal of Contention Utah B, which would constitute an impermissible interlocutory appeal.

In accordance with our direction in CLI-00-24, 52 NRC 351 (2000), the time for addressing issues relating to the ITP is during an appeal of the dismissal of Utah Contention B. Logically, the Commission cannot review the question whether there is adequate emergency planning at the ITP when it has not reviewed, and does not yet have before it, the Board’s determination that the ITP need not be licensed under Part 72. An appeal of that issue would be, as Utah points out, interlocutory. Furthermore, because the ISFSI and the proposed ITP would be 25 miles apart, the issues of emergency planning at the ISFSI and emergency planning at the ITP are not so closely related that these issues must be considered together. Therefore, if, after the Board’s final initial decision, Utah appeals the dismissal of Contention Utah B, the issue of emergency planning at the ITP should be raised then.

The NRC Staff points out that Utah has not identified in even a general way any error in the Board’s ruling dismissing emergency planning issues that relate to the ITP. Because the time for appeal of ITP issues has not arrived, there is no reason why Utah must identify points of error now. If Utah brings a timely appeal

⁵ Both the NRC and the Department of Transportation regulate the shipment of spent fuel. *See* 10 C.F.R. Part 71. A memorandum of understanding between the two agencies provides that NRC regulates licensing, packaging, and physical protection while DOT regulates transportation and operations. *See* 44 Fed. Reg. 38,690. NRC has issued a general license to any licensee to transport licensed material in an approved package. *See* 10 C.F.R. § 71.12(a).

of Contention Utah B, the Commission can decide at that time if the State has raised any substantial question of law, fact, or policy that warrants review.⁶

IV. CONCLUSION

The petition for Commission review is *denied*.
IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 12th day of March 2001.

⁶The Staff also argues that Utah cannot defer its appeal on emergency planning at the ITP until after the final initial decision, because the Commission has directed that any claims that “could have affected the outcome” of the partial initial decision should be brought immediately after the partial initial decision. *See* CLI-00-24, 52 NRC at 353. We do not agree that the ITP claims, even if accepted by the Board, could have changed the decision’s outcome with respect to emergency planning at the ISFSI. The Board was only considering safety factors at the ISFSI site itself, and its partial initial decision found only that that site met agency requirements.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Peter S. Lam
Thomas D. Murphy

In the Matter of

Docket No. 50-400-LA
(ASLBP No. 99-762-02-LA)

CAROLINA POWER & LIGHT
COMPANY
(Shearon Harris Nuclear Power
Plant)

March 1, 2001

In this 10 C.F.R. Part 2, Subpart K spent fuel pool (SFP) expansion proceeding, in accordance with 10 C.F.R. § 2.1115, the Licensing Board denies the request of Intervenor Board of Commissioners of Orange County, North Carolina (BCOC), to designate for an evidentiary hearing an admitted BCOC contention challenging the NRC Staff's environmental assessment (EA) determination not to prepare an environmental impact statement (EIS) under the National Environmental Policy Act of 1969 (NEPA) regarding Applicant Carolina Power and Light Company's (CP&L) request to increase the spent fuel storage capacity of its Shearon Harris Nuclear Power Plant through a 10 C.F.R. § 50.90 facility operating license amendment. The Licensing Board concludes (1) there was no genuine and substantial factual or legal dispute that required resolution in an evidentiary hearing in connection with the BCOC environmental contention claiming that an EIS was needed because of the probability of SFP accidents; and (2) the NRC Staff's best estimate of probability of a BCOC-positing severe accident scenario (2.0E-7) was reasonable and demonstrated that the scenario was "remote and speculative" so as not to require preparation of an EIS.

RULES OF PRACTICE: BURDEN OF PROOF (SUBPART K PROCEEDING; ENVIRONMENTAL CONTENTIONS)

The proponent of the need for an evidentiary hearing bears the burden of establishing that need, but the Staff bears the ultimate burden to demonstrate its compliance with NEPA in its EA determination that an EIS is not necessary relative to a license amendment request. *See Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 89 (1998).

RULES OF PRACTICE: BURDEN OF PROOF (SUBPART K PROCEEDING; ENVIRONMENTAL CONTENTIONS)

Once an intervenor crosses the admissibility threshold relative to its environmental contention, the ultimate burden in a Subpart K proceeding then rests with the proponent of the NEPA document — the Staff (and the applicant to the degree it becomes a proponent of the Staff’s EIS-related action) — to establish the validity of that determination on the question whether there is an EIS preparation trigger.

RULES OF PRACTICE: EXPERT WITNESS(ES)

When the qualifications of an expert witness are challenged, the party sponsoring the witness has the burden of demonstrating his or her expertise. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-410, 5 NRC 1398, 1405 (1977). Further, although the Federal Rules of Evidence (FRE) are not directly applicable to Commission proceedings, NRC presiding officers often look to the rules for guidance, including FRE 702 that allows a witness to be qualified as an expert “‘[i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or determine a fact in issue.’” *Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982) (quoting FRE 702). In addition, agency caselaw indicates that the qualifications of an expert are established by showing either academic training or relevant experience, or some combination of the two. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-78-36, 8 NRC 567, 570 (1978).

NEPA: ENVIRONMENTAL ANALYSIS (REMOTE AND SPECULATIVE EVENT)

In making a determination about whether a postulated accident sequence is “remote and speculative” so as not to require an analysis of its impacts in an EIS, a Staff determination can be made without a full PRA analysis. Rather, the

Staff determination can be based on existing materials available to it, probabilistic and otherwise, supplemented by additional information it might obtain from the applicant in an environmental report or through requests for additional information (RAIs).

REGULATIONS: INTERPRETATION (10 C.F.R. §§ 20.1001(b), 20.1201(a)(1), 50.47(b)(11) IN CONJUNCTION WITH ENVIRONMENTAL PROTECTION AGENCY PROTECTIVE ACTION GUIDE 2.5)

A review of the applicable regulatory provisions — 10 C.F.R. §§ 20.1001(b), 20.1201(a)(1), 50.47(b)(11) — indicates there is no regulatory bar that prohibits the use of a 25-rem dose limit in an actual emergency or in planning a response to such an emergency to assure SFP cooling after an accident. Likewise, Environmental Protection Agency Protective Action Guide 2.5 clearly allows a dose of up to 25 rem for life saving and protection of large populations. Moreover, because this dose is within regulatory standards, the Board will not engage in the unsupported surmise that knowledgeable plant personnel would be wholly unwilling to accept such doses in an emergency such as the postulated accident sequence. Thus, it is appropriate to use a permissible dose of 25 rem for purposes of calculating stay times and probabilities that personnel at the plant would be able to perform the necessary activities required to restore SFP cooling and makeup.

RULES OF PRACTICE: EFFECT OF 10 C.F.R. § 2.1113 WRITTEN PRESENTATION IN NEPA CONTEXT

Relative to challenge to validity of Staff EA determination, information submitted by the Staff in its 10 C.F.R. § 2.1113 written presentation can establish any requisite ‘hard look’ under NEPA has been taken. *See* 10 C.F.R. § 51.34(b).

TECHNICAL ISSUE DISCUSSED

The following technical issue is discussed: Probability of Postulated Spent Fuel Pool Accident Sequence.

**MEMORANDUM AND ORDER
(Denying Request for Evidentiary Hearing and
Terminating Proceeding)**

Before the Licensing Board in this 10 C.F.R. Part 2, Subpart K proceeding is a challenge by Intervenor Board of Commissioners of Orange County, North

Carolina (BCOC), to a license amendment request by Applicant Carolina Power and Light Company (CP&L) that would permit CP&L to increase the spent fuel storage capacity at its Shearon Harris Nuclear Power Plant (Shearon Harris) by placing two inactive spent fuel pools (SFPs) into service. The sole remaining contention to be resolved is an environmental contention (EC) — EC-6, Environmental Impact Statement Required — that we admitted in LBP-00-19, 52 NRC 85 (2000). With this issue statement, BCOC contests the NRC Staff's December 1999 decision that the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4321, and the Commission's implementing regulations, 10 C.F.R. Part 51, do not require the preparation of an environmental impact statement (EIS) relative to the CP&L SFP expansion request.

Pursuant to 10 C.F.R. § 2.1113, in December 2000 the Licensing Board entertained oral arguments by the parties concerning the pending question whether an evidentiary hearing is necessary regarding contention EC-6. BCOC asserts it has established there are genuine and substantial disputes of fact or law relative to its admitted contention that warrant an evidentiary hearing. Applicant CP&L and the Staff, however, maintain that BCOC has failed to identify any evidence of any disputed factual or legal matters that warrant an additional evidentiary proceeding, and that the Board should rule in their favor on the merits of the contention, thereby terminating this proceeding.

The Licensing Board finds that (1) BCOC has failed to show there is a genuine and substantial dispute of fact or law that only can be satisfactorily resolved by a further evidentiary hearing; and (2) based on the record before us, the Staff has met its burden in demonstrating that the accident scenario postulated by BCOC in support of contention EC-6 is remote and speculative so as not to warrant the preparation of an EIS in connection with the CP&L SFP amendment request. Further, because all matters before the Board in connection with the requested amendment have been resolved in favor of amendment issuance without the need for further evidentiary presentations, we authorize the grant of the requested license amendment, effective immediately, and dismiss this proceeding.

I. BACKGROUND

The portion of this litigation currently before the Board has its basis in a December 23, 1998 CP&L application for a 10 C.F.R. § 50.90 facility operating license amendment to increase the spent fuel storage capacity at its Shearon Harris facility by adding rack modules to previously inactive SFPs C and D and place those pools into service. Responding to the application, in January 1999 the Staff published a notice of proposed no significant hazards consideration and opportunity for a hearing regarding the CP&L application. *See* 64 Fed. Reg. 2237 (Jan. 13, 1999). Subsequently, in February 1999 BCOC filed a request for

hearing and petition to intervene, which it followed with a contentions supplement petition in April 1999. *See* [BCOC] Request for Hearing and Petition to Intervene (Feb. 12, 1999); [BCOC] Supplemental Petition to Intervene (Apr. 5, 1999). In addition to putting forth three contentions that raised technical concerns regarding the proposed SFP expansion, in issue statements labeled EC-1 through EC-5, BCOC claimed that CP&L and the Staff had failed to comply with various NEPA requirements, as implemented by the agency in 10 C.F.R. Part 51. In our July 1999 ruling on the BCOC intervention petition, in addition to finding admissible two BCOC technical contentions claiming the CP&L expansion measure involved inadequate criticality prevention and quality assurance measures, the Board also noted that the Staff had decided to issue an environmental assessment (EA) regarding the CP&L application and dismissed the BCOC NEPA contentions, albeit without prejudice to those matters being raised once the Staff's EA was done. *See* LBP-99-25, 50 NRC 25, 38-39 (1999).

Thereafter, pursuant to 10 C.F.R. § 2.1109, CP&L timely invoked the hybrid hearing procedures articulated in Subpart K of Part 2 relative to the further litigation of admitted contentions in this proceeding. In accordance with those procedures, after a discovery period and receipt of the parties' 10 C.F.R. § 2.1113 written summaries detailing all the known facts, data, and arguments to support or refute the existence of a genuine and substantial factual dispute, in January 2000 the Board heard oral argument on the question whether a dispute existed such that an evidentiary hearing would be necessary for all or a part of the admitted BCOC technical contentions. Ultimately, in a May 2000 decision, the Board concluded such a dispute did not exist and that CP&L had met its burden of showing that, relative to BCOC's concerns, CP&L's proposed spent nuclear fuel storage expansion was in compliance with applicable statutory and regulatory requirements. *See* LBP-00-12, 51 NRC 247, 282-83, *petition for review denied as premature*, CLI-00-11, 51 NRC 297 (2000).

In so ruling, we noted that our determination did not terminate this proceeding because certain environmental issues remained outstanding. *See id.* at 282 n.14. In this regard, on December 15, 1999, the Staff issued an EA with a finding of no significant impact (FONSI) for the proposed CP&L license amendment for Shearon Harris. *See* 64 Fed. Reg. 71,514, 71,516 (Dec. 21, 1999). In response to this Staff determination that no EIS was required, on January 31, 2000, BCOC filed a request for the admission of four late-filed environmental contentions, numbered EC-1 through EC-4, the admissibility of which were contested by CP&L and the Staff. In an August 7, 2000 ruling, the Board found that the first of these contentions, which we renumbered EC-6, was admissible. *See* LBP-00-19, 52 NRC at 93-98. This BCOC contention states:

In the Environmental Assessment ("EA") for CP&L's December 23, 1998, license amendment application, the NRC Staff concludes that the proposed expansion of spent fuel

storage capacity at the Shearon Harris nuclear power plant will not have a significant effect on the quality of the human environment. Environmental Assessment and Finding of No Significant Impact Related to Expanding the Spent Fuel Pool Stage Capacity at the Shearon Harris Nuclear Power Plant (TAC No. MA4432) at 10 (December 15, [1999]). Therefore, the Staff has decided not to prepare an Environmental Impact Statement (“EIS”) for the proposed license amendment. The Staff’s decision not to prepare an EIS violates the National Environmental Policy Act (“NEPA”) and NRC’s implementing regulations, because the Finding of No Significant Impact (“FONSI”) is erroneous and arbitrary and capricious. In fact, the proposed expansion of spent fuel pool storage capacity at Harris would create accident risks that are significantly in excess of the risks identified in the EA, and significantly in excess of accident risks previously evaluated by the NRC Staff in the EIS for the Harris operating license. These accident risks would significantly affect the quality of the human environment, and therefore must be addressed in an EIS.

There are two respects in which the proposed license amendment would significantly increase the risk of an accident at Harris:

(1) CP&L proposes several substantial changes in the physical characteristics and mode of operation of the Harris plant. The effects of these changes on the accident risk posed by the Harris plant have not been accounted for in the Staff’s EA. The changes would significantly increase, above present levels, the probability and consequences of potential accidents at the Harris plant.

(2) During the period since the publication in 1979 of NUREG-0575, the NRC’s Generic Environmental Impact Statement (“GEIS”) on spent fuel storage, new information has become available regarding the risks of storing spent fuel in pools. This information shows that the proposed license amendment would significantly increase the probability and consequences of potential accidents at the Harris plant, above the levels indicated in the GEIS, the 1983 EIS for the Harris operating license, and the EA. The new information is not addressed in the EA or the 1983 EIS for the Harris operating license.

Accordingly, the Staff must prepare an EIS that fully considers the environmental impacts of the proposed license amendment, including its effect on the probability and consequences of accidents at the Harris plant. As required by NEPA and Commission policy, the EIS should also examine the costs and benefits of the proposed action in comparison to various alternatives, including Severe Accident Mitigation Design Alternatives (“SAMDAs”) and the alternative of dry storage.

See id. at 93-94 (footnote omitted).

As we noted in our decision admitting this contention, all the parties agreed that the standard mandating EIS preparation is whether the action at issue is a major federal action having a significant impact on the human environment. Furthermore, the parties agreed that the agency in an EIS is not required to address consequences of an action that are remote and speculative. *See id.* at 94-95. In the context of this contention, however, the parties disagreed as to what constitutes a remote and speculative event. In its argument, BCOC identified a scenario that, as summarized by CP&L with modifications by BCOC, consisted of the following seven-step chain of events:

- (1) a degraded core accident;
- (2) containment failure or bypass;
- (3) loss of all spent fuel cooling and makeup systems;
- (4) extreme radiation doses precluding personnel access;
- (5) inability to restart any pool cooling or makeup systems due to extreme radiation doses;
- (6) loss of most or all pool water through evaporation; and
- (7) initiation of an exothermic oxidation reaction in pools C and D.

Id. at 95. Noting the Commission's guidance on admission of such a NEPA-related issue statement in *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-90-4, 31 NRC 333 (1990), and *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-90-7, 32 NRC 129 (1990), the Board admitted contention EC-6 because the materials presented by BCOC, including a 1993 individual plant examination (IPE) of core damage frequency (CDF) for the Shearon Harris facility, were "sufficient to establish a genuine material dispute of fact or law adequate to warrant further inquiry relative to the other aspects of the BCOC scenario and the associated probability analysis." LBP-00-19, 52 NRC at 97-98 (footnote omitted). In addition, the Board requested that the parties address the following three questions so that the Board could more accurately evaluate the materials provided by their section 2.1113 written summaries:

1. What is the submitting party's best estimate of the overall probability of the sequence set forth in the chain of seven events in the CP&L and BCOC's filings, set forth on p. 95, *supra*? The estimates should utilize plant-specific data where available and should utilize the best available generic data where generic data are relied upon.
2. The parties should take careful note of any recent developments in the estimation of the probabilities of the individual events in the sequence at issue. In particular, have new data or models suggested any modification of the estimate of 2×10^{-6} per year set forth in the executive summary of NUREG-1353, Regulatory Analysis for the Resolution of Generic Issue 82, Beyond Design Basis Accidents in Spent Fuel Pools (1989)? Further, do any of the concerns expressed in the [Advisory Committee on Reactor Safeguard's (ACRS)] April 13, 2000 letter suggest that the probabilities of individual elements of the sequence are greater than those previously analyzed (e.g., is the chance of occurrence of sequence element seven, an exothermic reaction, greater than was assumed in the decade-old NUREG-1353)?
3. Assuming the Board should decide that the probability involved is of sufficient moment so as not to permit the postulated accident sequence to be classified as "remote and speculative," what would be the overall scope of the environmental impact analysis the Staff would be required to prepare (i.e., limited to the impacts of that accident sequence or a full blown EIS regarding the amendment request)?

Id. at 98-99.

Following a 2-month discovery period,¹ on November 20, 2000, the parties filed their section 2.1113(a) summaries, with accompanying witness affidavits and documentary exhibits, in support of their respective positions on whether there is a genuine and substantial factual dispute that requires resolution in an evidentiary hearing as well as the efficacy of the Staff's EA determination that an EIS is not required for the CP&L amendment. *See* Summary of Facts, Data, and Arguments on Which Applicant Proposes to Rely at the Subpart K Oral Argument Regarding Contention EC-6 (Nov. 20, 2000) [hereinafter CP&L Summary]; NRC Staff Brief and Summary of Relevant Facts, Data and Arguments upon Which the Staff Proposes to Rely at Oral Argument on Environmental Contention EC-6 (Nov. 20, 2000) [hereinafter Staff Summary]; Detailed Summary of Facts, Data and Arguments and Sworn Submission on Which Orange County Intends to Rely at Oral Argument to Demonstrate the Existence of a Genuine and Substantial Dispute of Fact with the Licensee Regarding the Proposed Expansion of Spent Fuel Storage Capacity at the Harris Nuclear Power Plant with Respect to the Need to Prepare an Environmental Impact Statement to Address the Increased Risk of a Spent Fuel Pool Accident (Contention EC-6) (Nov. 20, 2000) [hereinafter BCOC Summary]. And in support of their summary statements, each of the parties took a somewhat different approach. BCOC places particular reliance on its supporting witness, Dr. Gordon Thompson, and a November 2000 report he prepared giving his views on the probability of a release from the Shearon Harris SFPs as a result of a severe reactor accident. *See* BCOC Summary, Exh. 2 (Dr. Gordon Thompson, The Potential for a Large, Atmospheric Release of Radioactive Material from Spent Fuel Pools at the Harris Nuclear Power Plant: The Case of a Pool Release Initiated by a Severe Reactor Accident (Nov. 20, 2000)) [hereinafter Thompson Report]. CP&L, on the other hand, provided what it claims is a "state-of-the-technology" probabilistic analysis, the so-called ERIN report, done by a contractor specifically to address the BCOC contention. *See* CP&L Summary, Exh. 1, attach. C (ERIN Engineering and Research, Inc., Technical Input for Use in the Matter of Shearon Harris Spent Fuel Pool Before the Atomic Safety and Licensing Board (Nov. 2000)) [hereinafter ERIN Report]. For its part, as outlined in the affidavit of the four Staff witnesses that accompanied the Staff's written summary, *see* Affidavit of Gareth W. Parry, Stephen F. LaVie, Robert L. Palla, and Christopher Gatton in Support of NRC Staff Brief

¹In accord with the 60-day schedule established by the Board in LBP-00-19, 52 NRC at 100, the formal discovery period relative to this BCOC contention began on August 21, 2000, and was scheduled to conclude on October 20, 2000. On October 13, 2000, BCOC filed a motion for an extension of time for discovery, briefing, and oral argument, requesting that the Board extend the discovery period to the full 90-day period permitted under 10 C.F.R. § 2.1111. *See* [BCOC] Motion for Extension of Schedule for Discovery, Briefing and Oral Argument and Request for Expedited Consideration at 2-9 (Oct. 13, 2000). The Board denied the BCOC request on the basis, among other things, that the requested extension was not justified under that provision's "exceptional circumstances" standard. *See* Licensing Board Memorandum and Order (Denying Discovery Deadline Extension Motion) (Oct. 19, 2000) at 3-4 (unpublished).

and Summary of Relevant Facts, Data and Arguments upon Which the Staff Proposes to Rely at Oral Argument on [EC-6] (Nov. 17, 2000) [hereinafter Staff Affidavit], the Staff addresses the contention by providing an analysis of existing CP&L probabilistic risk assessment (PRA)-related documents, principally an August 1993 IPE; a June 1995 individual plant examination for external events (IPEEE); and a 1995 probabilistic safety study (PSA) that updates the 1993 IPE, and other existing information relating to the Shearon Harris facility, including NUREG-1488, Revised Livermore Seismic Hazard Estimates for Sixty-Nine Nuclear Power Plants East of the Rocky Mountains (Apr. 1994), a seismic hazards analysis for sixty-nine nuclear power plants east of the Rocky Mountains; SECY-00-0007, Proposed Staff Plan for Low Power and Shutdown Risk Analysis Research to Support Risk-Informed Regulatory Decision-Making (Jan. 12, 2000), concerning low power or shutdown degraded core probabilities; portions of the Shearon Harris facility Final Safety Analysis Report (FSAR); CP&L information submitted in support of its December 1998 application; information obtained in discovery; and a September 2000 facility tour, *see* Staff Summary at 27-35. Subsequently, on December 7, 2000, the Licensing Board held a day-long oral argument with respect to contention EC-6 in Raleigh, North Carolina.² *See* Tr. at 443-706.

II. ANALYSIS

A. Standards Governing 10 C.F.R. § 2.1115 Determination Regarding the Need for an Evidentiary Hearing to Resolve Admitted Issues

I. *The Nuclear Waste Policy Act of 1982 and Implementing Regulations*

The procedures in 10 C.F.R. Part 2, Subpart K were established in response to a congressional mandate found in the Nuclear Waste Policy Act of 1982 (NWPA). NWPA § 134, 42 U.S.C. § 10154, states:

(a) Oral Argument.—In any Commission hearing under section 189 of the Atomic Energy Act of 1954 (42 USC 2239) on an application for a license, or for an amendment to an existing license . . . to expand the spent nuclear fuel storage capacity at the site of a civilian nuclear power reactor . . . the Commission shall . . . provide an opportunity for oral argument The oral arguments shall [be] preceded by such discovery procedures as the rules of the Commission shall provide. The Commission shall require each party . . . to submit in written

²On December 21, 2000, the Staff notified the Board and the other parties that, in accordance with 10 C.F.R. § 50.91, on that date it had issued a final no significant hazards consideration determination and a license amendment authorizing the requested SFP expansion at the Shearon Harris facility. *See* Board Notification 2000-06 (Dec. 21, 2000). By memorandum and order dated February 14, 2001, the Commission directed CP&L not to store spent fuel under the license amendment pending further Commission order or a Board order approving the amendment. *See* CLI-01-7, 53 NRC 113, 119 (2001).

form . . . a summary of the facts, data, and arguments upon which such party proposes to rely

(b) Adjudicatory Hearing.—(1) At the conclusion of any oral argument under subsection (a), the Commission shall designate any disputed questions of fact, together with any remaining questions of law, for resolution in an adjudicatory hearing only if it determines that—

(A) there is a genuine and substantial dispute of fact which can only be resolved with sufficient accuracy by the introduction of evidence in an adjudicatory hearing; and

(B) the decision of the Commission is likely to depend in whole or in part on the resolution of such dispute.

Sections 2.1113 and 2.1115 of Title 10 of the *Code of Federal Regulations* incorporate these requirements as mandated by the NWPA. Thus, section 2.1115(a)(1), (2) provides that

[a]fter due consideration of the oral presentation and the written facts and data submitted by the parties and relied on at the oral argument, the presiding officer shall promptly by written order:

(1) Designate any disputed issues of fact, together with any remaining issues of law, for resolution in an adjudicatory hearing; and

(2) Dispose of any issues of law or fact not designated for resolution in an adjudicatory hearing.

Moreover, a two-part test for determining whether an evidentiary hearing is required for resolution of the issues is articulated in section 2.1115(b):

(1) There is a genuine and substantial dispute of fact which can only be resolved with sufficient accuracy by the introduction of evidence in an adjudicatory hearing; and

(2) The decision of the Commission is likely to depend in whole or in part on the resolution of that dispute.

2. Burden of Proof

Also relevant to our determination here is the question of the burden of proof. In this Subpart K proceeding, the parties disagree as to who bears the ultimate burden of proof regarding the merits of the BCOC environmental contention. For its part, BCOC argues that, as the Board indicated in LBP-00-12, 51 NRC at 254-55, with respect to technical contentions, although the burden of proof for demonstrating the existence of a genuine and substantial factual dispute so as to require an evidentiary hearing is on the party seeking that hearing, the ultimate burden to demonstrate that an EIS is unnecessary belongs to the Staff and the Applicant. *See* BCOC Summary at 14-15 (citing *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 338 (1996)); Tr. at 461-63, 673-76. CP&L and the Staff disagree with this assessment. Citing a Licensing Board decision in *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90, *rehearing granted in part and denied in*

part, CLI-96-7, 43 NRC 235 (1996), and judicial holdings in *Citizen Advocates for Responsible Expansion, Inc. v. Dole*, 770 F.2d 423 (5th Cir.), *rehearing en banc denied*, 777 F.2d 701 (5th Cir. 1985), and *Louisiana v. Lee*, 758 F.2d 1081 (5th Cir. 1985), *cert. denied*, 475 U.S. 1044 (1986), they declare that although BCOC does not bear the ultimate burden of proof regarding the propriety of the Staff's EA determination that an EIS is not necessary, BCOC still has the burden of showing there is an accident sequence that goes beyond the "remote and speculative" threshold so as to require that the Staff then shoulder that ultimate burden by, for instance, establishing that the accident sequence does not have to be considered anyway or is not going to have any significant impacts other than those already discussed in its EA analysis. See CP&L Summary at 17; Staff Summary at 8-9, 36-37; Tr. at 647-48, 666-72.

We agree with BCOC that as the proponent of the need for an evidentiary hearing it bears the burden of establishing that need, but that the Staff bears the ultimate burden to demonstrate its compliance with NEPA in its determination that an EIS was not necessary relative to the CP&L SFP expansion request. See *Louisiana Energy Services, L.P. (Claiborne Enrichment Center)*, CLI-98-3, 47 NRC 77, 89 (1998). As we understand it, the crux of the argument by CP&L and the Staff is that, despite having provided a litigable contention in connection with the question of whether there is a non-remote and speculative accident sequence that requires EIS consideration, in the context of this Subpart K proceeding BCOC still has the burden of establishing that the accident sequence it has posited is indeed not remote and speculative. We do not agree. Once BCOC crossed the admissibility threshold relative to its accident sequence contention, the ultimate burden in this Subpart K proceeding then rested with the proponent of the NEPA document — the Staff (and the Applicant to the degree it becomes a proponent of the Staff's EIS-related action) — to establish the validity of that determination on the question whether the accident sequence is an EIS-preparation trigger.³

B. "Expert" Status of BCOC Witness Dr. Gordon Thompson

Also in controversy are the "expert" qualifications of BCOC's sole supporting affiant, Dr. Gordon Thompson. As previously noted, BCOC has proffered Dr. Thompson as an expert on nuclear power plant design and operation and provided a November 2000 report prepared by Dr. Thompson as one of the principal

³ Although it might be asserted that the section 2.1115(b) burden imposed on BCOC as the party seeking an evidentiary hearing to establish there are appropriate factual or legal disputes is the equivalent of the "burden to go forward" that is normally ascribed to an intervenor challenging a license application, see *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-262, 1 NRC 163, 191 (1975), this does not account for the fact that an intervenor generally is accorded the opportunity to build its case on the basis of witness cross-examination alone, see *Tennessee Valley Authority* (Hartsville Nuclear Plant, Units 1A, 2A, 1B, and 2B), ALAB-463, 7 NRC 341, 356 (1978). Nor does this assertion account for the post-Subpart K revision to the 10 C.F.R. § 2.714 standards for the admission of contentions that enhanced the showing needed for litigable issue statements.

supporting sources for its claims about the need for an evidentiary hearing. *See* BCOC Summary at 15-21; Tr. at 511-14, 518-20, 684-85. Both CP&L and the Staff, however, contest Dr. Thompson’s expertise relative to the matters at issue in this proceeding.⁴ *See* CP&L Summary at 20-28; Staff Summary at 18-23; Tr. at 535-37, 650-51, 702.

When the qualifications of an expert witness are challenged, the party sponsoring the witness has the burden of demonstrating his or her expertise. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-410, 5 NRC 1398, 1405 (1977). Further, although the Federal Rules of Evidence (FRE) are not directly applicable to Commission proceedings, NRC presiding officers often look to the rules for guidance, including FRE 702 that allows a witness to be qualified as an expert “[i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or determine a fact in issue.” *Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 475 (1982) (quoting FRE 702). In addition, agency caselaw indicates that the qualifications of an expert are established by showing either academic training or relevant experience, or some combination of the two. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-78-36, 8 NRC 567, 570 (1978).

In the first phase of this proceeding, which addressed the two admitted BCOC-proffered technical contentions, the Staff argued that Dr. Thompson did not qualify as an expert witness based on his knowledge, skill, experience, training, or education. The Staff maintained that Dr. Thompson was not qualified to render an expert opinion on spent fuel criticality and hence argued that his opinion testimony related to the contention at issue, TC-2, should be disregarded. Noting the Staff’s objection to his testimony, the Board refrained from making a bench ruling declaring him ineligible to provide expert testimony, but later held that by reason of his experience and training, “his expertise relative to reactor technical issues seems largely policy-oriented rather than operational.” LBP-00-12, 51 NRC at 267 n.9. The Board also noted that it would give his testimony “appropriate weight commensurate with his expertise and qualifications” regarding issues of criticality prevention. *Id.*

In the present phase of this proceeding, BCOC reaffirms the expert qualifications of Dr. Thompson, and argues that the Board should re-evaluate its finding in LBP-00-12 that Dr. Thompson’s opinions were largely “policy oriented” in that: (1) the Board overlooked his extensive knowledge relating to nuclear power plant operation and design; and (2) the contention now at hand involves new technical topics — probabilistic risk assessment and the phenomenology of spent fuel storage — that were not addressed in the previous

⁴BCOC has not challenged the qualifications of the witnesses proffered by CP&L or the Staff in support of their written summaries. Our review of their qualifications provides us with no reason to do so either.

phase of this proceeding. *See* BCOC Summary at 16. In support of the former assertion, BCOC delineates Dr. Thompson's various qualifications relating to those subjects.

According to BCOC, Dr. Thompson is highly qualified to give expert testimony relative to contention EC-6 based on his education, training, and experience. BCOC points out that Dr. Thompson received a bachelor's degree in mechanical engineering, mathematics, and physics from the University of New South Wales and later received a doctoral degree from Oxford University in the area of applied mathematics. *See id.*; *see also id.* Exh. 1, at 2-4 (Nov. 20, 2000 declaration of Dr. Thompson), attach. A (Gordon Thompson curriculum vitae). BCOC stresses that Dr. Thompson has more than 20 years of experience relating to nuclear facilities and their associated risks, noting that, in addition to the year he has had becoming intimately familiar with the Shearon Harris plant, Dr. Thompson also evaluated design and accident risk considerations for an array of nuclear facilities around the world. And of particular importance to this proceeding, BCOC declares, is his familiarity with probabilistic risk assessments (PRAs), including both general studies using PRA analysis and a number of studies regarding accident risks posed by plant operations and SFP storage. *See id.* at 17-21.

While Dr. Thompson may have little experience in the actual operation of a nuclear power plant or in PRA preparation, *see* CP&L Summary, Exh. 8, at 9-15, 17-20 (Oct. 16, 2000 deposition of Gordon R. Thompson), given his education and experience relating to nuclear facility and SFP design, particularly his experience with spent fuel storage issues and his previous activities with probability assessments, we cannot say that his testimony will not aid the Board in determining and/or understanding the probability of the seven-step accident sequence. Therefore, we give Dr. Thompson's testimony due weight in the subject areas in which we believe he possesses knowledge and experience that can aid the Board in its determinations regarding EC-6.

With these items resolved, we turn to the BCOC contention at issue.

C. Contention EC-6 — Accident Scenario Probability

As admitted, BCOC's contention EC-6 challenges the NRC Staff's EA determination not to prepare an EIS on the ground that the proposed CP&L license amendment is a major federal action having a significant impact on the human environment because the seven-event accident scenario identified by BCOC is not remote and speculative. In our determination admitting this contention, the Board included an extensive discussion of the Appeal Board and Commission decisions in the decade-old *Vermont Yankee* SFP expansion proceeding in which a similar NEPA concern was raised. *See* LBP-00-19, 52 NRC at 95-97. There, the Commission concluded that "future decisions that accident scenarios are remote and speculative must be more specific and more soundly based on the actual

probabilities and accident scenarios being analyzed.’’ *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-90-7, 32 NRC 129, 132 (1990). Further, the Commission indicated that although a finding that the probability for an entire accident sequence was 1×10^{-4} per reactor year (i.e., 1E-04 per reactor year in scientific notation, or one occurrence in 10,000 reactor years) should be returned to the Commission for further consideration, a lower probability would be subject to the presiding officer’s judgment regarding the remote and speculative nature of the accident. *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-90-4, 31 NRC 333, 336 (1990).

Consistent with this guidance and the first question we posed in LBP-00-19, each of the parties addressed the seven-item BCOC-postulated accident sequence in terms of the probabilities involved at each step (or at related steps) and for the sequence as a whole. We, in turn, address the parties’ approach to each step of the postulated scenario in seeking to determine whether there are factual or legal disputes that warrant further exploration in an evidentiary hearing and, if not, whether the probability assigned to the entire scenario falls into the category of “remote and speculative” so as not to require further NEPA analysis.

In doing so, however, we provide one general observation regarding the methodology utilized by CP&L, which consisted essentially of preparing a new PRA for the contention EC-6 accident scenario, as contrasted with the analytical efforts of the Staff and BCOC. In posing the first question, we did not ask, nor did we expect, that the parties would undertake an entirely new PRA for this contention. Indeed, to do so would suggest, incorrectly in our view, that Staff EA determinations on issues like that raised in contention EC-6 cannot be made without a full PRA analysis. Instead, our request for a best estimate was intended to obtain the fruits of the type of analysis that we anticipate the Staff generally would undertake in reaching such a determination, i.e., one based on existing materials available to it, probabilistic and otherwise, supplemented by additional information it might obtain from the Applicant in an environmental report or through requests for additional information (RAIs). As it turns out, the analysis undertaken by the Staff did indeed most closely follow the process that we anticipated would be utilized to answer the first question. Thus, as between CP&L and the Staff, the Staff’s analysis is the one to which we have looked in the first instance relative to BCOC’s competing claims regarding the probabilities involved in the different steps of the contention EC-6 accident sequence, while viewing CP&L’s PRA-enhanced analysis as a beneficial, although not dispositive, confirmation of the validity of the Staff’s analysis to the degree the CP&L analysis yielded a probability estimate that was equal to or lower than the Staff’s estimate.

1. Event 1 — A Degraded Core Accident

This first step in BCOC's postulated sequence of events leading to an exothermic reaction in the SFP assumes a serious reactor accident in which the core becomes damaged to the degree that radioactive material normally contained within the fuel rods in the core is released into the reactor and subsequently into the reactor containment building. *See* Thompson Report at 24-26; CP&L Summary at 56; Staff Summary at 27-30; Tr. at 467-72, 539-41.

a. BCOC Position

In its discussion regarding event one of the contention EC-6 scenario, BCOC relies on the November 20, 2000 declaration of BCOC's sole witness, Dr. Gordon Thompson and his November 2000 report, *see* Thompson Report at 24-26, 48; *id.*, App. C (Level 1 PRA analysis). And relative to this part of the scenario, BCOC references CP&L's 1993 IPE, its 1995 IPEEE, and its 1995 PSA analyses as the basis for its estimate of the degraded core accident sequence probability as the starting point of the overall sequence. BCOC actually describes four degraded core sequences that have as common features a loss of high-pressure coolant injection, loss of feedwater to the steam generators, and failure of reactor coolant pump seals, all of which lead finally to a loss of cooling to the fuel pools. BCOC also asserts that, instead of relying on the seismic hazard curves developed by the Electric Power Research Institute (EPRI) that were used by CP&L in its PSA seismic component, BCOC adjusted the core accident estimated probability to reflect Staff-endorsed seismic hazard curves from Lawrence Livermore National Laboratory. *See* Thompson Report at 25-26; *id.*, App. C at C-2 to -3. BCOC's estimate for the degraded core accident portion of the overall sequence thus is 3.1E-05 per reactor year. *See* Thompson Report at 48 (Table 1, Estimated Probability of a Degraded-Core Accident at Harris, Selected Sequences).

b. CP&L Position

CP&L did not calculate a specific probability for event one with respect to a degraded core accident or, as CP&L and the Staff refer to it, the CDF. Instead, CP&L evaluated event one and event two — containment failure or bypass — using PRA techniques. CP&L's analysis included internal events as initiators, such as steam generator tube rupture, loss of coolant accident, or station blackout. In addition, CP&L used the 1995 Harris plant IPEEE for determining probabilities from external events, such as fires and seismic events, and shutdown events. The results of these estimate analyses were presented in the ERIN Report and summarized in an affidavit by CP&L's expert Dr. Edward T. Burns. *See* ERIN Report at 4-1 to -76; CP&L Summary, Exh. 1, at 9-10 (Affidavit of

Edward T. Burns, Ph.D.) [hereinafter Burns Affidavit]. The CP&L best estimate of the combined probability for events one and two of the postulated sequence is summarized in the ERIN Report at Table 5-1 and was determined to be 7.67E-06. *See* Burns Affidavit at 14.

c. Staff Position

The Staff determined by analysis of existing CP&L and Staff reports that the best estimate of CDF probability at the Harris plant, including contributions from internal and external initiating events from full power, low power, and shutdown states, is 1.2E-04. *See* Staff Summary at 28, Staff Affidavit at 15-20. The Staff claims its determination of the CDF is likely to be conservative, since the frequency of initiating events has been shown to be considerably lower than assumed in the 1993 IPE, a principal document used by the Staff in its determination of the CDF. *See* Staff Affidavit at 117; *compare id.*, Exh. 9, § 3, at 45 ([CP&L] Probabilistic Safety Assessment (Rev. 1 Oct. 1995) (Table 3-17)) *with id.*, Exh. 6, at 3-18 ([CP&L] Individual Plant Examination Submittal (Aug. 1993) (Table 3-4)).

d. Board Analysis

The record before us makes it apparent that, by any measure, the degraded core accident that is the first step of BCOC's postulated sequence is a low frequency occurrence. The Staff estimates a CDF of 1.2E-04 per reactor year and BCOC puts a CDF at 3.1E-05 per reactor year. Although an argument can be made that BCOC's lower number utilizes appropriate conservatisms, nonetheless we accept the Staff's higher probability number as an appropriate starting point for the sequence. Moreover, in light of our adoption of the Staff's number, nothing regarding BCOC's assertions in connection with this aspect of the overall sequence evidences a dispute that warrants an evidentiary hearing.

2. Event 2 — Containment Failure or Bypass

The second step of BCOC's postulated sequence assumes that the reactor containment building is breached such that radioactive material within the reactor building or radioactive material within the reactor coolant system bypasses the reactor containment and is disbursed in other plant buildings or in the environment outside the reactor containment building. *See* Thompson Report at 26-29; CP&L Summary at 56; Staff Summary at 30-31; Tr. at 472-75, 542-45, 576-83, 627.

a. BCOC Position

BCOC draws on information from NUREG-1570, Risk Assessment of Severe Accident-Induced Steam Generator Tube Rupture (Mar. 1998), *see* Thompson Report, App. D, at 1 (Level 2 PRA analysis), to calculate the probabilities of a containment bypass. Although noting that other modes of containment failure may exist, BCOC discusses only the estimated probability of temperature-induced steam generator tube rupture (TI-SGTR) for selected degraded core accident sequences at Shearon Harris in its analysis of the containment failure/bypass step of the postulated sequence. Without including other mechanisms of containment failure, BCOC estimates the probability of containment bypass at 0.5 (50%). *See* Thompson Report at 26-28, *id.* at 49 (Table 2, Estimated Probability of [TI-SGTR] for Selected Degraded-Core Accident Sequences at Harris).

b. CP&L Position

See section II.C.1.b above.

c. Staff Position

The Staff again relies on CP&L's IPE and PSA as the starting point for its analysis of the probability of containment failure and/or bypass, as supplemented by Staff reports and responses to Staff discovery. *See* Staff Affidavit at 28-30. The Staff used a conditional containment failure probability of 0.2 (20%) for its analysis relative to the seven-step sequence. *See id.* at 31-32. In deriving this figure, the Staff provides an analysis of various failure modes, including early containment failures, *see id.* at 32-37; late containment failures, *id.* at 37-40; very late containment failures, *id.* at 40-41; containment isolation failures, *id.* at 41-42; and containment bypass failures, *id.* at 42-46. In this regard, the Staff assigns a conditional failure probability for a TI-SGTR of 0.021 (2.1%). *See id.* at 45. Furthermore, the Staff determined that a probability of 0.1 (10%) should be assigned to those containment failures of most concern, namely early and late containment failures. *See id.* at 69-71.

d. Board Analysis

The Board views BCOC's analysis as too simplistic for several reasons. BCOC concentrates its overall containment failure or bypass argument on the probability of a TI-SGTR and without giving adequate consideration to the specific details of accident scenarios, containment and equipment configuration, and plant operating procedures that will affect the overall probability for containment failure or bypass. In this regard, BCOC has not considered, for example, the recent

procedural changes adopted by CP&L not to run reactor coolant pumps after a severe accident. *See* Tr. at 543-45. Nor does BCOC consider the timing of containment failure based on various accident scenarios and has not linked various containment failure or bypass modes with specific core damage scenarios. In contrast, the Staff provides a credible analysis of the various containment failure and bypass modes that could be experienced at the Harris plant that is sufficient, in our estimation, to establish the validity of its estimate without the need for a further evidentiary hearing on this portion of the postulated accident scenario.⁵

In any event, regardless of these analytical differences, BCOC and the Staff do not differ significantly in their analyses of the cumulative probabilities of the postulated sequence through event two. As shown in the table below, *see infra* p. 267, at step two each of the parties shows a probability on the order of 1E-05 per reactor year. The need to utilize further evidentiary proceedings relative to this sequence step thus is not evident. Further, because the parties appear to agree on the overall probability of the basic mechanisms of accident damage and the immediate consequences of those damage mechanisms, our conclusion regarding the sufficiency of the Staff's EA determination relative to BCOC's EC-6 concern is based principally on our review of the parties' analyses of the remaining events.

3. Event 3 — Loss of Spent Fuel Pool Cooling

This step in BCOC's postulated sequence assumes that, as a result of the two accident sequence events discussed above, the ability to cool or provide makeup water to cover the highly radioactive spent fuel stored in the SFPs is lost. *See* Thompson Report at 29; CP&L Summary at 57; Staff Summary at 28-30; Tr. at 481-84, 545-47.

a. BCOC Position

BCOC asserts that for the selected accident sequences it utilized for event one, it is a certainty, i.e., a probability of 1.0 (100%), that the spent fuel system would become inoperative due to either failure of electric power on the site,

⁵In the context of this event and related event four concerning access preclusion by high radiation levels, BCOC also raises concerns about factual disputes relating to the radiological effects of high burnup fuel in the event of a containment breach or bypass, building wake effects relative to radioactive dispersion, and the Staff's use of the ARCON computer dispersion model. *See* Thompson Report at 28-29; Tr. at 475-77. Relative to high burnup fuel, in addition to the lack of any explanation of a dispersal mechanism in the context of the TI-SGTR accident scenario championed by BCOC, the report that is the basis for this concern, *see* Thompson Report, Exh. Schmitz and [Papin], 1999 (Franz Schmitz & Joelle Papin, High burnup effects on fuel behavior under accident conditions: The tests CABRI REP-Na, 270 *Journal of Nuclear Materials* 55 (1999)), is not representative of the circumstances at Shearon Harris. Given BCOC's failure to attempt any dispersion modeling, *see* section II.C.4.a, as contrasted with the Staff's showing regarding its dispersion modeling efforts, *see* Staff Affidavit at 104-06, BCOC's assertions regarding the adequacy of the Staff's dispersion methodology are speculative, at best. Thus, none of these items presents a dispute that warrants further consideration in an evidentiary hearing.

causing a loss of power to the SFP cooling pumps, or unavailability of component cooling water to cool the SFP heat exchangers. *See* Thompson Report at 29, 52. Furthermore, BCOC asserts that these failures are not recoverable, a matter we address more fully regarding event five below.

b. CP&L Position

Based on an extensive probabilistic analysis of the loss of fuel pool cooling as a result of the postulated accident, CP&L concluded that the addition of a second (redundant) fuel pool cooling and cleanup system in conjunction with the planned activation of pools C and D actually would reduce the likelihood of a fuel pool cooling failure from what it is for the present pools A and B.

c. Staff Position

In analyzing this sequence step, the Staff assessed the probability that the containment failure or containment bypass-related radioactive materials would cause the failure of the component cooling water system, which removes heat from the SFP cooling and cleanup heat exchangers, and failure of the electrical system, thus resulting in a loss of power for SFP cooling and cleanup system pumps. Using information from the IPE for the CDF and applying plant-specific information for internal events, seismic events, and fires, the Staff determined that the overall frequency of events that could lead to an interruption of fuel pool cooling, estimated to be approximately $6.3E-05$ per reactor year, is dominated by a loss of offsite power that would affect the operation of the facility's normal and emergency ventilation and exhaust systems. *See* Staff Affidavit at 117-18. The Staff further concluded that the probability of a degraded core accident that leads to an interruption of the SFP cooling function and a containment failure prior to SFP cooling restoration is bounded by $6.3E-06$. This determination was based on the Staff's conclusion that the containment failure modes of most concern are the early and late containment failures with a combined probability of 0.1 (10%). *See id.* at 69-71.

d. Board Analysis

The Board is seriously troubled by BCOC's claim of certainty — its use of a probability of one — that there will be a loss of SFP cooling as a result of a degraded core accident and containment failure. Putting aside the fact that this claim seemingly ignores the fundamental benefits of engineered safety principles, such as physical separation, redundancy, and diversity in connection with equipment necessary for SFP cooling, the Staff provides persuasive evidence

that the probability of a loss of SFP cooling and makeup is dominated by a loss of offsite power and that there are only limited circumstances after containment failure in which cooling would be lost. Moreover, as is discussed below, the Staff provides a persuasive showing that in many instances credit should be given for the successful recovery of equipment for cooling.

By countering effectively BCOC's argument that the probability of losing SFP cooling is certain (i.e., 1.0) for all accident scenarios, the Staff also counters BCOC's argument that a further evidentiary hearing is warranted relative to this portion of the accident sequence. The Staff's qualitative analysis of the probability of a containment failure or bypass after a degraded core accident is reasonable and supports its conclusion that a containment failure or bypass after a degraded core accident would not have a significant effect in addition to that SFP cooling loss probability that exists for a loss of offsite power.

4. Event 4 — Extreme Radiation Levels Precluding Personnel Access

This step in the BCOC postulated sequence assumes that the extreme radiation levels resulting from a reactor containment building breach or bypass precludes access to areas vital to restoring cooling and or makeup water to the fuel pools. *See* Thompson Report at 28-32; CP&L Summary at 57-60; Staff Summary at 31-33; Tr. at 476-79, 484-90, 547-56, 627-30, 637-38, 686, 693, 701-02.

a. BCOC Position

BCOC estimates that as a result of the degraded core and steam generator tube rupture scenarios analyzed, a release of radioactive material through the safety relief valve (SRV) and power operated relief valve (PORV) vent stacks would result in the deposition on the plant site of 5% of the tellurium, 10% of the iodine, and 10% of the cesium radioactive isotopes in the Shearon Harris reactor core within an assumed 200-meter radius centered on the stacks. From this deposition of radioactive material, BCOC calculates dose rates of up to 76 rem per minute outside and up to 110-1100 rem per day during the first release day (300-3000 total for the first 7 days) in the control room and the nearby technical support center (TSC) if there was an offsite power failure that caused an electrical failure to the ventilation systems for these areas after the 4-hour battery backup was exhausted. The control room and TSC are critical areas, according to BCOC, because they are needed for command and communications to coordinate and manage needed activities like maintaining control over the SFP cooling pumps. *See* Thompson Report at 29-32; *id.*, App. E (Radiation Exposure at the Harris Site After an Accident). Given these radiation levels, which would lead to radiation doses to personnel asserted to violate regulatory limits so as to preclude anyone

from going into these areas, BCOG also assigns this portion of the sequence a probability of 1.0 (100%). *See id.* at 52.

b. CP&L Position

For the postulated sequence, CP&L calculated radiation levels for areas for which access would be required to assure makeup and cooling to the fuel pools. Using computer modeling of plant thermal hydraulics and the transport of radioactivity, CP&L attempted to determine access, timing, and adverse conditions for critical areas of the plant. These calculations are described in the affidavits of CP&L witnesses Michael J. DeVoe and Benjamin W. Morgan. *See* CP&L Summary, Exhs. 6-7 (Affidavit of Michael J. DeVoe (Nov. 15, 2000); Affidavit of Benjamin W. Morgan (Nov. 15, 2000) [hereinafter Morgan Affidavit]). This information was, in turn, used as the basis for calculating access times based on radiation fields in the following event, for which CP&L provided an overall probability estimate.

c. Staff Position

The Staff performed a detailed qualitative assessment of the impact of radioactive material releases from the postulated sequence on accessibility to critical areas of the reactor auxiliary building (RAB) and the fuel handling building (FHB) needed to assure makeup and cooling water to the pools. The Staff used information on plant layout, expected meteorologic probabilities, and the consequences of the postulated accident scenarios to analyze the radiological and environmental (i.e., steam and heat) conditions at areas of the plant where expected remedial action would be required. This information was drawn from various sections of the Shearon Harris FSAR and Staff reports prepared for this litigation. *See* Staff Affidavit, Exhs. 15 ([CP&L] Response to NRC Staff's First Set of Interrogatories Directed to [CP&L] Regarding Contention EC-6 (Sept. 26, 2000)), 20 (Shearon Harris FSAR, ch. 9), 58 (Shearon Harris FSAR, ch. 12), 63 (Stephen F. LaVie, Staff Analysis of Harris Site Meteorology (Nov. 2000)), 65 (Stephen F. LaVie, Staff Analysis of Radioactivity Release Due to [SFP] Boiling (Nov. 2000)), 72 (Stephen F. LaVie, Staff Analysis of Post-Accident Ground Deposition Dose Rate (Nov. 2000)) [hereinafter Staff Ground Deposition Analysis]. In its detailed review, the Staff considered direct shine from the containment building, direct shine from accident-generated radioactivity in piping systems outside containment, radioactive material in the air of the RAB and the FHB, and radiation from uncovered fuel in the FHB to calculate radiation fields expected to be encountered at various times after the accident and after containment failure or bypass by personnel attempting to restore fuel

pool cooling. The Staff also calculated radiation fields at various FHB access points separated by varying distance and direction from expected accident release points. *See* Staff Affidavit at 98-99. The Staff further considered the historical meteorologic probabilities as to which direction the wind would blow the plume from the release points. The Staff concluded that the FHB access points in relation to expected release points made it unlikely that plume fallout from a breach or bypass would affect all available access points so as to totally preclude access. *See* Staff Ground Deposition Analysis at iii.

d. Board Analysis

BCOC did not perform the detailed calculations of expected radiation fields in various areas of the Shearon Harris plant to which access is needed to restore fuel pool cooling. *See* Tr. at 686. As a consequence, the upshot of its efforts — a simplistic determination that a fixed amount of radioactive material will deposit uniformly in a 200-meter circle centered on the plant SRV and PORV stacks — is unrealistically conservative and lacks a reasonable scientific basis by failing, as it does, to account for building and equipment configuration, historical meteorological data, and accident scenarios. On the other hand, Staff expert Stephen F. LaVie, who has significant experience and training in such calculations, *see* Staff Affidavit at 2; *id.*, Exh. 2 (Resume of Stephen F. LaVie), has provided a credible explanation about the time-dependent, post-accident radiological environment both within and external to the FHB from which access times available to restart fuel pool cooling or makeup can be calculated. Certainly, we find no basis in the information provided by BCOC to convene an evidentiary hearing relative to this segment of the postulated sequence.

5. *Event 5 — Inability to Restart Cooling or Makeup Systems Due to Extreme Radiation Doses*

This step in BCOC's postulated sequence assumes that CP&L will be unable to recover SFP cooling because the extreme radiation levels from the material escaping from the reactor building precludes plant staff from restoring SFP cooling and makeup water. *See* Thompson Report at 32-38; CP&L Summary at 57-60; Staff Summary at 31-35; Tr. at 490-95, 556-69, 593-94, 630-37, 651-53, 683-84, 694-96, 700-04.

a. BCOC Position

BCOC claims that CP&L cannot use a dose in excess of 5 rem, the maximum permissible occupational dose allowed in 1 year by NRC regulations, 10 C.F.R.

§ 20.1201(a)(1), in planning to recover from an accident. BCOC argues that to use a dose in excess of this value is inappropriate for two reasons. First, according to BCOC, doses in excess of 5 rem can be foreseen and therefore are not covered by the United States Environmental Protection Agency (EPA) protective action guideline (PAG) 2.5 allowing doses of up to 25 rem for life saving and protection of large populations. In addition, BCOC argues that workers will not accept such doses in an emergency. According to BCOC, the radiation field it calculates from the postulated accident exposes personnel in the control room and the TSC to radiation exposures in excess of the 5-rem per year dose limit of section 20.1201(a)(1) and General Design Criterion (GDC) 19, 10 C.F.R. Part 50, App. A, Criterion 19, making the control room uninhabitable for a period in excess of 7 days. This, in turn, would lead to the collapse of the Harris plant command structure and preclude access to areas needed to control SFP cooling. Moreover, BCOC declares this would be exacerbated by the fact that areas outside and inside the RAB would be inaccessible to personnel because of the accident-generated harsh radiation environment and the certainty that electric power likewise would be interrupted for the period that the command structure was inoperative, i.e., in excess of 7 days. Finally, BCOC maintains that all the options required to provide cooling or makeup to the fuel pools require human intervention and such actions would be precluded because of the extreme radiation levels in and around the plant, thus leading to the conclusion that, once again, this portion of the sequence should be assigned a probability of 1.0 (100%). *See* Thompson Report at 32-38, 52; *id.*, App. F (Radiation Exposure: Health Effects and Regulatory Limits).

b. CP&L Position

CP&L expert Benjamin Morgan calculated accessibility to in-plant areas and areas outside the plant buildings using industry-accepted computer codes and NRC Regulatory Guide 1.25, “Assumptions Used for Evaluating the Potential Radiological Consequences of a Fuel Handling Accident in the Fuel Handling and Storage Facility for Boiling and Pressurized Water Reactors.” Mr. Morgan indicated the results of these calculations show that various areas of the plant to which access would be necessary after the postulated accident would be reachable to perform activities to provide SFP cooling or makeup. *See* Morgan Affidavit at 4-10; *see also id.*, attachs. B-C (In-Plant Dose Calculation Results; Environmental Dose Calculation Results). Further, CP&L asserts that BCOC misinterprets both NRC regulations and EPA PAG 2.5 relative to worker doses and maintains that the CP&L analysis is consistent with the EPA 25-rem PAG. *See* Tr. at 593-94.

c. Staff Position

Based on the assumption that from the beginning of the accident sequence SFP cooling recirculation is unavailable, the Staff also provided an analysis of the time available for recovery activities before the water in the SFPs boils so as to lower the water level to the top of the fuel storage racks such that makeup is required. *See* Staff Affidavit at 62-69. According to the Staff, 15 days would be available for recovery for pools A and B and 10 days for pools C and D. The Staff then analyzed the alternative methods to provide for pool cooling or makeup. *See id.* at 72-78. Finally, the Staff determined response personnel stay times in the various areas specifically required to recover SFP cooling or makeup functions. These stay times were based on the EPA-sanctioned PAG 2.5 permissible dose of up to 25 rem, which the Staff declares is appropriate under NRC requirements and this EPA guidance, *see* Tr. at 633-37, and the radiation fields determined by the Staff at various locations, as outlined in section II.C.4.c above. *See* Staff Affidavit at 79-111. From this analysis, the Staff determined that there would be options for access to provide makeup or cooling to the pools. *See id.* at 111. Further, the Staff assessed the likelihood of successful operational activities using such access by utilizing a Human Reliability Analysis (HRA) methodology and concluded that, once the makeup method decision was made, the likelihood of success in achieving makeup was high. *See* Staff Affidavit at 111-16. Notwithstanding this conclusion, albeit noting that no HRA methodology has been constructed to provide human error probabilities for such recovery situations, the Staff nonetheless assigned what is described as a conservative probability of 0.1 (10%) that the SFP cooling restoration or makeup would not be successful. *See* Staff Affidavit at 116-17. Finally, the Staff agrees with CP&L that BCOC misinterprets both NRC regulations, including the agency's emergency planning response requirements, *see* 10 C.F.R. § 50.47(b)(11), and EPA PAG 2.5 relative to worker doses and asserts that the Staff's analysis is consistent with the EPA 25-rem PAG. *See* Tr. at 630-37.

d. Board Analysis

Considering first the question of the maximum allowable dose to be used in calculating whether access can be effected in an emergency situation, it is clear to us from a review of the applicable regulatory provisions — 10 C.F.R. §§ 20.1001(b), 20.1201(a)(1), 50.47(b)(11) — that there is no regulatory bar that prohibits CP&L from using a 25-rem dose limit in an actual emergency or in

planning a response to such an emergency to assure SFP cooling after an accident.⁶ Likewise, EPA PAG 2.5 clearly allows a dose of up to 25 rem for life saving and protection of large populations. *See* Staff Affidavit, Exh. 55, at 2-9 to -11 (EPA, Manual for Protective Action Guides and Protective Actions for Nuclear Incidents (May 1992)).⁷ Moreover, because this dose is within regulatory standards, the Board will not engage in the unsupported surmise, as BCOC would have us do, that knowledgeable plant personnel would be wholly unwilling to accept such doses in an emergency such as the postulated accident sequence. The Board thus concludes that it is appropriate to use a permissible dose of 25 rem for purposes of calculating stay times and probabilities that personnel at the plant would be able to perform the necessary activities required to restore SFP cooling and makeup.

As noted above, using the calculated radiation fields and the 25-rem person dose, the Staff calculated times available to perform SFP cooling and makeup restoration activities for the various alternative methods of providing makeup or cooling to the SFPs. *See* Staff Affidavit at 109 (Table 2, Makeup Alternatives). The Staff's analysis in support of its probability estimate, which is supported by CP&L's detailed evaluation, appears reasonably thorough and credible based on existing regulations and guidance for exposure to emergency workers, as well as on the expected radiation fields in locations at which SFP cooling recovery actions must take place and the availability of various alternative sources of cooling water. In contrast, BCOC provides us with no credible analysis, other than its unsupported assertion about uniform radioactive materials disposition and its mistaken interpretation of NRC requirements and EPA's PAG 2.5, to support its conclusion that any access to areas of the plant needed for SFP recovery and makeup would be precluded by high radiation fields.⁸ Once again, we find nothing relative to this sequence event that establishes the need for an evidentiary hearing.

⁶In this regard, unlike BCOC, *see* Thompson Report at 33 & n.64, in the context of reviewing what clearly are low probability accident scenarios, we do not equate consideration of radiation exposure in the course of doing a probability analysis with "foreseeability" relative to the EPA PAG so as to mandate application of a 5-rem exposure limit.

⁷In pertinent part, this EPA PAG provides:

Doses to all workers during emergencies should, to the extent practicable, be limited to 5 rem. There are some emergency situations, however, for which higher exposure limits may be justified. Justification of any such exposure must include the presence of conditions that prevent the rotation of workers or other commonly-used dose reduction methods. Except as noted below, the dose resulting from such emergency exposure should be limited to 10 rem for protecting valuable property, and to 25 rem for life saving activities and the protection of large populations. In the context of this guidance, exposure of workers that is incurred for the protection of large populations may be considered justified for situations in which the collective dose avoided by the emergency operation is significantly larger than that incurred by the workers involved.

Staff Affidavit, Exh. 55, at 2-11.

⁸Relative to this event, BCOC also makes the assertion that a purported Staff failure to make any assessment of the probability of restoring cooling provides a litigable dispute, *see* Tr. at 483, a claim that we find wholly without merit or worthy of further consideration in an evidentiary hearing given the discussion above regarding the Staff's analysis. The same is true of BCOC's claim of a factual dispute regarding firefighter access to a 195 degree Fahrenheit (°F) steam environment in the FHB, *see* Tr. at 494-95, which does not account for existing firefighter training, *see* CP&L Summary, Exh. 5, at 10 (temperatures in range of 300°F not unusual during fire brigade training sessions) (Affidavit of Eric A. McCartney).

6. Event 6 — Loss of Most or All Pool Water Through Evaporation

At this step of the postulated accident sequence, all of the water covering the spent fuel is assumed lost by evaporation because cooling or makeup water could not be restored. *See* Thompson Report at 39-40; CP&L Summary at 60-62; Staff Summary at 33-34; Tr. at 495-97, 560-64, 638.

a. BCOC Position

BCOC asserts that with the loss of SFP cooling capability after the postulated accident, boiling would occur in the pools to such an extent that the water level would reach the top of the fuel in pool A in a period of 4.7 days and pools C and D in a period of 10.2 to 116 days, depending on the heat load in the pool. BCOC also contends that this would happen with certainty — a probability of 1.0 or 100% — because the high radiation fields described in section II.C.4.a above would preclude any recovery of cooling or makeup systems to the pools. And this loss of water in pool A, BCOC declares, would result in an exothermic oxidation reaction that would release radioactive material in and around the FHB. *See* Thompson Report at 39-40.

b. CP&L Position

CP&L calculates it will take more than 8 days to uncover fuel in pools A and B and almost 100 days to uncover fuel in pools C and D. *See* Burns Affidavit at 11-12. It is unlikely this would ever happen, according to CP&L, because there are many ways to establish makeup and cooling to the SFPs, possibilities that will be enhanced by the redundant SFP cooling and cleanup system for pools C and D that provide additional pathways for makeup water injection. *See* ERIN Report at A-28 to -30 (Table A-1, [SFP] Makeup). CP&L concluded that at least one makeup water lineup was possible within 4 days for all the accident-initiating sequences of the postulated core damage accident. *See* Burns Affidavit at 12.

c. Staff Position

The Staff likewise analyzed the probability of success in restoring cooling and makeup water to the SFPs after the postulated accident and containment failure or bypass. For a late containment failure scenario — i.e., with failure at 90 hours — the Staff concluded there was a high probability of success in restoring cooling. The control room would be habitable for most of the period and alarms would indicate pool cooling failure and level reductions such that the plant staff could respond in a timely manner. *See* Staff Affidavit at 111-14. For an early containment failure scenario, the Staff assumed that although the

control room would not be habitable, command and control would be available in the TSC and/or the NRC incident response center. Moreover, citing NRC emergency operations center guidance regarding post-accident SFP cooling, the Staff asserted it would be unreasonable to assume there was any likelihood after the postulated accident that SFP cooling would be forgotten or ignored. *See id.* at 114. Additionally, the Staff reviewed the methods required by CP&L plant staff to restore cooling or initiate makeup and determined that there is a high likelihood of success in obtaining access and performing the necessary functions to restore cooling or makeup. As was noted previously in section II.C.5.c, the Staff assigned a probability of no greater than 0.1 (10%) that such actions would be unsuccessful. *See Staff Affidavit at 116-17.*

d. Board Analysis

As we have already noted, the Board adopts the Staff's analysis regarding CP&L's ability to provide SFP makeup and cooling. As we discussed in section II.C.5.d above, the Staff calculated reasonable stay times for the many SFP cooling and makeup methods. Even if CP&L loses the ability to run the plant from the control room, there are procedures in place for both CP&L and the NRC to exercise command and control to make decisions about safeguarding SFP cooling integrity. Putting aside the relatively low makeup water flow rates that likely would be needed, there are myriad ways to get the recovery makeup water into the fuel pools, which are not adequately accounted for in BCOC's assignment of a certainty to this step of the sequence. Ultimately, nothing presented by BCOC establishes the need to proceed to an evidentiary hearing on this aspect of the postulated scenario.

7. *Event 7 — Initiation of an Exothermic Oxidation Reaction in Pools C and D*

At this final step of BCOC's postulated accident sequence, the spent fuel cladding spontaneously ignites after the cooling water is lost by evaporation as a result of steps one through six above. Such a reaction essentially means that the fuel rapidly oxidizes (i.e., burns) and releases high levels of radioactive material into the environment around the Shearon Harris plant site. *See Thompson Report at 40-42; CP&L Summary at 65-68; Staff Summary at 6; Tr. at 497-99, 564-67, 596-97, 639-41, 694.*

a. Parties' Position

This last step of BCOC's postulated sequence looks to the probability that an exothermic oxidation reaction would occur in the pools after the fuel pool

cooling water evaporates and the fuel is uncovered. All parties agreed for the purpose of this analysis to assume that an exothermic reaction would take place. Although CP&L and the Staff are skeptical that such a reaction would take place with certainty, particularly if evaporation of the fuel pooling water occurred in a pool containing only aged spent fuel, *see* CP&L Summary at 67; Staff Affidavit at 124, they both accept for purposes of the analysis that an exothermic oxidation reaction would occur in pools C and D with certainty, i.e., with a probability of 1.0 (100%).

b. Board Analysis

The Board accepts that there is no controversy among the parties associated with this event in BCOC's postulated accident sequence. As such it does not provide a basis for further evidentiary hearings.

8. Cumulative Scenario Probability

As a result of its analysis of the contention EC-6 accident sequence, BCOC provides a probability of 1.6E-05 per reactor year as its best estimate of the overall probability of an oxidation reaction in pools C and D. *See* BCOC Summary at 40. CP&L's best estimate is 2.7E-08. *See* CP&L Summary at 51. The Staff provides a best estimate of the overall probability of the postulated accident scenario as 2.0E-07 per reactor year. *See* Staff Summary at 44. The Board's summary of the overall cumulative probabilities (per reactor year) determined by each of the parties for BCOC's postulated accident sequence is presented in the table below. The cumulative probability at step N (S_N) is defined as the product of the probability of all the preceding steps up to and including step N , namely ($S_N = P_1 P_2 P_3 \dots P_N$, where P_N is the individual probability for step N).⁹

⁹In this context, S_1 represents the probability of occurrence of step one of the postulated accident sequence. S_2 represents the probability of the occurrence of step one and step two of the scenario. Finally, S_7 represents the probability of occurrence of the entire seven-event accident sequence.

BCOC Contention EC-6 Accident Scenario Cumulative Probability (S_N)			
Sequence Event (N)	BCOC S_N	CP&L S_N	Staff S_N
1 Degraded core accident	3.1E-05		1.2E-04
2 Containment failure or bypass	1.6E-05	7.7E-06 ^a	
3 Loss of SFP Cooling and/or Makeup Loss	1.6E-05		6.3E-06 ^c
4 Radiation Dose Precludes Access	1.6E-05		
5 Inability to restart SFP cooling	1.6E-05		2.0E-07 ^d
6 Loss of part or all of SFP water by evaporation	1.6E-05	2.7E-08 ^b	2.0E-07
7 Initiation of an exothermic oxidation reaction in Pools C and D	1.6E-05	2.7E-08	2.0E-07
Overall Sequence Probability (per reactor year)	1.6E-05	2.7E-08	2.0E-07
^a CP&L combined its analysis of the first two steps. ^b CP&L combined its analysis of steps three through six. ^c Staff combined its analysis of steps two and three. ^d Staff combined its analysis of steps four and five.			

Relative to these estimates, for the reasons set forth in sections II.C.1 through II.C.7 above, the Board concludes that the overall probability of the BCOC postulated accident sequence resulting in an exothermic oxidation reaction in the Harris plant SFPs is conservatively in the range described by the Staff: 2.0E-07 per reactor year (two occurrences in 10 million reactor years) or less.

D. Cumulative Scenario Probability as Remote and Speculative

With this probability figure before us, we must next consider whether it appropriately can be characterized as “remote and speculative” within the meaning of NEPA, so as to provide a substantive basis for the BCOC challenge to the Staff’s EA determination. Citing agency consideration of severe accident probability estimates for reactor-related internal and/or external events in various NEPA or Atomic Energy Act contexts, both CP&L and the Staff assert that probabilities on the order of at least 1E-06 (one in one million) should be considered remote and speculative for NEPA purposes. *See* CP&L Summary at 46-50 (citing, e.g., SECY-98-231, Authorization of the Trojan Reactor Vessel Package for One-time Shipment for Disposal (Oct. 2, 1998) (1E-06); NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants § 5.2.3.1 (Supp. 2 1999) (8.9E-05)); Staff Summary at 36-43 (citing, e.g., *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-877, 26 NRC 287, 293 (1987) (3E-05 to 1E-10); *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit 2), ALAB-603, 12 NRC 30, 45 (1980) (1E-06 to 1E-07); *Public Service Electric and Gas Co.* (Hope Creek Generating Station, Units 1 and 2), LBP-78-15, 7 NRC 642, 699 (1978) (1E-06));

see also Tr. at 605-12, 659-61. BCOC, on the other hand, while suggesting that its probability estimate of 1.6E-05 is sufficient to establish that the contention EC-6 accident sequence is not remote and speculative, also declares that several factors should counsel serious Board concern about whether, in this proceeding, lower probability estimates should be considered as not falling within the category of remote and speculative. Among these are the need to take a “hard look” at potential environmental consequences in an EA; the level of uncertainty that is involved in the probability analyses used to support the EA determination; and particular uncertainty factors such as the use of unverifiable judgments rather than calculations to account for unknown aspects of plant behavior, the degree to which acts of malice, gross design errors, unforeseen accident sequences or phenomena, or degraded operation standards could influence those probability analyses, and dependence on new and untested applications of PRA techniques. *See* BCOC Summary at 23-30; *see also* Tr. at 499-508.

Notwithstanding the suggestion that we draw a “line in the sand” by declaring “remote and speculative” those matters whose probabilities fall into the range of 1E-06 or lower, in the context of this proceeding we need do no more than determine whether the Staff’s 2.0E-07 per reactor year probability analysis estimate that we find compelling falls beyond that line. The various agency determinations cited by CP&L and the Staff indicate that this estimate falls within the category of remote and speculative matters, assuming we do not consider the BCOC concerns described above sufficient to remove this estimate from that category.

In this regard, we note that whatever may have been the case previously, the information submitted by the Staff in its section 2.1113 written presentation regarding contention EC-6 makes it readily apparent that, relative to its EA determination, any requisite “hard look” has been taken at this point. *See* 10 C.F.R. § 51.34(b). And concerning the matter of probability analysis uncertainty, BCOC has not presented any specific information other than its expressed concerns about the reliability of the probability analysis process used in addressing its contention EC-6, particularly the purported lack of “peer review.” *See* BCOC Summary at 28, 29; Tr. at 499-501, 507-08, 514, 686-89.

Dr. Thompson apparently was the sole contributor to BCOC’s position. *See* Thompson Report at 2. No peer review of Dr. Thompson’s work was performed. *See* Tr. at 524. In contrast, CP&L and the Staff both attest to a peer review-type process in connection with their analyses.¹⁰ In connection with

¹⁰ According to CP&L, to answer the “best estimate” question posed by the Board in LBP-00-19, with considerable assistance from outside contractor ERIN Engineering and Research, Inc., CP&L sought to obtain a probability analysis of BCOC’s postulated accident sequence. In doing so, ERIN reviewed and utilized existing plant-specific information, including the Shearon Harris PSA and IPEEE, which were not prepared by ERIN and are in accord with NRC Generic Letter 88-20, to provide an updated Shearon Harris PSA. This work, in turn, was reviewed by CP&L personnel and ERIN personnel who were not members of the immediate team performing the analysis. Moreover, CP&L declares that its contractor was hired to answer the Board’s questions, not to satisfy its client CP&L. *See* CP&L Summary at 52-53; Tr. at 540-41, 569-71, 585-88, 595-96, 690-92.

the Staff's submission, which we have explained in section II.C, we consider an appropriate probability analysis tool in this instance,¹¹ the Staff confirms that the key documents it used — the CP&L 1993 IPE, 1995 IPEEE, and 1995 PSA — were subject to peer review when created. In addition, the IPE and IPEEE were reviewed by the Staff independent of this proceeding. Moreover, the Staff's analysis of the key elements of the contention EC-6 scenario had internal peer or supervisory review: the Staff fielded a panel of risk analysis practitioners from various disciplines to prepare its position, which was then subjected to a peer review by employees from the agency's Office of Nuclear Regulatory Research. *See* Staff Summary at 25-26, 34-35; Staff Affidavit at 9, 15, 16-17, 122; Tr. at 644-45.

The Board recognizes that, consistent with the Commission's guidance in its *Vermont Yankee* opinion "that future decisions that accident scenarios are remote and speculative must be more specific and more soundly based on the actual probabilities and accident scenarios being analyzed," CLI-90-7, 32 NRC at 132, we must have a significant degree of confidence in the reliability of the analyses we receive from the parties. At the same time, we do not think necessary, and did not request that the parties provide, a new, detailed PRA analysis relative to the contention EC-6 accident scenario. As was noted above, all of the parties began their evaluations of the postulated sequence with the CP&L PSA and/or IPE or IPEEE that have undergone peer review. Further, in the absence of any specific evidence of bias or mistake, the subsequent internal review of the components of its contention EC-6 probability analysis by Staff senior technical or supervisory personnel who were not involved in preparing the Staff's analysis is adequate in this context to provide the Board with confidence in the reliability of the Staff analysis regarding all of the important issues associated with each step of the postulated sequence. *Cf. United States v. Chemical Foundation, Inc.*, 272 U.S. 1, 14-15 (1926) (presumed that government official can be expected faithfully to execute his or her official duties). Thus, the fact that the peer review process for the Staff's contention EC-6 probability analysis may not be fully in accord with BCOC's criteria of complete independence is not a disqualifying factor, or one that mandates further evidentiary proceedings.

E. Additional Board Questions

As was noted in section II.B above, the Board also asked for party responses to two additional questions regarding (1) the relevance of a 2E-06 per reactor year estimate in NUREG-1353, a 1989 Staff generic study of SFP design basis accidents, and concerns about exothermic reactions expressed in an April 13,

¹¹ In large part, BCOC's uncertainty concerns relate to the CP&L PRA analysis in the ERIN Report rather than the Staff's analysis. *See* Tr. at 678-83.

2000 ACRS letter; and (2) the required scope of any EIS, if one is found to be necessary.

Regarding the first of these two Board inquiries, BCOC questions the relevance of NUREG-1353 because that report did not consider the seven-step sequence being examined under contention EC-6 and because the SFP conditions assumed in NUREG-1353 are not representative of the Shearon Harris rack configuration and fuel loading characteristics. With regard to the April 2000 ACRS letter, BCOC notes that although the February 2000 Staff draft technical study on SFP accident risk at decommissioning plants that is the subject of the ACRS letter did not address partial drainage or fuel/rack relocation heat transfer implications, it did acknowledge the limitations of previous analyses relative to exothermic reactions. *See* BCOC Summary at 40; Thompson Report at 44-46. Both CP&L and the Staff likewise declare NUREG-1353 has no direct relevance to the individual events in the scenario since that report uses a high ground acceleration earthquake rather than severe core damage accidents as an initiating event. And with regard to the April 2000 ACRS letter, CP&L and the Staff assert that the exothermic reaction concern that is the focus of that letter is irrelevant because it has been assigned a probability of 1.0 (100%) in scenario event seven. *See* CP&L Summary at 73-77; Staff Summary at 44-46; Tr. at 612-13.

After reviewing the arguments of the parties regarding this question, the Board agrees that NUREG-1353 has no direct relevance to our resolution of BCOC contention EC-6. The assignment of a probability of 1.0 to scenario step seven has incorporated the concerns raised in connection with the April 2000 ACRS letter as well.¹² And neither, of course, provides cause for further evidentiary proceedings.

Finally, given our disposition of this proceeding, the EIS-scope matter posed in the final question does not provide grounds for an evidentiary hearing or, indeed, warrant further consideration in this proceeding.

III. CONCLUSION

Based on the record before us, pursuant to 10 C.F.R. § 2.1115, we conclude Intervenor BCOC has failed to demonstrate relative to its contention EC-6 challenge to CP&L's December 1998 Harris facility SFP expansion amendment request, that there is any genuine and substantial dispute of fact or law that only

¹² Following the Board's December 2000 section 2.1113 oral argument, the agency released the October 2000 final version of the Staff study on SFP accident risks at decommissioning plants in which the Staff concluded that although the risk of an exothermic reaction in the form of a zirconium fire was very low, the radiological effects of such a fire would be serious. *See* Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Nuclear Power Plants (Oct. 2000), at viii (available at www.nrc.gov/NRC/REACTOR/DECOMMISSION/SF/index.html). Because a probability of 1.0 already has been assigned to the step in the contention EC-6 scenario that postulates an exothermic reaction, this report is not relevant to the matters at issue in this proceeding.

can be resolved with sufficient accuracy in an evidentiary hearing. At the same time, we find the Staff has demonstrated the sufficiency of its analysis, which places the overall probability that the accident sequence postulated under BCOC contention EC-6 will result in an exothermic oxidation reaction in the Harris facility SFPs conservatively in the range of 2.0E-07 per reactor year or less. As a result, the Staff has met its burden to establish that such a scenario can properly be characterized as “remote and speculative” so as not to warrant preparation of an EIS regarding CP&L’s amendment application.

We thus dispose of this contention by affirming the Staff’s December 1999 EA FONSI determination, as supplemented by this decision and the accompanying record and, having resolved the only outstanding matter at issue in this cause, terminate this proceeding.

For the foregoing reasons, it is, this first day of March 2001, ORDERED that:

1. With respect to BCOC contention EC-6, Environmental Impact Statement Required, in accordance with 10 C.F.R. § 2.1115(b), because (a) there is no genuine and substantial dispute of fact or law that only can be resolved with sufficient accuracy by the introduction of evidence in an evidentiary hearing; and (b) the NRC Staff has established that the accident scenario that is the basis for that issue statement is remote and speculative so as not to warrant the preparation of an EIS, the December 1999 Staff EA FONSI determination relative to the December 1998 CP&L SFP expansion license amendment application is *affirmed*, as supplemented by this decision and the record accompanying it; and,

2. Because there are no remaining disputed issues of fact or law requiring resolution in an adjudicatory hearing and all issues in this proceeding have been resolved in favor of granting the December 1998 license amendment application, the Staff is *authorized* to issue the license amendment requested by CP&L and, pursuant to section 2.1115(a)(2), this proceeding is *dismissed*.

In accordance with 10 C.F.R. §§ 2.760, 2.764, and the Commission’s decision in CLI-01-7, 53 NRC 113, 119 (2001), this decision shall become effective immediately. It will constitute the final decision of the Commission forty (40) days from the date of issuance, or on *Tuesday, April 10, 2001*, unless a petition for review is filed in accordance with 10 C.F.R. § 2.786, or the Commission directs otherwise. Within fifteen (15) days after service of this decision, 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 for a party to have exhausted its administrative remedies before seeking judicial review. 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.

The petition for review and any answers shall conform to the requirements of 10 C.F.R. § 2.786(b)(2)-(3).

THE ATOMIC SAFETY AND
LICENSING BOARD¹³

G. Paul Bollwerk, III, Chairman
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Thomas D. Murphy
ADMINISTRATIVE JUDGE

Rockville, Maryland
March 1, 2001

¹³ Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Applicant CP&L, (2) Intervenor BCOC, and (3) the Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

Ann Marshall Young, Chair
Dr. Charles N. Kelber
Thomas S. Moore

In the Matter of

Docket Nos. 50-336-LA
50-423-LA
(ASLBP No. 00-783-09-LA)

NORTHEAST NUCLEAR ENERGY
COMPANY
(Millstone Nuclear Power Station,
Units 2 and 3)

March 29, 2001

In this operating license amendment proceeding, the Licensing Board majority finds that the Petitioners have not proffered an admissible contention so the intervention petition must be denied.

RULES OF PRACTICE: CONTENTIONS

The contention pleading criteria set forth in 10 C.F.R. § 2.714(b)(2) are mandatory and must be scrupulously followed. As the Commission has stated with respect to these regulatory provisions, “[i]f any one of these requirements is not met, a contention must be rejected.” *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991).

RULES OF PRACTICE: CONTENTIONS

The provisions of 10 C.F.R. § 2.714(b)(2)(i), (ii), and (iii) were specifically added by the Commission “to raise the threshold bar for an admissible

contention,” and prohibit “notice pleading, with the details to be filled in later” and “vague, unparticularized contentions.” *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334, 338 (1999).

RULES OF PRACTICE: CONTENTIONS

It is the burden of the petitioner to come forward with contentions meeting the rules. *Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 NRC 39, 41 (1998). A licensing board is not free to supply missing information or draw factual inferences on the petitioner’s behalf. *See Palo Verde*, CLI-91-12, 34 NRC at 155-56.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

A contention is admissible only if it is within the scope of the proceeding outlined in the Commission’s hearing notice and referral order. *Wisconsin Electric Power Co.* (Point Beach Nuclear Plant, Units 1 and 2), ALAB-739, 18 NRC 335, 339 (1983).

RULES OF PRACTICE: CONTENTIONS (CHALLENGE OF COMMISSION RULE)

A contention attacking or challenging a Commission rule or regulation is inadmissible and that inadmissibility bar necessarily applies to contentions advocating such things as additional or stricter requirements than those imposed by the regulations. 10 C.F.R. § 2.758; *Oconee*, CLI-99-11, 49 NRC at 334; *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-8, 29 NRC 399, 416-17 (1989); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-87-12, 26 NRC 383, 395 (1987); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1656 (1982).

RULES OF PRACTICE: CONTENTIONS (CHALLENGING REMOVAL OF TECHNICAL SPECIFICATIONS)

A claim that a statute or regulation requires a technical specification to remain part of an operating license is an indispensable element of any contention challenging the relocation of material from a plant’s technical specifications to a licensee-controlled document because there can only be a right to a hearing or future changes to such material if there is a statutory or regulatory requirement

that such matters be included in the plant's technical specifications in the first place.

RULES OF PRACTICE: CONTENTIONS (CHALLENGING REMOVAL OF TECHNICAL SPECIFICATIONS)

There is no general right to a hearing for a hearing's sake. In indicating in *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315, 329 (1996) that the intervenors' challenge needed to show why the "nature and significance" of the material removed from a plant's technical specifications must remain in the operating license, the Commission was merely using a shorthand expression for the required explanation of the nexus between the relocated material and either section 182a of the Atomic Energy Act or 10 C.F.R. §§ 50.36 and 50.36a — the statutory and regulatory provisions detailing the contents of a plant's technical specifications.

MEMORANDUM AND ORDER

The Petitioners, Connecticut Coalition Against Millstone (CCAM) and STAR (Standing for Truth About Radiation) Foundation, seek to intervene in this operating license amendment proceeding on the application of Northeast Nuclear Energy Company (NNECO) to amend the technical specifications of its Millstone Units 2 and 3 located in Waterford, Connecticut.¹ The Applicant and the NRC Staff oppose the Petitioners' intervention petition, arguing that the Petitioners lack standing and that they have failed to proffer an admissible contention as required by the Commission's Rules of Practice.² For the reasons set forth below, we find that the Petitioners' sole proffered contention fails to meet the requirements of 10 C.F.R. § 2.714(b). Accordingly, the contention cannot be admitted and the intervention petition must be denied.

¹ See Connecticut Coalition Against Millstone and STAR Foundation Petition for Leave to Intervene and Request for Hearing (Sept. 8, 2000) [hereinafter Petition]; Connecticut Coalition Against Millstone and STAR Foundation Amended Petition for Leave to Intervene and Request for Hearing (Oct. 27, 2000) [hereinafter Amended Petition].

² See Northeast Nuclear Energy Company's Answer to Request for a Hearing and Petition for Leave to Intervene (Sept. 25, 2000) [hereinafter NNECO Answer]; Northeast Nuclear Energy Company's Answer to Amended Petition to Intervene (Nov. 17, 2000) [hereinafter NNECO Second Answer]; NRC Staff's Response to Petition for Leave to Intervene and Request for Hearing Filed by the Connecticut Coalition Against Millstone and the STAR Foundation (Sept. 28, 2000) [hereinafter Staff Response]; NRC Staff's Response to Amended Petition to Intervene and Request for Hearing Filed by Coalition Against Millstone and STAR Foundation (Nov. 17, 2000) [hereinafter Staff Second Response].

I. BACKGROUND

On February 22, 2000, NNECO filed an application to amend Operating License DPR-65 for Millstone Unit 2, a Combustion Engineering nuclear steam supply system plant, and Operating License NPF-49 for Millstone Unit 3, a Westinghouse nuclear steam supply system plant. Subsequently, on August 28, 2000, the Applicant supplemented its application. Specifically, NNECO requests approval to relocate selected procedural details and their associated bases of each unit's Radiological Effluent Technical Specifications (RETS) dealing with the monitoring of routine operational releases to the Millstone Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODCM) for each unit consistent with the Commission's technical specification improvements policy statement,³ the NRC Staff's generic letter on this subject,⁴ and the agency's improved standard technical specifications for plants like Millstone Units 2⁵ and 3.⁶ The Applicant's amendment application also seeks to add two new technical specifications to the administrative controls section of the technical specifications of each unit. The new administrative control technical specifications provide programmatic controls for radioactive effluent control and radiological monitoring programs in lieu of the relocated RETS requirements and mandate that the appropriate programs and operating procedures must be in place and conform to applicable regulatory requirements. NNECO's license amendment request does not involve any change to radiological release limits, radiological monitoring instrumentation, or radiological effluents for the Millstone plants. Similarly, the amendments do not impact the assumptions used in any accident analysis, affect any plant equipment, plant configurations, or the manner in which the plants are operated. Indeed, because of the programmatic controls contained in the new administrative controls technical specifications, future changes to the details of the REMODCM must meet the requirements of 10 C.F.R. § 50.59 or be the subject of a license amendment.

The Petitioners timely filed their intervention petition in response to the agency's notice of opportunity for hearing, 65 Fed. Reg. 48,744, 48,754 (Aug. 9, 2000), asserting that "[s]hould the amendment be granted, modifications to the instrumentation and surveillance mechanisms to monitor routine radioactive releases from Millstone Units 2 and 3 may thereby be effected without public

³ See "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors," 58 Fed. Reg. 39,132 (July 22, 1993). See also 60 Fed. Reg. 36,953 (July 19, 1995) (statement of considerations accompanying amendment of 10 C.F.R. § 50.36).

⁴ See Generic Letter 89-01 (Jan. 31, 1989) "Implementation of Programmatic Controls for Radiological Effluent Technical Specifications in the Administrative Controls Section of the Technical Specifications and the Relocation of Procedural Details of RETS to the Offsite Dose Calculation Manual or to the Process Control Program."

⁵ See NUREG-1432, "Standard Technical Specifications, Combustion Engineering Plants" (Sept. 1992).

⁶ See NUREG-1431, "Standard Technical Specifications, Westinghouse Plants" (Apr. 1995).

notice and the opportunity for hearing.” Petition at 2. According to the petition, CCAM is an organization consisting of numerous statewide organizations that advocate for safe and renewable energy sources and environmental protection, and its membership also includes families who own property and reside within the 5-mile priority evacuation zone around Millstone. *Id.* The petition states that the STAR Foundation is a not-for-profit organization based in East Hampton, New York, whose membership includes families that own property and reside within the Millstone 10-mile emergency evacuation zone. *Id.* In the petition, the Petitioners claim that if the amendment is granted their members “will suffer increased risk of hazard from radiological releases from Millstone Units 2 and 3 and consequent adverse health effects with no opportunity for comment or objection.” *Id.* at 3.

Although not required to be filed at the time of their initial intervention petition, the Petitioners also included one contention in their petition. In pertinent part, the contention alleges that the relocation of selected RETS to the Millstone REMODCM will deprive Petitioners’ members of notice and an opportunity for a hearing on proposed changes to the Millstone radiological liquid and gaseous effluent monitoring instrumentation. *Id.* at 4. It also asserts that the requested amendments will lower standards of radiological monitoring and “open[] the door to increases in the types and amounts of effluents that may be released offsite.” *Id.* The contention concludes by stating that the Petitioners are prepared to establish through expert testimony that any increase in routine radiological effluents from Millstone will expose the public to greater risk of cancer, immunodeficiency diseases, and other adverse health effects. *Id.*

After NNECO and the Staff filed answers to the intervention petition, the Licensing Board issued a scheduling order setting a deadline by which the Petitioners could amend their petition and file their final contentions. *See* Licensing Board Order (Setting Schedule for Proceedings) (Oct. 6, 2000). Thereafter, on October 27, 2000, the Petitioners timely filed an amended petition essentially identical to their initial one. The amended petition, however, included the affidavit of Mr. Joseph M. Besade who indicates that he is a member of CCAM living about 2 miles from the Applicant’s facility and that he has authorized the Coalition to represent him in the amendment proceeding. *See* Amended Petition, Affidavit of Joseph H. Besade (Oct. 26, 2000) at 13 [hereinafter Besade Affidavit]. In his affidavit, Mr. Besade asserts that the grant of the license amendment will allow modifications to the instrumentation and surveillance mechanisms monitoring routine radiological releases at Millstone without public notice and an opportunity for a hearing. *Id.* at 13-14. The affidavit further states that the amendment would put Mr. Besade and his family at “increased risk of hazard from radiological releases from Millstone Units 2 and 3 and consequent adverse health effects with no opportunity for comment or objection.” *Id.* Finally, the affiant states that he believes “that an increase in such radiological discharges,

and a lowering of standards which limit such discharges, are contemplated in the present applications.” *Id.* The Petitioners’ amended intervention petition also indicated that it included the affidavit of another named individual, presumably a member of the STAR Foundation, but no such affidavit was included with the amended petition. On November 8, 2000, the Petitioners filed, without more, a corrected page to its amended petition substituting the name of a different member of the STAR Foundation and the affidavit of that individual essentially paralleling the affidavit of Mr. Besade.⁷

The Petitioners’ amended intervention petition also included the affidavit of Mr. Joseph Mangano in support of their assertion in both their initial and amended petitions that any increase in routine radiological effluents from Millstone will expose the public to greater risk of cancer and other adverse health effects. In his affidavit, Mr. Mangano, who holds a master’s degree in public health, states that he is a research associate with the Radiation and Public Health Project in New York City and that he has authored numerous technical studies, books, and reports related to radiation and its health effects. *See* Amended Petition, Declaration of Joseph Mangano (Oct. 27, 2000) at 5 [hereinafter Mangano Declaration]. In pertinent part, Mr. Mangano states that he is familiar with NNECO’s license amendment application. *Id.* He asserts that the amendment will eliminate the opportunity for notice and hearing “regarding changes to the Millstone radiological liquid and gaseous monitoring instrumentation” and that “such instrumentation is critical in the prevention of radiological effluent releases to the environment and the monitoring of such releases.” *Id.* at 6. Finally, the affiant claims that the people of Connecticut and Long Island are at risk of adverse health effects from radiological discharges at Millstone and that standards of effluent monitoring instrumentation should be tightened, not loosened, but, if the amendment is approved, “it is virtually certain that standards of effluent monitoring instrumentation, as such exist, will be lessened.” *Id.*

II. ANALYSIS

To intervene as a matter of right in a Commission licensing proceeding, section 189a of the Atomic Energy Act (AEA), 42 U.S.C. § 2239(a), as well as the Commission’s Rules of Practice, 10 C.F.R. § 2.714(a)(1), require that a petitioner demonstrate that its “interest may be affected” by the proceeding. In ascertaining whether a petitioner has established the requisite “interest” to intervene, the Commission long ago held that contemporaneous judicial concepts of standing are to be applied. *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 613-14 (1976). In addition

⁷ *See* Amended Petition, Affidavit of Christine Guglielmo (Nov. 7, 2000).

to establishing its standing, the Commission's Rules of Practice also require that a petitioner proffer at least one admissible contention in order to become a party to the proceeding. 10 C.F.R. § 2.714(b)(1); *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 333 (1999). Although normal practice is to address the issue of the Petitioners' standing before turning to the question of the admissibility of contentions, here, because the Petitioners have proffered a single contention that we find fails to meet the contention requirements of 10 C.F.R. § 2.714(b)(2), there is no need to freight this decision with an analysis of the standing issues. Accordingly, we address only the question of the admissibility of the Petitioners' contention.

A. The Commission's Rules of Practice provide that "[e]ach contention must consist of a specific statement of the issue of law or fact to be raised or controverted." 10 C.F.R. § 2.714(b)(2). Additionally, section 2.714(b)(2)(i), (ii), and (iii) states that each contention must be accompanied by:

- (i) A brief explanation of the bases of the contention.
- (ii) A concise statement of the alleged facts or expert opinion which support the contention . . . together with references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion.
- (iii) Sufficient information . . . to show that a genuine dispute exists with the applicant on a material issue of law or fact. This showing must include references to the specific portions of the application . . . 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.

The contention pleading criteria set forth in section 2.714(b)(2) are mandatory and must be scrupulously followed. As the Commission has stated with respect to these regulatory provisions, "[i]f any one of these requirements is not met, a contention *must be rejected*." *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991) (emphasis supplied); *accord Oconee*, CLI-99-11, 49 NRC at 335; *see* Final Rule, Rules of Practice for Domestic Licensing Proceedings — Procedural Changes in the Hearing Process, Statement of Considerations, 54 Fed. Reg. 33,168, 33,171 (Aug. 11, 1989). The provisions of section 2.714(b)(2)(i), (ii), and (iii) were specifically added by the Commission "to raise the threshold bar for an admissible contention" and prohibit "notice pleading, with the details to be filled in later" and "vague, unparticularized contentions." *Oconee*, CLI-99-11, 49 NRC at 334, 338. Further, it is the burden of the petitioner to come forward with contentions meeting the rules. *Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 NRC 39, 41 (1998). A licensing board is not free to supply missing information or draw factual inferences on the petitioner's behalf. *See Palo Verde*, CLI-91-12, 34 NRC at 155-56. As the Commission

emphasized in its *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22 (1998), “[a] contention’s proponent, not the licensing board, is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for the admission of contentions in 10 C.F.R. § 2.714(b)(2).”

In addition to the contention pleading requirements of section 2.714(b)(2), a number of other long established principles of NRC adjudication bound the subject matter of contentions and thus affect their admissibility. Most fundamentally, licensing boards, as delegates of the Commission, only have jurisdiction over those matters the Commission commits to them in the various hearing notices and referral orders that identify the subject matters of the hearings and delegate to the boards the authority to conduct proceedings. *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790 (1985); *Public Service Co. of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 NRC 167, 170-71 (1976). Accordingly, a contention is admissible only if it is within the scope of the proceeding outlined in the Commission’s hearing notice and referral order. *Wisconsin Electric Power Co.* (Point Beach Nuclear Plant, Units 1 and 2), ALAB-739, 18 NRC 335, 339 (1983). Further, a contention attacking or challenging a Commission rule or regulation is inadmissible and that inadmissibility bar necessarily applies to contentions advocating such things as additional or stricter requirements than those imposed by the regulations. 10 C.F.R. § 2.758; *Oconee*, CLI-99-11, 49 NRC at 334; *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-8, 29 NRC 399, 416-17 (1989); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-87-12, 26 NRC 383, 395 (1987); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1656 (1982).

B. Assessing the Petitioners’ proffered contention in light of the contention pleading requirements of section 2.714(b)(2) and these well-established principles of NRC adjudication makes it clear, as the Applicant and the Staff argue, that the contention must be rejected. To aid in that assessment, and to ensure there is no question as to precisely what the Petitioners’ contention states and, equally important, what the contention fails to include, we set forth in full the Petitioners’ two-paragraph contention:

“Relocating” the selected radiological effluent Technical Specifications and the associated Bases to the Millstone Radiological Effluent Monitoring and Offsite Dose Calculation Manual will deprive the public, and the membership of the Connecticut Coalition Against Millstone and STAR Foundation, of notice of proposed changes to the Millstone radiological liquid and gaseous effluent monitoring instrumentation. It will deprive them of the opportunity for hearing and to comment and object to changes, which can only be projected to lower standards of radiological effluent monitoring in the era of deregulation and electric restructuring. The amendment request is particularly objectionable in light of the record levels of radiological effluent released to the environment by the Millstone reactors.

This amendment will degrade protection of the public health and safety from radiological effluents. Even according to the applicant, NNECO, the amendment opens the door to increases in the type and amounts of effluents that may be released offsite as well as individual and cumulative occupational radiation exposures. NNECO's amendment requests states [*sic*] that such increases will not be "significant." (Application, Feb. 22, 2000, cover letter, page 3). However, as there will be no opportunity for hearing or public comment, the public will be exposed to greater risk of radiation doses from the routine operations of the Millstone nuclear reactors if NNECO obtains the amendment requested. The Petitioners are prepared to establish through expert testimony that any increase in routine radiological effluent to the air and water by the Millstone nuclear reactors will expose the public to greater risk of cancer, immunodeficiency diseases and other adverse health effects.

Amended Petition at 3-4.

Although it is not free of all doubt, it appears that the first paragraph of the contention sets out the issue the Petitioners seek to litigate in an attempt to comply with the requirement of section 2.714(b)(2), and the second paragraph sets out the bases for the contention in an attempt to comply with the requirements of section 2.714(b)(2)(i), (ii), and (iii). The issue the Petitioners raise in the first paragraph asserts that moving the RETS to the REMODCM will deprive the Petitioners' members of notice and an opportunity for hearing on the proposed changes "to the Millstone radiological liquid and gaseous effluent monitoring instrumentation . . . which can only be projected to lower standards of radiological effluent monitoring." The second "bases" paragraph of the contention appears to focus on the alleged future deleterious health effects from the amendment by stating that it will degrade the protection of the public health and safety from "routine" radiological effluents by opening the door to increases in the types and amounts of effluents that may be released and expose the public to greater radiation doses from "routine" Millstone operations.

During a telephone prehearing conference in the proceeding, the Petitioners indicated that the issue they sought to raise in their contention was not the same legal issue involved in *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315 (1996), but rather "a mixed legal and factual issue." (Tr. 50). Regardless of how Petitioners characterize the issue they seek to raise, the Commission's *Perry* decision is instructive and aids in understanding the inadmissibility of Petitioners' contention.

The intervenor in *Perry*, like the Petitioners here, challenged the relocation of material from the technical specifications to a licensee-controlled document. Specifically, the licensee sought a license amendment to transfer the withdrawal schedule for the reactor vessel material specimens from the plant's technical specifications to the facility's updated safety analysis report consistent with the NRC Staff's generic letter on this subject. *Perry*, CLI-96-13, 44 NRC at 316-17. Along with the removal of the withdrawal schedule from the technical specifications, the licensee's amendment application, similar to NNECO's

application here, included a new technical specification requiring that the reactor vessel material surveillance specimens be removed and examined in accordance with a specific regulation. *Id.* at 319. The intervenors in *Perry* proffered a legal contention raising a single legal issue. They claimed that the removal of the withdrawal schedule from the plant's technical specifications violated the notice and hearing requirements of section 189a of the Atomic Energy Act by depriving them of the opportunity for a hearing on future changes to the withdrawal schedule because such changes would be *de facto* license amendments. *Id.* The *Perry* intervenors, however, conceded that there was no legal requirement that the withdrawal schedule remain in the plant's technical specifications. *Id.* at 320, 329.

In *Perry*, the Commission held, contrary to the intervenors' claim, that future changes to the withdrawal schedule would not be *de facto* license amendments because such changes would not permit the licensee to operate in any greater capacity than that prescribed by the original license. *Id.* at 327-28. The Commission concluded its decision by addressing the intervenors' assertion that they merely wished to participate in the regulatory process stating:

If the Intervenor believed that the nature and significance of the material specimen withdrawal schedule was such that it needed to remain in the *Perry* technical specifications — as a specific term of the *Perry* license — the Intervenor could have raised that argument in this proceeding. They instead concurred with the NRC Staff that there is no statutory or regulatory requirement that the withdrawal schedule remain in the *Perry* license.

Id. at 329.

The Petitioners' contention here, similar to the intervenors' fatal concession in *Perry*, makes no claim that there is a statutory or regulatory requirement that the procedural details and associated bases of the Millstone RETS must remain as specific terms of the Millstone operating licenses. Such a claim is an indispensable element of any contention challenging the relocation of material from a plant's technical specifications to a licensee-controlled document because there can only be a right to a hearing on future changes to such material if there is a statutory or regulatory requirement that such matters be included in the plant's technical specifications in the first place. As the Commission stated in *Perry*, "there is no statutory or regulatory requirement that every operational detail listed in [a licensee-controlled document] be subject to a technical specification." *Id.* at 328. And, as should be obvious, there is no general right to a hearing for a hearing's sake. Indeed, in indicating in *Perry* that the intervenors' challenge needed to show why the "nature and significance" of the material removed from a plant's technical specifications must remain in the operating license, the Commission was merely using a shorthand expression for the required explanation of the nexus between the relocated material and either section 182a of the AEA or 10

C.F.R. §§ 50.36 and 50.36a — the statutory and regulatory provisions detailing the contents of a plant’s technical specifications.

Here, the Petitioners’ contention does not even mention AEA section 182a or regulatory sections 50.36 or 50.36a, much less state why those provisions require that the procedural details and associated bases of the Millstone RETS need to remain in the Millstone operating licenses. Without this essential information, the Petitioners’ contention does not contain “[s]ufficient information . . . to show that a genuine dispute exists with the applicant on a material issue of law or fact” as required by 10 C.F.R. § 2.714(b)(2)(iii). See *Oconee*, CLI-99-11, 49 NRC at 337, 341. Accordingly, the contention must be rejected.

The Dissent (at pp. 306-11) appears to argue, apparently relying upon the Commission’s decision in *Perry*, CLI-96-13, 44 NRC at 327-29, that a contention challenging the removal of a technical specification from an operating license need not show that the provisions of AEA section 182a or 10 C.F.R. §§ 50.36 and 50.36a require the technical specification to remain as a specified term of the operating license. Rather, the Dissent claims that *Perry* somehow enlarged the realm of admissible contentions to include those in which the removal of a technical specification would give the licensee greater operational authority, apparently regardless of whether the technical specification was required by AEA section 182a or 10.C.F.R. §§ 50.36 and 50.36a to be in the technical specifications in the first place or the relationship of the technical specification to reactor safety. Thus, it appears that the dissent reads *Perry* to set out a “once there, forever there” rule for technical specifications when removal of the technical specification would somehow increase the licensee’s operational authority, even though there is no connection to reactor safety or any statutory or regulatory requirement that the technical specification be included in the operating license. We do not read the Commission’s decision in *Perry* to dictate such a result.

The Petitioners’ contention must also be rejected for several additional reasons. During the telephone prehearing conference held long after the deadline for Petitioners’ final contentions, the Petitioners apparently recognized the necessity of alleging in their contention that the Commission’s regulations require that the Millstone RETS remain as specific terms of the operating licenses. At the conference, the Petitioners claimed for the first time that 10 C.F.R. § 50.36(c)(1)(ii)(A) requires that the material at issue remain in the technical specifications. (Tr. 26-28). In response to a direct question whether their contention stated that section 50.36(c)(1)(ii)(A) required the technical specifications at issue to remain in the license, the Petitioners’ counsel answered that “[w]e haven’t explicitly set that forth. I believe it is implicit in our petition.” (Tr. 56).

Contrary to the Petitioners’ assertion, however, this fundamental, indispensable element of a challenge to the removal of material from a plant’s technical specifications is not implicit in their contention. The contention does not even

mention the word “regulation” much less refer to 10 C.F.R. § 50.36(c)(1)(ii)(A) and nothing in the language or structure of the contention even vaguely suggests that the Commission’s technical specification regulations require that the Millstone RETS remain part of the operating license. Nor is the failure to include such an indispensable element of a challenge to the removal of material from a plant’s technical specifications the kind of minor pleading error that can be added to a contention long after the time for filing contentions has past. Similarly, it cannot reasonably be asserted that rejecting the Petitioners’ contention for failing to comply with the contention pleading requirements of the Commission’s regulations is somehow holding the Petitioners to a standard of technical perfection in the pleading of contentions.

Moreover, even if we ignore the lateness of the Petitioners’ attempt to remedy the omission of indispensable information from their contention, the regulatory provision relied upon by the Petitioners (Tr. 26-28) at the prehearing conference as requiring the retention of the Millstone RETS in the operating licenses — 10 C.F.R. § 50.36(c)(1)(ii)(A) — is by its terms, inapplicable to NNECO’s license amendment application. Rather, only 10 C.F.R. § 50.36(c)(2)(ii) is applicable to a determination of whether the procedural details of the Millstone RETS need to remain in the facility technical specifications. Therefore, for these additional reasons, the Petitioners’ contention fails to comply with 10 C.F.R. § 2.714(b)(2)(iii) and must be rejected.

The failure of the Petitioners’ contention to comply with yet another requirement of section 2.714(b)(2)(iii) also requires that we reject the contention. That regulatory provision provides that the Petitioners’ contention “must include references to the specific portions of the application . . . that the petitioner disputes and the supporting reasons for each dispute.” 10 C.F.R. § 2.714(b)(2)(iii). But the Petitioners’ contention is completely devoid of any references to specific portions of the Applicant’s amendment application. Similarly, the contention does not dispute any of the Applicant’s analysis or conclusions set out in the license amendment application regarding why the applicable provisions of the Commission’s technical specification regulation, 10 C.F.R. § 50.36(c)(2)(ii), do not prohibit the relocation of the various technical specifications at issue to the Millstone REMODCMs. The fact that the Licensee’s amendment application is long and deals with numerous interrelated technical specifications does not somehow exempt the Petitioners from complying with the requirements of section 2.714(b)(2)(iii) to identify each portion of the amendment application that they dispute along with the reasons for each of their objections. Nor is there anything unique about a contention challenging the removal of material from a plant’s technical specifications that somehow makes the contention pleading requirements of section 2.714(b)(2)(iii), or any of the other contention pleading rules, inapplicable. One of the purposes of the Commission’s contention pleading rules is to “focus[] the hearing process on real disputes susceptible of resolution in

an adjudication.’’ *Oconee*, CLI-99-11, 49 NRC at 334. In line with this purpose, the requirements of section 2.714(b)(2)(iii) are intended to force petitioners who wish to invoke the agency’s hearing process to identify and support, at the outset of the proceeding, each and every genuine dispute of material law or fact that they wish to contest regarding a licensee’s amendment application. As the Commission stated regarding these specific contention pleading requirements, “[a] contention alleging that an application is deficient must identify ‘each failure and the supporting reasons for the petitioners’ belief’ ” and “[i]t is [the petitioners’] job to review the application and to identify *what* deficiencies exist and to explain *why* the deficiencies raise material safety concerns.’’ *Id.* at 336-37. Thus, “a contention ‘that fails directly to controvert the license application . . . is subject to dismissal.’ ” *Id.* at 342 (quoting *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998)). Here, the failure of the Petitioners’ contention to identify each and every portion of the Applicant’s amendment application that they dispute, along with their reasons for each of their objections, requires that we reject the contention.

As already amply demonstrated, the Petitioners’ contention fails to state and support a litigable issue regarding their alleged loss of hearing rights. The assertions in the remainder of the Petitioners’ contention, to the extent they are relevant at all to the loss of hearing rights issue they seek to raise on the Applicant’s amendment application, do nothing to enhance the admissibility of their contention. The Petitioners assert that the license amendment will lower standards of radiological effluent monitoring and increase the types and amounts of effluents released off site, thereby causing increased radiation doses to the public and increasing the risk of cancer, immunodeficiency diseases, and other adverse health effects.

First, the Petitioners’ claim that the license amendment will lower standards of effluent monitoring is nothing more than the Petitioners’ own *ipse dixit*. The contention references no documents or other sources to support their claim as required by section 2.714(b)(2)(ii). As the Commission stated in analogous circumstances, “[d]ocuments, expert opinion, or at least a fact-based argument are necessary.’’ *Id.* at 342. Hence, this assertion fails to comply with the basis requirements of the Commission’s Rules of Practice.

Second, the claim in the contention that the license amendment will increase the types and amounts of effluents released off site also lacks adequate support. Although the contention refers to the Applicant’s cover letter on the amendment application to support their claim, an examination of the letter shows that the letter neither states nor implies that the amendment request includes any increases in releases of radiological effluents off site. Similarly, the Petitioners have not pointed to any other portion of the amendment application proposing any increase in offsite releases or otherwise provided a reasoned explanation of how such

increases will occur. Accordingly, this unsupported assertion also fails to comply with the requirements of section 2.714(b)(2)(i) and (ii).

Finally, the Petitioners claim that the amendment will cause an increased risk to the public of cancer and other adverse health effects. In support of this assertion, the Petitioners' contention incorporates the affidavit of Joseph Mangano. Because the Petitioners' claims upon which Mr. Mangano's allegations rest (i.e., the amendment will lower standards of radiological effluent monitoring and increase offsite effluent releases) are not properly supported, his affidavit claiming deleterious health effects is irrelevant. Nor does Mr. Mangano's affidavit independently show that the license amendments at issue will increase radiological effluent releases. Even assuming relevancy, however, Mr. Mangano's affidavit does not raise or properly support any matters within the scope of this license amendment proceeding.

The Petitioners' contention explicitly states that "the public will be exposed to greater risk of radiation doses from the *routine* operations of the Millstone nuclear reactors if NNECO obtains the amendment requested." Amended Petition at 4 (emphasis supplied). Further, the contention states that "[t]he Petitioners are prepared to establish through expert testimony that any increase in *routine* radiological effluent to the air and water by the Millstone nuclear reactors will expose the public to greater risk of cancer, immunodeficiency diseases and other adverse health effects." *Id.* (emphasis supplied). By definition, "routine radiological effluent[s]" from "routine operations" are those from normal operations, not abnormal operations or accident conditions. Necessarily, therefore, routine effluent releases from routine operations are releases within regulatory limits. Mr. Mangano's affidavit does not make clear whether the increased effluent releases he alleges (and which he claims will cause adverse health effects) will be within regulatory limits or violate the Commission's regulations.⁸ If the former, Mr. Mangano's assertion represents an impermissible challenge to the Commission's regulations, 10 C.F.R. Part 20 and Part 50, that

⁸The dissent ignores the explicit language of the Petitioners' proffered contention alleging "routine radiological effluent[s]" from "routine operations," Amended Petition at 4, and instead effectively amends the contention to allege effluent releases that exceed regulatory limits in making her argument. See Dissent at 303-04 & n.16. As the Commission has frequently emphasized, however, "the burden of coming forward with admissible contentions is on their proponent . . . not the licensing board." *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC at 22; see *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 329 (2000). The Licensing Board may not properly supply missing information to a proffered contention to make it admissible. Indeed, the Dissent's "Overview of Information in Record Relating to Alleged Increased Risk of Hazard," Dissent at 288-96, is little more than an attempt to add explanations and supporting details to the Petitioners' proffered contention that the contention, as filed, nowhere contains. In this regard, the dissenting Board Chairman treats a routine telephone oral argument on the Petitioners' standing and the admissibility of their one contention as some sort of evidentiary hearing from which the Dissent, in effect, makes factual findings. At that time, however, the Board Chairman accurately articulated the Dissent's underlying position that "[a]s a relative newcomer here, on the one hand it seems to me that when you are talking about the release of radiological effluent, it is almost implicitly safety significant, and that the monitoring of that would also thereby be implicitly safety significant." (Tr. 48-49).

establish radiological dose limits. *See* 10 C.F.R. § 2.758. On the other hand, if Mr. Mangano is asserting that, pursuant to the amendment, the Applicant in the future will violate the Commission's regulatory dose limits, then his claim directly contradicts the Petitioners' contention. In any event, such a claim is insufficiently supported. Although Mr. Mangano's affidavit states that in 1999 the Applicant pled guilty in federal court to felonies under the Atomic Energy Act and the Clean Water Act, he provides no further explanation or documentation for that statement and no other supported claims that would establish a pattern and practice of past conduct by the Applicant sufficient to warrant a conclusion that the Applicant will violate the Commission's regulations in the future if this license amendment is granted. Absent such support, we will not presume a licensee will violate the regulations. *See GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-35, 52 NRC 364, 405 (2000); *General Public Utilities Nuclear Corp.* (Oyster Creek Nuclear Generating Station), LBP-96-23, 44 NRC 143, 164 (1996). Accordingly, Mr. Mangano's affidavit does nothing to remedy the inadmissibility of the Petitioners' contention.

III. CONCLUSION

For the foregoing reasons, we find that the Petitioners' sole proffered contention is inadmissible. Accordingly, pursuant to 10 C.F.R. § 2.714(b)(1), the Petitioners may not be admitted as parties to the proceeding and their intervention petition must be denied and the proceeding terminated.

As provided in 10 C.F.R. § 2.714a, the Petitioners, within ten (10) days of service of this Memorandum and Order, may appeal the Order to the Commission by filing a notice of appeal and accompanying brief.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Thomas S. Moore
ADMINISTRATIVE JUDGE

Dr. Charles N. Kelber
ADMINISTRATIVE JUDGE

Rockville, Maryland
March 29, 2001

Dissent of Judge Young

I respectfully dissent. I agree with my colleagues that the Petitioners' contention lacks precision in some particulars, which I find makes the case a close one. The Petitioners' assertion that relocating the technical specifications at issue to the REMODCM will result in future changes to the Millstone radiological liquid and gaseous effluent monitoring instrumentation, which will in turn result in lowered standards and "increases in the type and amounts of effluents that may be released offsite," Connecticut Coalition Against Millstone and STAR Foundation Amended Petition for Leave to Intervene and Request for Hearing (Oct. 27, 2000), at 4 [hereinafter Amended Petition], is accompanied by neither any citation to specific portions of the amendment application, nor any specific statutory or regulatory authority, nor any specific estimate as to the precise amounts of potential increases in effluents, nor any specific and precise description of how such increases might occur. These factors taken alone might lead me also, at first blush, to find that the provisions of 10 C.F.R. § 2.714(b)(2) have not been completely satisfied.

I find, however, that a fuller view of this case is in order under applicable law and, based upon the following overview and analysis, conclude that the Petitioners have established not only standing but also the admissibility of their contention sufficiently to warrant further inquiry in the case.

Overview of Information in Record Relating to Alleged Increased Risk of Hazard

Before addressing the law governing the issues of standing and the admissibility of the Petitioners' contention in this proceeding, an overview of the information in the record relating to the nature, significance, and actual effect of relocating the technical specifications at issue, particularly with regard to the possibility of future changes that could result in increased releases of radiological effluents, is helpful in providing context for the legal analysis.⁹

⁹I undertake this overview not in any attempt to add anything to the Petitioners' contention to make it admissible (see Majority Memorandum *supra* note 8), or to make any findings of fact on the merits of this case, but rather to discuss the results of my examination of the information in the record as I have attempted to clarify relevant factual issues and determine whether any potential injury asserted by the Petitioners rises to a level sufficient to establish standing, as well as whether the Petitioners' contention sufficiently raises litigable issues or would, even if proven, "be of no consequence . . . because it would not entitle [the] petitioner[s] to relief." See 10 C.F.R. § 2.714(d)(2)(ii). This discussion includes a recounting of portions of the prehearing conference during which my colleagues and I heard oral argument and questioned all participants on a number of issues relating, as indicated in the text, to the nature, significance, and effect of relocating the technical specifications at issue. The appropriate extent of such attempts to clarify matters relevant to standing and the admissibility of contentions, and to conduct a "thoughtful, albeit non-merits review" of Petitioners' information and theories is not a static or easily defined matter. See, e.g., *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part and remanded*, CLI-90-4, 31 NRC 333 (1990); *Cleveland Electric Illuminating Co.* (Perry

(Continued)

In their Amended Petition, the Petitioners assert that the amendment at issue will lead to their members “suffer[ing] increased risk of hazard from radiological releases . . . and consequent adverse health effects.” Amended Petition at 2. They allege that relocating the technical specifications at issue will deprive them of notice and opportunity for hearing with regard to proposed changes, “which can only be projected to lower standards of radiological effluent monitoring in the era of deregulation” and “opens the door to increases in the type and amounts of effluents that may be released offsite,” which will lead to “greater risk of radiation doses from the routine operations of the Millstone nuclear reactors.” *Id.* at 2-4. The Petitioners offer the “Declaration” and are prepared to offer the expert testimony of Joseph Mangano, who has an MPH in Health Administration and an MBA in Management and who has written on health effects of radiation, to establish that “any increase in routine radiological effluent to the air and water by the Millstone nuclear reactors will expose the public to greater risk of cancer, immunodeficiency diseases and other adverse health effects.” *See id.* at 4; *see also* Amended Petition at 5, Decl. of Joseph Mangano. My colleagues have quoted the complete contention of the Petitioners above, except for the Declaration of Mr. Mangano, which is incorporated as part of the contention and contains a series of facts and allegations that are discussed in more detail in the section below on the Admissibility of the Petitioners’ Contention.

The Staff and the Applicant contend that there is no increased risk of hazard such as the Petitioners have alleged that could result from relocating the technical specifications at issue so as to support a finding of either standing or an admissible contention in this proceeding. *See* NRC Staff’s Response to Petition for Leave to Intervene and Request for Hearing Filed by [CCAM and STAR] (Sept. 28, 2000) at 10 [hereinafter Staff Response to Petition]; NRC Staff’s Response to Amended Petition to Intervene and Request for Hearing filed by [CCAM and STAR] (Nov. 17, 2000) at 5 [hereinafter Staff Response to Amended Petition]; Northeast Nuclear Energy Company’s Answer to Request for a Hearing and Petition for Leave to Intervene (Sept. 25, 2000) at 11 [hereinafter NNECO Answer to Petition]; Northeast Nuclear Energy Company’s Answer to Amended Petition to Intervene (Nov. 17, 2000), at 7, 12 [hereinafter NNECO Answer to Amended Petition]. NNECO characterizes its license amendment request as follows:

[The request] concerns no more than relocating — intact — selected Radiological Effluent Technical Specifications (“RETS”), and the associated Bases, to the Millstone Radiological Effluent Monitoring and Offsite Dose Calculation Manual (“REMDCM”). The proposed

Nuclear Power Plant, Unit 1), LBP-90-25, 32 NRC 21, 24-28 (1990) [hereinafter *Perry A*]. And it is not unusual, in close cases such as this one, that differing conclusions can be reached by different minds, each endeavoring in good faith to analyze matters presented in light of applicable law, and still ending up in honest disagreement. This is the standard I have adhered to in this case, as I believe a fair reading of the record will establish.

relocation is consistent with the requirements of 10 C.F.R. § 50.36(c)(2)(ii), which describes the limiting conditions for operation for which Technical Specifications must be established. Also, consistent with 10 C.F.R. § 50.36(a), the proposed changes include a new programmatic Technical Specification addressing the radioactive effluent monitoring program, mandating the related operating procedures and specifying procedures for future changes. Finally, the proposed relocation is consistent with the Commission's "Final Policy Statement on Technical Specification Improvements for Nuclear Power Reactors" [citing 58 Fed. Reg. 39,132, 39,136 (July 22, 1993), *as amended*, 60 Fed. Reg. 36,953 (July 19,1995)], with Generic Letter 89-01, and with NUREG-1431 and NUREG-1432. The LAR does not involve any change to radiological monitoring instrumentation or radiological effluents from the nuclear units, nor does it impact the assumptions used in any accident analysis, affect plant equipment, plant configuration, or the way in which the plant is operated.

NNECO Answer to Amended Petition at 2-3.¹⁰

¹⁰The "new programmatic Technical Specification addressing the radioactive effluent monitoring program, mandating the related operating procedures and specifying procedures for future changes," appears to be that found in new Technical Specification 6.15 for Unit 2 of the plant, and new Technical Specification 6.13 for Unit 3. According to the Staff's issuance of the license amendments at issue, the provisions appear to be essentially identical, and read as follows:

RADIOLOGICAL EFFLUENT MONITORING AND OFFSITE DOSE CALCULATION MANUAL (REMODCM)

- a. The REMODCM shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the radiological environmental monitoring program; and
- b. The REMODCM shall also contain the radioactive effluent controls and radiological environmental monitoring activities and descriptions of the information that should be included in the Annual Radiological Environmental Operating, and Radioactive Effluent Release, reports required by Specification [6.9.1.6a or 6.9.1.3] and Specification [6.9.1.6b or 6.9.1.4] [having to do with an "Annual Radiological Environmental Operating Report" and a "Radioactive Effluent Release Report," also an annual report that is to include "a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit," *see* License Amendments at 6-18 (Unit 2), 6-19 (Unit 3)].

Licensee initiated changes to the REMODCM:

- a. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:
 - 1) sufficient information to support the change(s) together with the appropriate analyses or evaluations justifying the change(s), and
 - 2) a determination that the change(s) will maintain the level of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and Appendix I of 10 CFR 50, and not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations;
- b. Shall become effective after review and acceptance by SORC and the approval of the designated officer; and
- c. Shall be submitted to the Commission in the form of a complete, legible copy of the entire REMODCM as a part of or concurrent with the Radioactive Effluent Release Report for the period of the report in which any change in the REMODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

Memorandum to Atomic Safety and Licensing Board and All Parties from Jacob I. Zimmerman, Attached Amendment Nos. 250 and 188 for Millstone Units 2 and 3, respectively, at 6-24 of each amendment (Nov. 28, 2000). It is noted that the language of the new technical specifications is taken almost verbatim from Enclosure 3 to Generic Letter 89-01. It is also noted that the Staff, in the Safety Evaluation for Amendment Nos. 250 and 188, states that

(Continued)

During a telephone prehearing conference held December 7, 2000, the Board heard oral argument on the issues of standing and the admissibility of the contention in this case, and NRC and NNECO experts were also heard, over the objection of the Petitioners' Counsel, in an effort to clarify the issues in the case, *see* 10 C.F.R. § 2.752(a)(1). Mr. Joseph H. Besade, a member of CCAM who had previously worked at the Millstone plant and whose affidavit was attached to the Amended Petition, *see* Amended Petition at 13, Aff. of Joseph H. Besade (Oct. 26, 2000), also spoke briefly. This attempt at clarification was particularly appropriate, given what was somewhat obviously at that point a "genuine dispute" between the parties on the "material issue" of whether in fact the relocation of the technical specifications at issue would, as Petitioners claim, "open the door to increases in the type and amounts of effluents that may be released offsite [which will lead to] greater risk of radiation doses from the routine operations of the Millstone nuclear reactors," Amended Petition at 4, or would instead, as the Applicant declares, "not involve any change to plant operation, radiation monitoring, or radiological effluent releases," or, if future changes did occur, "cause [any] accidental releases." NNECO Answer to Petition at 12; NNECO Answer to Amended Petition at 3, 8, 12-13.

In response to the Petitioners' argument that the "procedural step of moving . . . technical specifications [is] related to serious health and safety issues," Tr. 21, and "concern[s] automatic protective devices [that are] barriers to prevent accidental release of radiological effluent," Tr. 27, Staff Counsel and the Staff's expert, health physicist Stephen Klementowicz, stated that the radiological effluent monitoring involved in the technical specifications at issue in this proceeding involves only "normal releases . . . very, very small amounts," "routine, low level effluent release monitoring," and that "[t]hese monitors only serve a monitoring function[, s]o if there was a reactor accident, these monitors don't do that . . . [t]hey do not prevent the severity of [a] reactor accident, nor do they mitigate the consequences and severity of [an] accident." *See* Tr. 90, 97-98. Other statements, however, made by or on behalf of both the Staff and the Applicant to counter

[Generic Letter 89-01] states that because programmatic controls on radiological effluents will remain in the TSs and the procedural details being relocated to the [REM]ODCM . . . do not meet any of the four criteria given above [referring the criteria found at 10 C.F.R. § 50.36(c)(2)(ii)(A)-(D)] for inclusion in the TSs, the staff considers that the requirements in 10 CFR 50.36a for TS on radiological effluents from nuclear power plants will continue to be met.

See Attach. to Nov. 28, 2000, Zimmerman Memorandum, at 3 [hereinafter Safety Evaluation]. It is not known whether there have been any supplements to Generic Letter 89-01, issued in 1989, addressing the four criteria of 10 C.F.R. § 50.36(c)(2)(ii)(A)-(D) that were promulgated in 1995, 60 Fed. Reg. 36,953-59, after having originally been proposed in two earlier versions in 1982 and 1987, and proposed in their final version in 1993 with the Commission's Final Policy Statement on Technical Specification Improvements for Nuclear Power Reactors. *See* 58 Fed. Reg. at 39,132. (The 1982 version had only two criteria, 47 Fed. Reg. 13,369 (Mar. 30, 1982), while there were three criteria in the 1987 version, 52 Fed. Reg. 3788 (Feb. 6, 1987).) Generic Letter 89-01, however, does not itself refer to the final four section 50.36(c)(2)(ii) criteria.

the allegations of the Petitioners, were not so unequivocal, as illustrated in the following discussion.

The Applicant's Counsel acknowledged that "a surveillance requirement [relating to a monitoring instrument] might conceivably be changed down the road," which, if something else failed and surveillance were somehow to become unduly lax, "because of the reduced surveillance, fails to pick up [a] release." Tr. 41-42. Although this was said to be very unlikely and to "really stretch[] credibility . . . given the nature of the instrumentation involved, . . . the existence of the effluent limit that will not change, [and] the control process that will exist on future changes," it was also acknowledged that an increased release of radiological effluent "that could lead to an immediate danger to public health or safety," as a result of such a failure to catch a release, could not be categorically discounted — "somebody might argue that that could occur." Tr. 43-44.¹¹ An example given of a possible future change to the radiological effluent monitoring was changing the surveillance interval for a monitor, or for checking a monitor. *See* Tr. 77. There have also been references to such possibilities constituting unreviewed or unresolved safety questions, *see* Tr. 39-40, 94, and that a change that would involve such a question would require NRC Staff approval. *See* Tr. 40.

The Staff's view as expressed at the December 7, 2000, prehearing conference was to the effect that the "bottom line" is that there could never be any changes as a result of the relocation of the technical specifications at issue in this proceeding that could ever result in any safety-significant event. In reaching this point,

¹¹ It is noted that Mr. Repka, who made the statement to the effect that such a possibility could not be categorically discounted, later clarified his response after Ms. Hodgdon, Counsel for the NRC Staff, noted that "[o]perating experience has shown to the contrary, that it doesn't need to be in tech specs," and stated, "I believe that the better answer might have been that if it will be possible after these tech specs are moved to the licensing control document, that it would have been possible before these tech specs were moved. It has nothing to do with this action." Tr. 92. Mr. Repka stated that he agreed with Ms. Hodgdon's response, that it was "exactly correct." *Id.* This was followed up by an attempt to clarify which sorts of things could be changed without a license amendment prior to any relocation of the technical specifications at issue herein, and which would require a license amendment, to which Ms. Hodgdon responded as follows:

Whatever is in the tech specs specifically, those details cannot be changed or could not be changed prior to this license amendment without a license amendment. However, just to stray a little bit from that, these Petitioners — the public would not have a right to intervene. They would have a right to notice. But since this has no off-site consequences, no hearing would be granted on these amendments dealing with small changes to the kind of details that should never have been in tech specs in the first place, as the Commission makes clear in the statement of considerations on 50.36. Tr. 93-94.

What is problematic in Counsel's statements is that they are conclusory in nature, like much of the discussion in this proceeding about the nature of the subject of the technical specifications at issue, with certain exceptions. As a result it is not clear what the basis is for the conclusion in effect drawn by the Applicant and the Staff, that there could *never* be any significant likelihood that changes in the monitoring instrumentation and surveillance requirements governed by the technical specifications at issue herein, of the sort that would require a license amendment prior to relocation of the relevant technical specifications but would not require an amendment after such relocation, could result in a failure to detect a higher-than-routine release as quickly as before, such that there could be a violation of a regulatory dose limit and harm to public health and safety. The fact that the monitoring instrumentation at issue is designed to monitor only low, routine levels of radiological effluents does not appear to lead inexorably to this conclusion.

NRC health physicist Stephen Klementowicz began by explaining the purpose of Generic Letter 89-01:

[I]ts purpose was not to change the dose criteria for effluents. It remains to be Appendix I to Part 50. . . . [but] it was not appropriate to have all of these details of the monitors and the surveillances and the calibrations in the tech specs. So the Commission said you can take out that level of detail. However, we maintained the overall dose controls, consistent with Appendix I to Part 50.

Tr. 96.

When asked what things could be changed in the future under the manual, Mr. Klementowicz responded that some setpoint levels (which generally include an “absolute high alarm point . . . consistent with 10 C.F.R. Part 20 [as well as] a lower setpoint that corresponds to the ALARA Appendix I to Part 50 value” and “a third setpoint for each . . . batch release that occurs”) could be changed, and also in effect agreed with Applicant Counsel’s statement above that a surveillance frequency, or how often an operator would check monitor readouts, could be changed. Tr. 102-03. In addition, he posed the possibility of a licensee deciding that they will “no longer monitor their units at release points” and making “that change in their [REM]ODCM through their own review process.” Tr. 106. Mr. Klementowicz pointed out that if this were done and the NRC discovered through inspection that the licensee “is still making effluent releases via that pathway, but deleted it from their [REM]ODCM, we would say that is a violation of regulations.” *Id.*

Notwithstanding the previous statements, Mr. Klementowicz still did not think that there could be any increases in effluent releases as a result of any such changes, because licensees are still required to conform with the regulatory dose limits, and “assuming a licensee conforms with their tech spec for the total dose, their setpoints could never exceed that value.” Tr. 104. Licensees can change setpoints that do not exceed the absolute high setpoint even with the technical specifications remaining in the license, according to Mr. Klementowicz, and there can be human error whether the requirements at issue are in the license technical specifications or in the manual. Therefore he did not believe that changes under the manual could lead to a greater likelihood of increased releases that could threaten public health and safety. If the licensee made an inappropriate change, according to Mr. Klementowicz, the NRC could issue a notice of violation and require the licensee to correct the situation. *See* Tr. 104-08.

Mr. Klementowicz stated that after the Three Mile Island accident the NRC ordered, in NUREG-0737, all licensees to install high-range monitors that monitor high amounts of radiation released from the plant. Tr. 98. This was necessary, according to Mr. Klementowicz, because “the low level routine monitors that were across the board in the industry were found to not be adequate to monitor high range releases[, so, pursuant to NUREG-0737,] there are two separate and distinct

classifications of radiation monitors.” Tr. 109.¹² Low radiation level monitors such as are involved with the technical specifications at issue will not register high levels of radiation, for reasons that are subject to many theories, according to Mr. Klementowicz. Therefore, plants were required to install monitors so that plants would “be able to follow an accident from a low range fully to high range.” Tr. 110. Mr. Klementowicz said that, “if there is a reactor accident,” the monitors that are addressed in the technical specifications at issue “will not change the course of events.” Tr. 97. He agreed, however, that “if [a] monitor alarms, . . . it alerts somebody that something unusual is happening, and that operator can take action to terminate the release.” Tr. 99. And he later stated that there are some trip functions in the low-level liquid release monitors that will terminate a release if it exceeds the high setpoint. Tr. 113. Petitioners’ Counsel also referred at the prehearing conference to a statement in the application (February 22, 2000, Request, Attachment 2, at 1) about trip functions “terminat[ing a] release prior to exceeding the limits of 10 CFR Part 20.” Tr. 21.

Because of time limitations on the December 7 telephone prehearing conference, some apparent inconsistencies, as illustrated in the previous paragraphs, were not completely explained or resolved, and one result of the decision of my colleagues is that these and other inconsistencies will not be clarified. For example, the statement in the Applicant’s February 22, 2000, Request that “approval of this amendment is needed by [August 31, 2000] to support the ongoing effort to eliminate Millstone Unit Nos. 2 and 3 dependence on the Millstone Unit No. 1 Stack Gas High Range Radiation Monitor,” highlighted by the Petitioners’ Counsel at the December prehearing conference, *see* Tr. 127-28, would seem on its face to contradict Mr. Klementowicz’s statement to the effect that high and low range monitors are “two separate and distinct classifications of radiation monitors.” Tr. 109.

Notwithstanding such inconsistencies, however, it is noted that the Applicant’s Counsel, with admirable candor, addressed what would appear to be at least one aspect of the nature of the monitors that are the subject of the technical specifications at issue in this proceeding when he stated, in response to a question concerning the nature of the relocated technical specifications and whether the monitoring they cover would catch an accidental or unusually high release, that “yes, these are radiation monitors so they would detect accidental normal or

¹² It is noted that the Transcript at page 109 mistakenly identifies the speaker of the quoted language, by attributing two successive statements to Judge Young, and omitting to indicate when Mr. Klementowicz actually began to speak during the first statement attributed to Judge Young. However, it is obvious from the words used that they were those of Mr. Klementowicz and not Judge Young.

abnormal releases.’’¹³ Tr. 86. From this, it would seem to follow that, to consider but one example of the type of change discussed above, changing surveillance schedules to allow for less frequent monitoring could possibly result in a failure to detect and address an accidental abnormal release of radiological effluent as quickly or effectively as on an unchanged, more frequent schedule.

The Petitioners have questioned whether the position of the NRC Staff is to the effect that routine radiological monitoring has no safety significance and that only design basis accidents or catastrophic incidents are deemed to have safety significance such that a hearing should be granted in a case involving relocation of technical specifications. Tr. 129-30. And indeed, in comparison to the reactor vessel material surveillance program withdrawal schedule at issue in *Perry I*, this case does involve a lower level of safety significance. NNECO’s Counsel referred to the radiological monitoring at issue as a “second tier component.”

¹³ In the interest of accuracy and context, the following excerpt from the transcript of the December 7, 2000, prehearing conference, from pages 85-86, is provided:

JUDGE YOUNG: That’s what I’m trying to understand. If we have a technical expert, what I would like to hear from him is if the nature of the technical specifications that are being moved are such that they could allow for changes in the monitoring methodology that — such that they could fail to catch a release, such that they could fail to catch a release that could lead to immediate public health and safety consequences.

MR. JOSHI: The answer to the question, actually if we make a change, is what Dave was saying before, will still — if we will make a change, we got to make sure that we are still within the regulation with the limits. So we cannot go beyond the limit.

JUDGE YOUNG: Right. But what I’m trying to understand is, are the things that you could make changes to the sort of monitoring and surveillance mechanisms and methodologies that are there to catch releases that might result from an accident?

I’m hearing Judge Moore say no. Is the answer no? Is that what you’re saying? That they are not of that nature?

MR. REPKA: That they would not address accidental releases?

JUDGE YOUNG: They are not of the sort that monitor — that provide monitoring that would catch an accidental or unusually high release?

JUDGE MOORE: I believe, Mr. Repka, I asked that question and you answered it that these systems involved with these tech specs do not do that.

JUDGE YOUNG: I thought — and I thought I heard you say, Mr. Repka, that it would be possible that they could do that. So that’s what I am trying to understand.

MR. REPKA: Well, I mean I think the answer has to be that, yes, these are radiation monitors so they would detect accidental normal or abnormal releases.

JUDGE KELBER: Let me try and straighten this out. Are we talking about redundant systems? In other words, are we talking about a system that monitors the equipment in the off-gas — let’s focus on the off-gases — that monitors the operation of the off-gas system, those technical specifications covering those systems are not of the current amendment, and also the radiation monitor which, of course, will detect an abnormal release. It seems to me we are talking about redundant systems.

MR. REPKA: I believe that is correct, Judge Kelber.

JUDGE KELBER: Well, then, the technical specifications covering one set of the redundant systems, I am not finding them in technical specifications called for in other parts of the redundant system are part of the technical amendment. Like the Perry license amendment.

MR. REPKA: Correct.

JUDGE KELBER: Thank you.

JUDGE YOUNG: While we are with Mr. Joshi, or Dr. Joshi, can you explain anything more about the monitoring methodologies, systems, that are part of the redundancy that Judge Kelber referred to, more specifically?

MR. JOSHI: No, I don’t have a specific answer at this point right now. I need to go back.

Tr. 41. The relevant area that appears to be in question in this proceeding is that area in which effluents that are not in the high range of possible effluent releases might still increase to the point that they would exceed the limits of Appendix I to 10 C.F.R. Part 50, resulting not from the sort of major accident that would produce high-range releases but rather from some other cause, such as a relatively minor accidental or other failure of equipment, accompanied by a failure to detect and correct as quickly the increased release, by virtue of changed surveillance schedules or setpoints (or placement of monitors at inappropriate release points) as well as failure of whatever redundant systems exist to detect and/or stop such “moderately excessive” releases. In this context, I turn now to the issue of standing.

Standing

I note first the principle that even “minor radiological exposure” can constitute adequate grounds for finding standing. See *North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), LBP-98-23, 48 NRC 157, 162 (1998), *vacated as moot*, CLI-98-24, 48 NRC 267 (1998); *Atlas Corp.* (Moab, Utah Facility), LBP-97-9, 45 NRC 414, 425 (1997), *aff’d*, CLI-97-8, 46 NRC 21 (1997); *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 70 (1996), *aff’d*, CLI-96-7, 43 NRC 235, 246-48 (1996); *General Public Utilities Nuclear Corp.* (Oyster Creek Nuclear Generating Station), LBP-96-23, 44 NRC 143, 158-59 (1996). The Petitioners have provided the affidavit of Joseph Besade, a member of CCAM, who lives approximately 2 miles from the Millstone Nuclear Power Station. See Amended Petition at 13.¹⁴ In their Amended Petition the Petitioners assert that, “[s]hould the amendment be granted, the membership of CCAM and STAR Foundation will suffer increased risk of hazard from radiological releases from Millstone Units 2 and 3 and consequent adverse health effects with no opportunity for comment or objection.” Amended Petition at 2.

In light of these assertions of the Petitioners, and the admissions of the Staff’s expert and the Applicant’s Counsel to the effect that it is possible that changes in provisions such as surveillance schedules could lead to possible delayed detection and correction of increased effluent releases, I find that there is the possibility in this case of at least “minor radiological exposure” that could result from future

¹⁴ Another affidavit, that of STAR member Christine Guglielmo, was submitted late, on November 8, 2000. NNECO and the Staff argue that Ms. Guglielmo’s affidavit should be rejected as untimely. On this issue, were this case to encompass further proceedings before this Board, I would be inclined to rule as argued by NNECO and the Staff. No good cause has been shown for the late filing of the affidavit, other than the statement that the cause of the lateness was a “communications error,” with no further explanation. Although the 10 C.F.R. § 2.714(a) lateness factors, relied upon by NNECO counsel, may not be directly applicable to supplements to petitions, looking to them for guidance would lead to conclusions that Mr. Besade’s participation in the proceeding, along with Counsel for both Petitioners, would likely sufficiently protect and represent Ms. Guglielmo’s interest, and that it is unlikely that her participation would assist measurably in developing a sound record.

such changes to the REMODCM after relocation of the technical specifications at issue to it from the license.

Moreover, Mr. Besade and the Petitioners allege that, as a result of relocating the technical specifications, “modifications to the instrumentation and surveillance mechanisms to monitor routine radioactive releases from Millstone Units 2 and 3 may thereby be effected without public notice and the opportunity for hearing.” Amended Petition at 2, 14. By raising their potential loss of future hearing rights, the Petitioners have overcome a significant initial hurdle with regard to their standing, given the “special” nature of such procedural rights. *See Lujan v. Defenders of Wildlife*, 504 U.S. 555, 572 n.7 (1992); *Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Unit 1)*, CLI-93-21, 38 NRC 87, 94 (1993) [hereinafter *Perry I*]. And if the procedural rights at issue in this proceeding are “designed to protect some threatened concrete interest . . . that is the ultimate basis of [the Petitioners’] standing,” then the Petitioners have met the test for standing in such circumstances, as enunciated in *Lujan*, *see* 504 U.S. at 573 n.8, and applied by the Commission in *Perry I*. *See Perry I*, CLI-93-21, 38 NRC at 94-96. I find that the possible exposure alleged by the Petitioners and illustrated in the above Overview constitutes such a “threatened concrete” injury.

In *Perry I* the Commission reversed the Licensing Board’s decision denying standing, in a context much like that in this case, involving the proposed relocation of part of certain technical specifications from the facility’s license to its updated safety analysis report (USAR). *Id.* at 89. The part to be moved was the reactor vessel material surveillance program withdrawal schedule. This was proposed in response to the NRC Staff’s encouragement in Generic Letter 91-01 that licensees seek license amendments to propose the removal of such withdrawal schedules from their technical specifications. *Id.* The petitioners in *Perry I* asserted that moving the withdrawal schedule would violate their right to notice and opportunity for a hearing on any future changes to the schedule. The Licensing Board found any such injury to be “speculative in view of the uncertainty over whether changes will ever be made to the withdrawal schedule,” and also found no substantive underlying concrete injury that would confer standing. *Id.* at 91-92.

The Commission in *Perry I* concluded that the petitioners therein had satisfied threshold standing requirements, finding that “[t]he loss of the rights to notice, opportunity for a hearing, and opportunity for judicial review, constitutes a discrete and palpable — not hypothetical — injury . . . linked to *this* amendment.” *Id.* at 93. The Commission in reaching its decision cited *Lujan*, quoting the Supreme Court’s language therein that procedural rights are “special,” and that the “person who has been accorded a procedural right to protect his concrete interests can assert that right without meeting all the normal standards for redressability and immediacy.” *Id.* at 94 n.9 (citing *Lujan*, 504 U.S. at 572 n.7). The Commission noted that the Petitioners in *Perry I* had not provided as “cogent specification of their ultimate concerns” before the Licensing Board as before the Commission,

where they depicted a reactor vessel embrittlement scenario. *Perry I*, CLI-93-21, 38 NRC at 95. The Commission found, however, that the Petitioners had in their pleadings before the Licensing Board “sufficiently presented a link between the loss of procedural opportunities under section 189a and their asserted health and safety interests,” noting the Petitioners’ reference to the removal of “safety-significant” material from the operating license, and their expression of an interest in the “safe operation” of the Perry plant “given their residence near the facility.” *Id.*

“Clearly,” concluded the Commission with regard to the Petitioners in *Perry I*, “they seek to vindicate the loss of an alleged procedural right that relates to a potential substantive injury — radiological harm to them as residents in the plant’s vicinity. The Petitioners’ radiological safety concerns unquestionably fall within the zone of interests regulated and protected by the Atomic Energy Act.” *Id.* (footnote omitted). Noting that a member of the Petitioner lived within 15 miles of the Perry plant, sufficient to establish injury for standing if the proposed action involves an “obvious potential for offsite consequences,” the Commission stated it could not conclude

that no potential for offsite consequences is posed by the loss of notice and opportunity for a hearing to challenge future changes to the withdrawal schedule. The material condition of the plant’s reactor vessel obviously bears on the health and safety of those members of the public who reside in the plant’s vicinity.

Id. at 95-96 (citation omitted).

The Commission in *Perry I* also cited a Licensing Board’s decision in another, similar case, also involving the Perry Nuclear Power Plant and the proposed deletion of “cycle-specific parameter limits from the . . . technical specifications,” in which the board had found standing and an admissible contention. *Id.* at 93 (citing *Perry A*, LBP-90-25, 32 NRC 21). The Commission in *Perry I* found,

Similarly, we reject the . . . claim that the alleged procedural injury is speculative. . . . Although future changes to the withdrawal schedule are by no means certain, the likelihood of changes cannot be discounted, particularly when a goal of the license amendment is to simplify the required procedural steps for such changes.

Perry I, CLI-93-21, 38 NRC at 93-94. The Commission rejected the *Perry I* Licensing Board’s “compartmentalized reading of the Petitioners’ pleadings,” and stated:

[A] fair reading of the Petitioners’ claims indicates that, at bottom, [they] fear that if they are deprived of the opportunity to challenge future proposals to alter the withdrawal schedule, the surveillance of the Perry reactor vessel may become lax and prevent detection of a weakened

reactor vessel, and ultimately result in an accidental release of radioactive fission products into the environment if the vessel should fail.

Id. at 94.

As in *Perry I*, “[a]lthough future changes to the [radiological effluent monitoring instrumentation] are by no means certain, the likelihood of changes cannot be discounted, particularly when a goal of the license amendment is to [‘reduce costs by allowing NNECO to change the requirements without necessarily amending the license’].” *See* NNECO Request to Amend at 1 (Feb. 22, 2000). And as in *Perry I*, a

fair reading of the Petitioners’ claims indicates that, at bottom, [they] fear that if they are deprived of the opportunity to challenge future proposals to alter the [radiological effluent monitoring instrumentation], the surveillance of [routine radiological releases] may become lax and prevent detection of [increased releases] of radioactive fission products into the environment [that could endanger their health and safety].

See Perry I, CLI-93-21, 38 NRC at 94.

The Petitioners have raised health and safety issues related to alleged future changes that will allegedly lead to increased radiological effluent releases. According to the information recounted in the above Overview, changes to monitoring schedules and to setpoint calibrations are possible, and Mr. Klementowicz also posited the possibility that a licensee could decide to “no longer monitor their units at release points” and “make that change in their [REM]ODCM through their own review process.” Tr. 106. As indicated above, it follows that such changes could result in any accidental or otherwise abnormal release of radiological effluents that occurred (of the sort the monitors are there to detect) not being detected or corrected as quickly by human operators who check the monitors and can take action to prevent any further excessive release. And the Petitioners have an expert who can present evidence on the health effects of such relatively low-level radiation. Whether the Petitioners’ evidence would lead to a ruling in their favor in a proceeding on the merits of this case is not certain, but such certainty is not required at this stage of the proceedings; rather, the standard is whether there is a “realistic threat” of injury. *See Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 74 (1994).

I find that a “realistic threat” of increased effluent releases of the sort alleged by the Petitioners has been shown, *see id.*, and that the Petitioners herein have, as in *Perry I*, “alleged a particularized procedural injury that [is] fairly traceable to the challenged amendment and . . . likely to be redressed by a favorable decision.” *Id.* at 75. “Although the licensee’s continued adherence to [regulatory dose limits] is required by Commission regulations, this change [would eliminate] the opportunity for a hearing in the event of future changes to the [radiological

effluent monitoring instrumentation].” *Id.*¹⁵ Given that even “minor radiological exposure” can constitute adequate grounds for finding standing, *see Seabrook*, LBP-98-23, 48 NRC at 162; *Atlas*, LBP-97-9, 45 NRC at 425; *Yankee Atomic*, LBP-96-2, 43 NRC at 70, and CLI-96-7, 43 NRC at 246-48; *Oyster Creek*, LBP-96-23, 44 NRC at 158, and construing the petition in the Petitioners’ favor, *see, e.g., Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995); *Seabrook*, LBP-98-23, 48 NRC at 162; *Atlas*, LBP-97-9, 45 NRC at 424, I cannot, at this stage in deciding threshold standing, conclude that

no potential for offsite consequences is posed by the loss of notice and opportunity for a hearing to challenge future changes to the [radiological effluent monitoring instrumentation that could potentially result in failure to detect or correct as quickly increased radiological releases into the environment, which] obviously bears on the health and safety of those members of the public who reside in the plant’s vicinity.

See Perry I, CLI-93-21, 38 NRC at 95-96; *see also Yankee Atomic*, CLI-96-7, 43 NRC at 248.

Based upon the preceding analysis, I conclude that Petitioner CCAM on behalf of its members has demonstrated standing in this proceeding under 10 C.F.R. § 2.714(d)(1) and the authority of *Perry I*.

Admissibility of Contention

With regard to the admissibility of the Petitioners’ contention, my colleagues fault the Petitioners for failing to cite a specific statutory or regulatory requirement that the technical specifications NNECO seeks to relocate to the REMODCM must remain in the operating licenses for Millstone Units 2 and 3; based on this absence of a citation to a statute or regulation, they find that the Petitioners fail to provide sufficient information to show that a genuine dispute exists with the Applicant on a material issue of law or fact, as required by 10 C.F.R. § 2.714(b)(2)(iii). In addition, my colleagues find that the Petitioners fail to provide references to documents or other sources, or adequate support under section 2.714(b)(2)(i), (ii), for their claim that the license amendment at issue will increase the types and amounts of effluents released off site, which in effect nullifies, for my colleagues, the claim that increased effluents will cause increased risk of cancer and other adverse health effects. Finally, my colleagues note that the Petitioners fail to include with their contention any reference to the specific

¹⁵The actual language used by the Commission in the *Sequoyah* case, in which the Commission explained its earlier ruling in *Perry I*, was: “Although the licensee’s continued adherence to the withdrawal schedule is required by Commission regulations, this change eliminated the opportunity for a hearing in the event of future changes to the withdrawal schedule.”

portions of the amendment application they dispute or any reasons for each dispute, as required by section 2.714(b)(2)(iii), and that neither the Petitioners' contention nor their proffered expert's Declaration specify whether the increased effluent releases underlying the adverse health effects they allege will be within or violate the Commission's regulation on such effluents — and thus, if the former, their assertion represents an improper challenge to the Commission's regulations, or, if the latter and the Petitioners are asserting that NNECO will intentionally violate the Commission's regulatory dose limits in the future, they have failed to support such a claim and no such conclusion may be presumed.

I approach the issue of the admissibility of the Petitioners' contention by looking first to the contention requirements themselves and to the Commission's Statement of Considerations that accompanied the requirements when they were adopted in their present form in 1989. The relevant portions of 10 C.F.R. § 2.714(b) state:

(2) Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner shall provide the following information with respect to each contention:

- (i) A brief explanation of the bases of the contention.
- (ii) A concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing, together with references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion.
- (iii) Sufficient information (which may include information pursuant to paragraphs (b)(2)(i) and (ii) of this section) to show that a genuine dispute exists with the applicant on a material issue of law or fact. This showing must include references to the 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

In addition, section 2.714(d) provides in relevant part:

. . . [A] ruling body or officer shall, in ruling on—

. . . .

(2) The admissibility of a contention, refuse to admit a contention if:

- (i) The contention and supporting material fail to satisfy the requirements of paragraph (b)(2) of this section; or
- (ii) The contention, if proven, would be of no consequence in the proceeding because it would not entitle petitioner to relief.

The Statement of Considerations [hereinafter SOC] for the 1989 amendments to the contention requirements, which explains the Commission's basis for, and interpretation of, the regulatory language quoted above, provides useful guidance on the proper application of the requirements — guidance which is entitled to “special weight.” *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 290-91 (1988), *review declined*, CLI-88-11,

28 NRC 603 (1988). In the SOC, 54 Fed. Reg. 33,168 (Aug. 11, 1989), the Commission, in response to comments it had received on the proposed rule, noted that the requirement at subsection (b)(ii) above “*does not call upon the intervenor to make its case at this stage of the proceeding, but rather to indicate what facts or expert opinions, be it one fact or opinion or many, of which it is aware at that point in time which provide the basis for its contention.*” *Id.* at 33,170 (emphasis added). Further, “[i]n addition to providing a statement of facts and sources, the new rule will also require intervenors to submit with the list of contentions *sufficient information (which may include the known significant facts described above) to show that a genuine dispute exists* between the petitioner and the applicant or the licensee *on a material issue of law or fact.* This will require the intervenor to read the pertinent portions of the license application. . . .” *Id.* at 33,170 (emphasis added).

The Commission in the SOC quoted the following language from *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 NRC 460, 468 (1982), *vacated in part on other grounds*, CLI-83-19, 17 NRC 1041 (1983):

[A]n intervention petitioner has an ironclad obligation to examine the publicly available documentary material pertaining to the facility in question with sufficient care to enable the petitioner to uncover any information that could serve as the foundation for a specific contention. Neither Section 189a of the Atomic Energy Act nor § 2.714 of the Rules of Practice permits the filing of a *vague, unparticularized contention*, followed by an endeavor to flesh it out through discovery against the applicant or Staff.

54 Fed. Reg. at 33,170 (emphasis added). Continuing, the Commission’s SOC contains the following statements:

The new rule will require that a petitioner include in its submission *some alleged fact or facts in support of its position sufficient to indicate that a genuine issue of material fact or law exists.* . . .

. . . [T]he rule will require that before a contention is admitted the intervenor have *some factual basis* for its position and *that there exists a genuine dispute* between it and the applicant. It is true that *this will preclude a contention from being admitted where an intervenor has no facts to support its position* . . . The Commission believes it is a reasonable requirement that an intervenor be able to identify *some facts* at the time it proposes a contention to indicate that a dispute exists between it and the applicant on a material issue [and that it] *read the portions of the application . . . that address the issues that are of concern* to it and *demonstrate that a dispute exists* between it and the applicant on a material issue of fact or law.

. . . .
. . . [T]he presiding officer shall not admit a contention to the proceeding if the intervenor fails to set forth the contention with *reasonable specificity* or establish a basis for the contention. In addition, the contention will be dismissed if the intervenor sets forth *no* facts or expert opinion on which it intends to rely to prove its contention, or if the contention fails to establish that a genuine dispute exists between the intervenor and the applicant . . . [T]he use of this standard for the admission of contentions had been supported by the Federal courts in numerous instances. *Vermont Yankee Nuclear Power Corp. v. NRC*, 435 U.S. 519 (1978); *Independent*

Bankers Ass'n v. Board of Governors, 516 F.2d 1206 (D.C. Cir. 1975); *Connecticut Bankers Ass'n v. Board of Governors*, 627 F.2d 245 (D.C. Cir. 1980). The court in the latter case emphasized that “a protestant does not become entitled to an evidentiary hearing merely on request, or on a bald or conclusory allegation that such a dispute exists. *The protestant must make a minimal showing that material facts are in dispute, thereby demonstrating that an ‘inquiry in depth’ is appropriate.*” 627 F.2d at 251. The Commission’s rule is consistent with these decisions.

... The Commission expects that at the contention filing stage the factual support necessary to show that a genuine dispute exists *need not be in affidavit or formal evidentiary form and need not be of the quality necessary to withstand a summary disposition motion*. At the summary disposition stage the parties will likely have completed discovery and essentially will have developed the evidentiary support for their positions on a contention. Accordingly, there is much less likelihood that substantial new information will be developed by the parties before the hearing. Therefore, the quality of the evidentiary support provided in affidavits at the summary disposition stage is expected to be of a higher level than at the contention filing stage.

Id. at 33,170-71 (emphasis added).

In the *Oconee* case, cited by my colleagues, the Commission stated that Petitioners

must develop a fact-based argument that actually and specifically challenges the application. . . . [A] contention “that fails directly to controvert the license application . . . is subject to dismissal.” . . . Moreover, . . . it is not unreasonable to expect a petitioner to provide additional information corroborating the existence of an actual safety problem. Documents, expert opinion, *or* at least a fact-based argument are necessary.

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 341-42 (1999) (emphasis added). Continuing, the Commission stated:

It is surely legitimate for the Commission to screen out contentions of doubtful worth and to avoid starting down the path toward a hearing at the behest of Petitioners who themselves have no particular expertise — or expert assistance — and no particularized grievance, but are hoping something will turn up later as a result of NRC Staff work.

Id. at 342.

The Petitioners in this case argue that there will be changes in the radiological surveillance and monitoring instrumentation covered by the technical specifications at issue, which will result in increased radiological effluents, which will in turn cause health problems. They have not “made their case,” but, as indicated in the SOC for the contention rule, are not required to do so. Based upon the analysis that follows, I find they have provided sufficient information to show that a genuine dispute exists, specifically asserting that future changes will result in increases in radiological effluents that could harm their health, which is directly contrary to the position of the Applicant. Although they are not clear on the extent of such alleged increases, during the prehearing conference, after

hesitating to “venture quite so far” as to speculate into the future and stating that the Petitioners’ position is that the technical specifications should not be removed so that “then we shouldn’t have to worry about the next step, about increased risk of actual radiological effluent emissions,” Petitioners’ Counsel responded to the question whether the Petitioners were arguing that changes in surveillance monitoring mechanisms and methods could lead to releases that would violate the limits set in the rules and in Appendix I, by stating, “Certainly,” and that the Petitioners were concerned with both “routine permissible releases” and “impermissible accidental releases.” Tr. 61-62, 67, 69.¹⁶

It is also recognized that the Petitioners have not specified which particular parts of the amendment request or which particular technical specifications at issue will result in the changes they allege, but make their allegations with regard to the complete amendment request. Contrary to my colleagues, however, I find it to be evident that the various interrelated parts of the relocated technical specifications at issue work together as a whole, such that the whole application is placed at issue, an approach I do not find to be foreclosed under section 2.714(b)(2)(iii). The Petitioners are clearly challenging the relocation of all the technical specifications at issue out of the Applicant’s operating licenses for Units 2 and 3. And the Petitioners give reasons for their dispute with the Applicant over this relocation.

The Petitioners offer an expert in radiation and health issues — only one expert at this point, but one is enough under the rule as interpreted in the Commission’s SOC. In his Declaration, incorporated into the Petitioners’ contention, this expert makes “references to . . . specific sources and documents,” *see* 10 C.F.R. § 2.714(b)(2)(ii), including the Applicant’s official reports of radiological effluent, epidemiological records, and various studies. Amended Petition at 5-7 (attached Mangano Decl.). From his Declaration, it appears Mr. Mangano may hold some opinions that might be viewed as somewhat unorthodox, but the merits of these views are not at issue at this stage in the proceedings,¹⁷ absent a finding under section 2.714(d)(2)(ii) that “the contention, if proven, would be of

¹⁶To the degree the Petitioners challenge releases that would be within relevant regulatory limits, I agree with my colleagues that this would be challenging the regulation, which is not permissible in a proceeding such as this, and evidence would not be admitted on this issue were a hearing to be held. However, I do not find that it follows from alleging increased releases in violation of the rule that these would necessarily have to be intentional. It is not clear from the face of the petition whether the increased radiological effluents the Petitioners allege would violate regulatory requirements, but neither is this excluded, nor are intentional or unintentional increases. And some clarification, as indicated in the text, was provided at the prehearing conference. In any event, there is no requirement in the contention rule or SOC that a contention include a specific allegation or citation of a regulatory violation, and the lack of this in the Petitioners’ contention does not subtract significantly from the basic logic of the contention, which, as I indicate in the text, is fairly straightforward and self-evident.

¹⁷*See* SOC for the new contention rule, 54 Fed. Reg. at 33,171, where the Commission notes that language in a previous version of the proposed rule, to the effect that a presiding officer was to refuse to admit a contention where “[i]t appears unlikely that petitioner can prove a set of facts in support of its contention,” was deleted from the final rule in response to comments that this would suggest that the presiding officer is to prejudge the merits of a contention, because the Commission “recognize[d] the potential ambiguity of the proposed phrasing.”

no consequence in the proceeding because it would not entitle the petitioner to relief,” which I do not find to be the case — if all elements of the contention were proven, the Petitioners would be entitled to relief.

With regard to the Petitioners’ “claims upon which Mr. Mangano’s allegations rest (i.e., the amendment will lower standards of radiological effluent monitoring and increase offsite effluent releases),” *see* Majority Opinion *supra* section II.B, the Petitioners have referred to the Applicant’s own statements (which refer to “changes [that] will not significantly increase the types and amounts of effluents that may be released offsite,” *see* Amended Petition at 4, referring to NNECO Request to Amend at 3), to the relocation of the technical specifications at issue “in the era of deregulation and electric restructuring” leading to changes that will “lower standards,” and to “record levels” and “excessive levels” of radiological effluents from the Millstone reactors. Amended Petition at 3-4. In addition, the Petitioners offer the fact, undisputed in NNECO’s Answer, that the Applicant pleaded guilty in the U.S. District Court for the District of Connecticut on September 25, 1999, to felonies under the Atomic Energy Act, “including its submission of falsified records to the [NRC].” Amended Petition at 5. And since changes under the REMODCM are required to be documented and reported to the NRC, *see supra* note 10, there would appear to be an arguable “direct and obvious relationship between the character issue [of the guilty plea to submission of falsified records] and the licensing action in dispute” in this proceeding, sufficient for this character issue to be considered in assessing the probability of future changes that might lead to increased releases of effluents that might violate regulatory limits, which changes are required to be recorded and reported. *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 189-90 (1999); *see also Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 120 (1995); *Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), CLI-93-16, 38 NRC 25, 30-32 (1993).

Although the Petitioners’ contention is no doubt minimal in some particulars, it is not altogether devoid of a logic that is at least arguable to the extent necessary under the contention requirements and the Commission’s SOC on them. As indicated above in the context of standing, the following adaptation of the Commission’s language from *Perry I* illustrates the rather straightforward, self-evident nature of this logic, in any context:

[A] fair reading of the Petitioners’ claims indicates that, at bottom, [they] fear that if they are deprived of the opportunity to challenge future proposals to alter the [radiological effluent monitoring instrumentation], the surveillance of [routine radiological releases] may become lax and prevent detection of [increased releases] of radioactive fission products into the environment [that could endanger their health and safety].

Perry I, CLI-93-21, 38 NRC at 94. To support their claims, the Petitioners in their contention offer “some facts and expert opinion,” along with references to sources and documents of which the Petitioners are aware and on which they intend to rely to establish the facts they allege, and sufficient information to show that a genuine dispute exists with regard to material facts. It sets forth a basis that is “reasonably specific” and is not “vague and unparticularized,” and the Petitioners do not rely on the possibility that the NRC Staff will “turn up something later,” as the petitioners in *Oconee* did. See 54 Fed. Reg. at 33,170-71; *Oconee*, CLI-99-11, 49 NRC at 342.

Moreover, it is evident from the information gleaned at the prehearing conference and summarized in the above Overview, and from the Applicant’s own statements, that the relocation of the technical specifications at issue will very likely result in changes to the radiological surveillance and monitoring instrumentation — which “will reduce costs by allowing NNECO to change the requirements without necessarily amending the license.” See NNECO Request to Amend at 1 (Feb. 22, 2000). And these changes could indeed possibly, according to representatives of both NNECO and the Staff, result in any accidental or abnormal increased releases of radiological effluents of the sort the monitors are designed to detect not being detected or corrected as quickly as before the technical specifications at issue were relocated.

It is, of course, preferable in a case such as this, involving somewhat complex issues, to present a much more specific contention. On the other hand, the uncertain nature of the universe of possible future changes that might be undertaken inherently limits to some degree the level of specificity possible in describing exactly how such changes might occur. Relocation of the technical specifications at issue, which as Mr. Klementowicz observed involve a high level of detail, opens up a whole “one-step-removed” area of possible future changes that are necessarily uncertain at the present time. The *Perry* cases illustrate some of the complexities involved in cases in which technical specifications are proposed to be relocated out of a license — in neither was it a quick or direct route through, among other things, consideration of the “nature and significance” of the technical specifications at issue, to the eventual outcome.

With regard to relocation of technical specifications generally, in *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315 (1996) (hereinafter *Perry II*), the Commission, in deciding an appeal from a ruling on the merits in the same case as *Perry I*, discussed the general policy that led to the license amendment request in that case (and in all cases involving applications to amend licenses by relocating technical specifications, including the instant case), as follows:

By the early 1980s, the NRC Staff concluded that the burgeoning number of items commonly included in standard technical specifications was both diverting Staff and licensee

attention from the most significant safety requirements and unnecessarily burdening agency and industry resources with a severalfold increase in license amendment applications. To remedy this trend, the Staff initiated a Technical Specifications Improvement Project [citing 58 Fed. Reg. 39,132, 39,133 (July 22, 1993)]. The project resulted in a policy to limit technical specifications to those items deemed most important to safety [citing *id.* at 39,135; *see also* 60 Fed. Reg. 36,953, 36,957-58 (July 19, 1995)].

As part of the new policy to streamline and improve technical specifications, the NRC Staff over the past several years has been identifying which items can be removed — without safety consequences — from the standard technical specifications. Items so identified can be transferred to the licensee’s updated safety analysis report or some other licensee-controlled document.

Perry II, CLI-96-13, 44 NRC at 318. The Commission went on to note that “[i]n late 1990, the Staff concluded that the material specimen withdrawal schedule could be moved from the standard technical specifications to the licensee’s updated safety analysis report.” *Id.* at 318-19. Just as Generic Letter 89-01 encouraged the transfer of the monitoring instrumentation technical specifications in this case, Generic Letter 91-01 encouraged the transfer of the technical specifications containing the material specimen withdrawal schedule to the licensee’s updated safety analysis report in *Perry II*, presumably because the Staff believed, as with Generic Letter 89-01, that they could be removed from the license “without safety consequences.” *Id.*

In *Perry I*, the Commission had remanded the case to the Board for further proceedings to “resolve[], subject to our rules of practice on the admission and litigation of contentions, whether the removal of the withdrawal schedule from the technical specifications is indeed an unlawful act.” *Perry I*, CLI-93-21, 38 NRC at 96. The Licensing Board had then, addressing the intervenors’ arguments that the only effect of the amendment relocating the technical specifications at issue was “to remove the public from the process [of future changes to the material surveillance specimen withdrawal schedule] in violation of section 189a” of the Atomic Energy Act and “that the withdrawal schedule [was a material license issuance decision that would require a hearing under section 189a],” ruled in favor of the intervenors in that case. *See Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), LBP-95-17, 42 NRC 137, 139, 141 (1995). The Board found that, because it would require NRC approval, any future change to the material specimen withdrawal schedule would be a *de facto* license amendment, thus entitling the Intervenor to notice and an opportunity for hearing under section 189a in the event of any future change to the withdrawal schedule. *Id.* at 149.

The Commission in *Perry II* reversed, finding that not all agency approvals granted to licensees constitute license amendments that would trigger section 189a hearing rights. The Commission’s analysis was based instead on whether an NRC approval grants a licensee any “greater operating authority”; the “key

consideration,” arising from caselaw on the point, is whether the agency action supplements the existing operating authority prescribed in the license. *Perry II*, CLI-96-13, 44 NRC at 326-29 (citing *Kelley v. Selin*, 42 F.3d 1501, 1515 (6th Cir. 1995), *cert. denied*, 515 U.S. 1129 (1995); *Citizens Awareness Network, Inc. v. NRC*, 59 F.3d 284, 295 (1st Cir. 1995); *In re Three Mile Island Alert, Inc.*, 771 F.2d 720, 729-30 (3d Cir. 1985), *cert. denied*, 475 U.S. 1082 (1986); *San Luis Obispo Mothers for Peace v. NRC*, 751 F.2d 1287, 1314-15 (D.C. Cir. 1984), *reh’g en banc on other grounds*, 789 F.2d 26 (1986), *cert. denied*, 479 U.S. 923 (1986). The Commission concluded that, since any changes to the material specimen withdrawal schedule that conformed to a standard of the American Society for Testing and Materials [hereinafter ASTM standard], which was referenced in Appendix H to 10 C.F.R. Part 50, would “not alter the Perry license [or] permit the Licensee to operate in any greater capacity than the original license prescribe[d],” and the Licensee was not authorized to do anything other than conform to the ASTM standard, no license modification or amendment was involved that would give the right to a hearing under section 189a. *Perry II*, CLI-96-13, 44 NRC at 327-29.¹⁸

In this case it is argued that there can be no changes that would result in any increases in effluents that would violate any regulatory limits, because the Applicant must still assure that it complies with the requirements and dose limits set forth at 10 C.F.R. § 50.59, Parts 20 and 50, and Appendix I to Part 50, and with dose rates and limits that will remain in the technical specifications. See NNECO Answer to Amended Petition at 9, 13; Staff Response to Amended Petition at 6, 8.¹⁹ And further, in response to questioning by Judge Moore during

¹⁸The Commission also noted that the intervenors “explicitly did not contest the transfer of the schedule to the Perry USAR [updated safety analysis report]”; that “there is no statutory or regulatory requirement that every operational detail listed in the USAR be subject to a technical specification” (citing *Portland General Electric Co. (Trojan Nuclear Plant)*, ALAB-531, 9 NRC 263, 273 (1979)); and that “[c]onfirming compliance with a self-implementing, detailed, industry standard does not call into play the various common reasons for requiring an adjudicatory hearing under Subpart G of 10 C.F.R. Part 2, such as the need to weigh various parties’ observations or the utility of cross-examination.” *Perry II*, CLI-96-13, 44 NRC at 328, 330. However, the Commission’s analysis was primarily directed to the issue of the “key consideration” of whether an agency action would “supplement” the existing operating authority prescribed in the license” and thereby bring into play section 189a hearing rights. *Id.* at 329.

¹⁹Section 50.59 defines the criteria and circumstances under which a licensee may make changes in a facility or its procedures (one of which is that “[a] change to the technical specifications incorporated in the license is not required,” 10 C.F.R. § 50.59(c)(1)(i)). Part 20, “Standards for Protection Against Radiation,” includes among other things various dose limits, precautionary procedures, and record and reporting requirements. Appendix I to Part 50 sets forth “Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion ‘As Low As Is Reasonably Achievable’ for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents.” Appendix I provides in section I that “levels of radioactive material in effluents to unrestricted areas [are to be kept] as low as practicable.” Appendix I’s numerical guides, at sections II.A and B, provide that

[t]he calculated annual total quantity of all radioactive material above background to be released . . . will not result in an estimated annual dose or dose commitment from liquid effluents for any individual in an unrestricted area from all pathways of exposure in excess of 3 millirems to the total body or 10 millirems to any organ

(Continued)

the prehearing conference, both NNECO and the Staff stated that relocation of the technical specifications at issue will not give the Applicant any “greater operating authority.” Counsel for the Petitioners, on the other hand, responded that such relocation “certainly does, or at least it gives [the Applicant] greater potential of exercising a greater operational authority.” Tr. 124.

Approaching this issue from the standpoint of what would actually be involved in any decision to make any change, for example, to a surveillance frequency, a setpoint, or a monitoring point, under new technical specifications 6.15 for Unit 2 and 6.13 for Unit 3 any such change would require that a determination be made and documented that the change would not result in any failure to assure compliance with relevant regulatory provisions, and the Applicant must document and record “sufficient information to support the change(s) together with the appropriate analyses or evaluation justifying the change(s).” *See supra* note 10. Thus, in contrast to the ASTM standard, which in *Perry II* “establishe[d] specific technical criteria for determining where in the reactor vessel to place surveillance capsules, how many capsules should be used, and how often capsules should be removed for testing,” “provide[d] delineated parameters for Cleveland Electric to use in calculating an appropriate withdrawal schedule,” and was a “self-implementing, detailed, industry standard,” *see Perry II*, CLI-96-13, 44 NRC at 328, 330, the determinations required for making future changes in this case appear to involve significant discretion and judgment — discretion and judgment that NNECO was not previously authorized in making changes to surveillance schedules, setpoints, and monitoring points, when the specific requirements for them were contained in technical specifications in the license. And thus it would appear that relocating the technical specifications at issue would arguably “‘supplement’ the existing operating authority” of NNECO, at least to the extent of authorizing it to exercise significantly increased discretion in matters that were previously conditioned on requesting and being granted a license amendment. *See Perry II*, CLI-96-13, 44 NRC at 326-29.

The Commission in *Perry II* found, as indicated above, that the operating authority of the licensee therein would not be supplemented through any future changes to the material specimen withdrawal schedule, that such changes would not therefore constitute license amendments, and that the intervenors were

and that

[t]he calculated annual total quantity of all radioactive material above background to be released . . . will not result in an estimated annual air dose from gaseous effluents at any location near ground level which could be occupied by individuals in unrestricted areas in excess of 10 millirads for gamma radiation or 20 millirads for beta radiation,

but that the Commission may specify a lower quantity to be released to the atmosphere if it appears that the previous design objective “is likely to result in an estimated annual external dose from gaseous effluents to any individual in an unrestricted area in excess of 5 millirems to the total body.” Also, under section IV.A, if the quantity of radioactive material actually released during any calendar quarter is such that the resulting exposure would exceed one-half the design objective annual exposure, an investigation and certain corrective measures are to be taken.

therefore not deprived of any section 189a hearing rights. Near the end of its decision, the Commission included the following language, also quoted above by my colleagues in section II.B of its opinion:

If the Intervenor believed that the nature and significance of the material specimen withdrawal schedule was such that it needed to remain in the Perry technical specifications — as a specific term of the Perry license — the Intervenor could have raised that argument in this proceeding. They instead concurred with the NRC Staff that there is no statutory or regulatory requirement that the withdrawal schedule remain in the Perry license.

Perry II, CLI-96-13, 44 NRC at 329.

The Petitioners herein clearly believe and have themselves stated, with no help from the Licensing Board, that the nature and significance of the radiological effluent surveillance and monitoring instrumentation technical specifications are such that they need to remain in NNECO's operating license. They provide a specific statement of the mixed issue of law and fact they raise, to the effect that relocating the technical specifications at issue "will deprive [them] of notice of proposed changes . . . of the opportunity for hearing and to comment and object to changes, which can only be projected to lower standards of radiological effluent monitoring . . . [and expose the public] to greater risk of radiation doses" They provide a brief explanation of the bases for the contention, including, as indicated above, the references to future changes, past record levels of effluents, the Applicant's guilty plea, and Mr. Mangano's evidence relating to health and safety effects of increased effluents. Amended Petition at 3-7. And they provide a concise statement of the alleged facts and expert opinion on which they rely, including references to sources of which they are aware and intend to rely.

My colleagues find this insufficient to show that a genuine dispute exists with the Applicant on a material issue of law or fact, concluding from the language quoted above that "the Commission was merely using a shorthand expression for the required explanation of the nexus between the relocated material and 10 C.F.R. §§ 50.36 or 50.36a — the Commission's regulations detailing the contents of a plant's technical specification." See Majority Opinion *supra* section II.B.

Of course, as suggested by my colleagues, if there is a regulatory requirement under section 50.36 or 50.36a that a technical specification remain in a license, then removing and relocating it would be "unlawful." It is noted in this regard that the Commission left the fourth criterion in section 50.36 ("[a] structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety," 10 C.F.R. § 50.36(c)(2)(ii)(D)) open-ended, stating in response to a commenter who had suggested limiting the criterion to specific items, as follows:

The Commission believes this is a more appropriate means to define how Criterion 4 will be used in practice, rather than to limit the structures, systems, and components captured by

Criterion 4 to those items important to risk-significant sequences as defined in Generic Letter 88-20, Appendix 2, and reported in licensees' IPE [individual plant examination] reports. The Commission believes that this process will provide the NRC staff and the industry with additional risk insights, beyond those identified through the IPE program.

Continuing, the Commission observed:

The same commenter said that the operating experience portion of the fourth criterion should be deleted because it is subjective and because no equipment would satisfy only that portion of the fourth criterion and none of the other criteria.

While operating experience is an important part of PRA [probabilistic risk assessment], not all PRA models are sophisticated enough to capture all operating experience. The Commission believes that operating experience can play an important role in determining the safety significance of structures, systems, and components and that there will be no adverse impact by including operating experience as part of Criterion 4.

60 Fed. Reg. at 36,956. The Commission also noted that

this rule [containing the four criteria] reflects the subjective statement of the purpose of technical specifications expressed by the Atomic Safety and Licensing Appeal Board in *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-531, 9 NRC 263 (1979). There, the Appeal Board interpreted technical specifications as being reserved for *those conditions or limitations upon reactor operation necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety.*

Id. at 36,955 (emphasis added).²⁰

Clearly, if a petitioner explicitly alleges that a technical specification needs to remain in a license because it meets one of the criteria of section 50.36(c)(2)(ii) (or 50.36a, as suggested by my colleagues), this is the best and most straightforward means of posing an admissible contention asserting that a technical specification should remain in a license, provided all the requirements of section 2.714(b)(2), (d)(2) are met. I do not find, however, that this exhausts all avenues of approaching such a case, quite apart from the fact that nowhere in section 2.714(b)(2), (d)(2), or the SOC for the new contention rule is there any requirement that a petitioner cite to a specific statutory or regulatory section. There may also be an allegation that implicitly brings into play one of the four 50.36(c)(2)(ii) criteria. And the Commission's analysis in *Perry II* of when future changes to relocated technical specifications would trigger hearing rights under section 189a of the Atomic

²⁰The Licensing Board in *Perry A*, in ruling on the contention in that case (which was based upon alleged violation of section 189a of the Atomic Energy Act), applied the *Portland* standard and looked to how much discretion would be vested in a licensee in making future changes as the determinative factor in ruling on the contention and on the merits of the case. *Perry A*, LBP-90-25, 32 NRC at 23-28; LBP-90-39, 32 NRC 368, 370 (1990). Although *Perry A*, not having been considered by the Commission other than in *Perry I* in its discussion of standing, does not have precedential value on other issues, its analysis is found to be similar to that of the Commission in *Perry II*, and to be helpful in illustrating how granting a licensee greater discretion than it previously had could "supplement its operating authority."

Energy Act also suggests that the inquiry is broader than that suggested by my colleagues — that this inquiry may also include the question whether technical specifications should remain and not be removed from a license because such removal would violate petitioners’ future hearing rights under section 189a, which is essentially the argument posed by the Petitioners herein in their contention.

Whether or not any of the Petitioners’ allegations implicitly bring into play one of the four section 50.36(c)(2)(ii) criteria,²¹ it cannot be gainsaid that the Petitioners have implicitly raised their hearing rights under section 189a, in a context of alleged health and safety consequences of future changes to relocated provisions that were formerly license technical specifications. And given that cases involving the relocation of technical specifications do involve the taking away of “special” procedural rights under section 189a, connected to substantively complex matters involving future uncertainties, allowing for the kind of flexibility specifically contemplated in the Commission’s SOC for the present contention rule seems especially appropriate in such cases — provided at least the “minimal showing” that is required has been made. Petitioners must, of course, do more than merely request a hearing based on “bald or conclusory allegations.” I find that the Petitioners have done more: notwithstanding that their petition contains some conclusory allegations, they have, as illustrated above, provided a specific statement of the mixed issue of law and fact they raise, along with a brief explanation of the basis of their contention, and an expert opinion that alleges health and safety issues and refers to various documents and alleged facts, all of which I find constitutes sufficient information to show that a genuine dispute exists with the Applicant on a material issue of law and fact, relating to the entire amendment application at issue.

With regard to the conclusory nature of some of their statements, the conclusory nature of much of what has been stated by *all* participants in this proceeding, *see supra* note 11, is likely related to, and to some degree is illustrative of, the unique nature of this type of case: in contrast to the usual license amendment case, in which the application specifies what the actual change that is of interest will be and how it will occur, in a case involving the relocation of technical specifications the significant changes at issue will, as indicated above, occur in the uncertain future, in uncertain ways. And to respond, as the Staff does, to the Petitioners’ allegations of potential future changes that could result in increased effluents harmful to health, that if in the future a licensee violates a regulatory requirement the Staff could issue a notice of violation, or that if an unresolved safety issue arises the Staff would have to become involved, does not address the issue of the public’s right under section 189a, to seek a hearing on the appropriateness

²¹ Petitioners’ Counsel did at the prehearing conference refer to a May 26, 1998, notice of violation issued to NNECO, relating to several items including NUREG-0737, which she argued might relate to “operating experience” under Criterion 4. Tr. 119.

of the amendment relocating the technical specifications, in order to address the potential for health and safety risks involved in any future proposed changes in advance, before they can occur — and possibly also to seek future hearings in the event of future changes themselves (assuming in each instance, of course, that petitioners are able to make appropriate showings as to standing and the admissibility of contentions).

To hold petitioners in a case such as this to an especially strict standard of specificity with regard to contentions relating to such potential future events, which standard goes beyond what section 2.714(b)(2) on its face requires, I find to be unjustified in light of the Commission's statements in its SOC to the contention requirements. Although the Petitioners would be expected at a hearing or even a summary disposition stage to describe in some detail the kinds, mechanisms, and probabilities of future changes that could lead to the resulting increased effluents harmful to health that they predict, and in addition to provide detailed and supported explanation of the manner and extent to which such results would occur, they are not expected to so "make their case" at the contention stage of this proceeding. The Petitioners must be held to the Commission's contention requirements, and it is their burden to demonstrate that their contention meets the requirements sufficiently to warrant further inquiry, but no more than this is required at this stage of proceedings.

Based upon the preceding analysis, I conclude that the Petitioners have made the necessary minimal showing, under 10 C.F.R. § 2.714(b)(2), (d)(2), and relevant case law, of the admissibility of their contention to demonstrate that "further inquiry" would be appropriate in this case. *See* SOC, 42 Fed. Reg. at 33,171; *Yankee Atomic*, CLI-96-7, 43 NRC at 249.

Ann Marshall Young, Chair
ADMINISTRATIVE JUDGE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Ivan W. Smith, Presiding Officer
Dr. Charles N. Kelber, Special Assistant

In the Matter of

Docket No. 55-22136-SP
(ASLBP No. 01-788-01-SP)

MICHAEL L. PIASECKI
(Denial of Operator's License)

March 30, 2001

MEMORANDUM AND ORDER
(Terminating Proceeding)

Michael L. Piasecki, an employee of the Sequoyah Nuclear Plant, requested a hearing on a determination that he had not passed the written examination for an operator's license administered to him by NRC Staff on August 21, 2000. He contended two questions in the examination were inappropriate and should be disregarded. I, as the Presiding Officer, granted the request in an order designated ASLBP No. 01-788-01-SP, dated February 16, 2001. This proceeding is covered by the provisions of 10 C.F.R. Part 2, Subpart L. The NRC Staff and Mr. Piasecki were directed to proceed under those informal rules in my February 16 order.

By a joint motion dated March 16, 2001, Mr. Piasecki and the NRC Staff move for an order terminating this proceeding. The Staff has agreed with Mr. Piasecki that the two challenged questions should be deleted from the examination. With those deletions, Mr. Piasecki's examination grade has been changed from failing to passing, thereby mooted this proceeding. The parties, therefore, move for an order terminating this proceeding. After consultation with Judge Kelber, I agree that the proceeding is moot and it is, therefore, *terminated*.

It is so ORDERED.

BY THE PRESIDING OFFICER*

Ivan W. Smith
ADMINISTRATIVE JUDGE

Rockville, Maryland
March 30, 2001

*Copies of this Order were sent this date by Internet e-mail transmission to Michael L. Piasecki and the NRC Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before Administrative Judges:

Charles Bechhoefer, Presiding Officer
Dr. Linda W. Little, Special Assistant

In the Matter of

Docket No. 030-34610-ML
(ASLBP No. 99-768-02-ML)
(M22/GID-3 Automatic Chemical
Agent Detector/Alarm)

DEPARTMENT OF THE ARMY
(Aberdeen Proving Ground, Maryland)

March 30, 2001

In a proceeding challenging the NRC Staff's denial of an application for registration and exempt-usage licensing of an Automatic Chemical Agent Detector Alarm (ACADA), the Presiding Officer approves a stipulation of dismissal submitted by both parties to the proceeding and terminates the proceeding.

MEMORANDUM AND ORDER
(Approving Stipulation and Terminating Proceeding)

This proceeding concerns the Department of the Army's (Army) challenge to the NRC Staff's denial of Army's application for registration and exempt-usage licensing (under 10 C.F.R. §§ 30.20(a) and 32.26) of the model M22/GID-3 Automatic Chemical Agent Detector-Alarm (ACADA). It is subject to the hearing procedures set forth in 10 C.F.R. Part 2, Subpart L. By Memorandum and Order dated July 12, 1999 (unpublished), I granted Army's request for a hearing. As provided by 10 C.F.R. § 2.1231, the NRC Staff filed the hearing file on September 13, 1999.

At a prehearing conference conducted at the Atomic Safety and Licensing Board Hearing Room in Rockville, Maryland, on October 13, 1999, the Presiding Officer and his Special Assistant suggested that, rather than the exempt-usage licensing that Army was seeking, a better approach would be for Army to seek an amendment to its current materials licenses (one in each NRC Region). This amendment would delete (with respect to the ACADA but not other devices covered by the licenses) terms and conditions that were not necessary to preserve the public health and safety with regard to ACADA usage but, if not deleted, would impede the Army in its intended usage of the ACADA. The parties agreed to pursue this approach, and the Presiding Officer accordingly deferred further actions in this proceeding, with parties required to submit periodic reports on their progress in this new approach. *See* LBP-99-41, 50 NRC 277 (1999).

Following the filing of several status reports, on March 26, 2001, the Staff submitted a stipulation of dismissal (copy attached), accompanied by a certificate issued by the NRC Staff on February 5, 2001, reflecting the agreement reached with the Army relaxing the required leak test frequency for the ACADA devices.¹ The parties jointly requested that this adjudicatory proceeding be terminated.

Commission rules, of course, encourage the fair and reasonable settlement of proceedings of this type, so long as the Presiding Officer approves. 10 C.F.R. § 2.1241. After consultation with the Special Assistant, the Presiding Officer here *approves* the stipulation of dismissal as appropriate and, accordingly, *terminates* this proceeding.

IT IS SO ORDERED.

Charles Bechhoefer, Presiding Officer
ADMINISTRATIVE JUDGE

Rockville, Maryland
March 30, 2001

[Copies of this Memorandum and Order have this date been transmitted by facsimile to counsel for each of the parties.]

¹ A copy of the certificate may be found in the NRC's Agencywide Documents Access and Management Systems (ADAMS), under Accession No. ML010810378.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE PRESIDING OFFICER

In the Matter of

**Docket No. 30-34610-ML
(Denial of Materials License
for M22/GID-3 Automatic
Chemical Agent Detector/Alarm)**

**DEPARTMENT OF THE ARMY
(Aberdeen Proving Ground, Maryland)**

STIPULATION OF DISMISSAL

The Registry of Radioactive Sealed Sources and Devices Certificate No. NR-1129-D-101-S, dated February 5, 2001 (copy attached*), pertains to the Graseby Ionics Detector-3 (GID-3), also known as the Automatic Chemical Agent Detector Alarm (ACADA). This Certificate reflects the agreement reached with the Army relaxing the required leak test frequency for the ACADA devices. Accordingly, the above-captioned adjudicatory proceeding may be terminated.

John T. Hull, Esq.
Counsel for NRC Staff

March 15, 2001

Phillip B. Hunter, Esq.
Counsel for U.S. Department of Army

March 20, 2001

*The original and its attachments may be found in ADAMS under Accession No. ML010810378.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of

Docket No. 72-22-ISFSI
(ASLBP No. 97-732-02-ISFSI)

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage
Installation)

March 30, 2001

In this 10 C.F.R. Part 72 proceeding concerning the application of Private Fuel Storage, L.L.C. (PFS), for a license to construct and operate an independent spent fuel storage installation (ISFSI) on the reservation of the Skull Valley Band of Goshute Indians in Skull Valley, Utah, the Licensing Board denies the request of Intervenor State of Utah (State) for admission of late-filed contention Utah PP, Exceedance of Rail Loading Capacities, finding that a balancing of the five late-filing criteria found in 10 C.F.R. § 2.714(a)(1), does not warrant entertaining the contention.

RULES OF PRACTICE: NONTIMELY SUBMISSION OF
CONTENTIONS (NEPA ISSUES)

NEPA: ADMISSIBILITY OF LATE-FILED CONTENTIONS

Section 2.714(b)(2)(iii) of Title 10 of the *Code of Federal Regulations* requires that a petitioner file its initial contentions based on an applicant's environmental report. A petitioner can "amend those contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement

. . . or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's document." As recognized by the Commission in adopting this provision, it was "not intended to alter the standards in § 2.714(a) of [the] rules of practice as interpreted by NRC caselaw, e.g., *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041 (1983), respecting late-filed contentions nor [is it] intended to exempt environmental matters as a class from the application of those standards." 54 Fed. Reg. 33,168, 33,172 (Aug. 11, 1989).

RULES OF PRACTICE: NONTIMELY SUBMISSION OF CONTENTIONS (GOOD CAUSE FOR DELAY)

In evaluating the admissibility of a late-filed contention, the first and foremost factor in this appraisal is whether good cause exists that will excuse the late-filing of the contention. *See Commonwealth Edison Co.* (Braidwood Nuclear Power Station, Units 1 and 2), CLI-86-8, 23 NRC 241, 244 (1986). And the good cause element has two components that may impact on a presiding officer's assessment of the timeliness of a contention's filing: (1) when was sufficient information reasonably available to support the submission of the late-filed contention; and (2) once the information was available, how long did it take for the contention admission request to be prepared and filed. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-99-3, 49 NRC 40, 46-48 (assessing late-filing factors relative to petition to intervene), *aff'd*, CLI-99-10, 49 NRC 318 (1999).

RULES OF PRACTICE: NONTIMELY SUBMISSION OF CONTENTIONS (BALANCING OF 10 C.F.R. § 2.714(a)(1) CRITERIA)

Relative to the four other late-filing factors, in the absence of good cause there must be a compelling showing on the remaining elements, of which factors two and four — availability of other means to protect the petitioner's interest and extent of representation of petitioner's interests by other parties — are to be given less weight than factors three and five — assistance in developing a strong record and broadening the issues/delaying the proceeding. *See Braidwood*, CLI-86-8, 23 NRC at 244-45.

RULES OF PRACTICE: NONTIMELY SUBMISSION OF CONTENTIONS (GOOD CAUSE FOR DELAY)

In connection with the question of when information is available to support an intervenor's submission of a late-filed environmental contention, with regard

to information provided during cross-examination on a financial assurance issue by and in the presence of intervenor counsel who subsequently submitted a late-filed environmental contention request to which that information was pertinent, information synthesis is a burden the intervenor must assume.

MEMORANDUM AND ORDER

(Denying Request for Admission of Late-Filed Contention Utah PP)

Pending with the Licensing Board in this 10 C.F.R. Part 72 proceeding concerning the application of Private Fuel Storage, L.L.C. (PFS), for a license to construct and operate an independent spent fuel storage installation (ISFSI) on the reservation of the Skull Valley Band of Goshute Indians in Skull Valley, Utah, is a request by Intervenor State of Utah (State) for admission of late-filed contention Utah PP, Exceedance of Rail Loading Capacities. With this issue statement, the State seeks to challenge the adequacy of the spent fuel transportation risk analysis in the NRC Staff's June 2000 draft environmental impact statement (DEIS) regarding the proposed Skull Valley site. Specifically, this contention charges that the DEIS fails to address the environmental impacts and risks associated with the movement of loaded spent fuel transportation casks on railway cars that are not separated by spacer or buffer cars, and whose allowable weight exceeds the guidelines for transport on United States railways. Applicant PFS and the Staff both contend that the Board should reject this contention because it fails to meet the 10 C.F.R. § 2.714(a)(1) late-filing criteria and the section 2.714(b), (d) basis and specificity requirements.

For the reasons set forth below, we find that the contention is not admissible under a balancing of the late-filing factors articulated in 10 C.F.R. § 2.714(a)(1).

I. BACKGROUND

In the Board's April 22, 1998 decision holding that the State, along with several other petitioners, had established its standing and had submitted at least one admissible contention, the Board found admissible that portion of the State's National Environmental Policy Act (NEPA)-related contention Utah V, Inadequate Consideration of Transportation-Related Radiological Environmental Impacts, that alleged that the weight for a loaded PFS shipping cask was outside the parameters specified in 10 C.F.R. § 51.52. *See* LBP-98-7, 47 NRC 142, 199-200, *reconsideration granted in part and denied in part on other grounds*, LBP-98-10, 47 NRC 288, *aff'd on other grounds*, CLI-98-13, 48 NRC 26 (1998). As adopted in that order, contention Utah V reads,

The Environmental Report (“ER”) fails to give adequate consideration to the transportation-related environmental impacts of the proposed ISFSI in that PFS does not satisfy the threshold condition for weight specified in 10 C.F.R. § 51.52(a) for use of Summary Table S-4, so that the PFS must provide “a full description and detailed analysis of the environmental effects of transportation of fuel and wastes to and from the reactor” in accordance with 10 C.F.R. § 51.52(b).

Id. at 256.

As is apparent from its language, the State utilized as the basis for this contention the environmental report (ER) submitted by PFS as part of its July 1997 license application, which contains information intended to aid the agency in complying with its NEPA requirements, including preparation of a DEIS. On June 12, 2000, the Staff notified the Board and the parties that the DEIS had been completed on June 9, 2000, and was in the reproduction process. *See* Letter from Robert M. Weisman, NRC Staff Counsel, to the Licensing Board (June 12, 2000). On June 16, 2000, a DEIS was publicly issued by the Staff, along with cooperating federal agencies the Bureau of Indian Affairs and the Bureau of Land Management, both from the Department of the Interior, and the United States Surface Transportation Board. *See* Office of Nuclear Material Safety and Safeguards, United States Nuclear Regulatory Commission, Draft Environmental Statement for the Construction and Operation of an [ISFSI] on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah, NUREG-1714 (June 2000) [hereinafter DEIS]; *see also* 65 Fed. Reg. 39,206 (June 23, 2000). Copies of the DEIS were made available to the parties at the evidentiary hearing held in Salt Lake City, Utah, on June 19, 2000. *See* Tr. at 1387.

The State responded with three DEIS-related late-filed contention submissions. On July 27, 2000, the State proffered late-filed contention Utah KK, Potential Impacts to Military Training and Testing and State Economy. This was followed on August 2, 2000, by late-filed contentions Utah LL through Utah OO, which challenged various aspects of the DEIS transportation analysis. Finally, on October 25, 2000, less than a week before the Board’s ruling finding the first two sets of contentions inadmissible, *see* LBP-00-27, 52 NRC 216 (2000) (contention Utah KK); LBP-00-28, 52 NRC 226 (2000) (contentions Utah LL through Utah OO), *petition for interlocutory review denied*, CLI-01-1, 53 NRC 1 (2001),¹

¹With regard to late-filed contention Utah KK, the Board held that although the State had filed contention Utah KK within the allotted time period, the substance of that issue statement could have been raised long before the DEIS was issued. This failure to fulfill the good cause criterion, when balanced with the other four factors, failed to fulfill the late-filing requirements of section 2.714(a)(1). *See* LBP-00-27, 52 NRC at 221-24.

The Board also rejected late-filed contentions Utah LL through Utah OO, albeit for a different reason. The State request for admission of these late-filed contentions was submitted to the Board on August 2, 2000. Applying the section 2.714(a)(1) late-filing criteria, the Board noted that even though that section does not specify an exact time

(Continued)

the State submitted late-filed contention Utah PP, Exceedance of Rail Loading Capacities, which is now before the Board. This contention provides:

The DEIS, NUREG-1714, fails to comply with the National Environmental Policy Act and 10 C.F.R. § 51.71(d) because it fails to address the environmental impacts of transporting loaded spent fuel transportation casks on railway cars that are not separated by spacer or buffer cars and whose allowable weight exceeds guidelines for transportation on U.S. railway lines.

See [State] Request for Admission of Late-Filed Contention Utah PP (Exceedance of Rail Loading Capacities) (Oct. 25, 2000) at 2 [hereinafter State Request].

In its motion, the State argues that this late-filed contention should be admitted because, while the DEIS anticipates that each loaded railcar containing spent nuclear fuel (SNF) would be separated by a spacer or buffer car, it became apparent in PFS's September 25, 2000 DEIS comments that PFS only plans to put a spacer car at the end of each train. The result of this recently revealed shipping configuration change is to concentrate the weight of a PFS rail shipment of loaded fuel casks as it moves along track routes, the environmental effects of which (i.e., increased probability of bridge failures; increased probability of cask damage/releases because of smaller railcar separation; greater "en route" public exposures because of reduced train speeds) have not been analyzed in the DEIS. *See id.* at 2-10. By responses filed November 9, 2000, PFS and the Staff oppose the State's motion for admittance of late-filed contention Utah PP, asserting that this issue statement, being impermissibly late, fails to satisfy the section 2.714(a)(1) late-filing factors as well as the section 2.714(b), (d) standards for an admissible contention. *See* [PFS] Response to [State] Request for Admission of Late-Filed Contention Utah PP (Nov. 9, 2000) at 3-14 [hereinafter PFS Response]; NRC Staff's Response to [State] Request for Admission of Late-Filed Contention Utah PP (Nov. 9, 2000) at 6-15 [hereinafter Staff Response].

limit for submission of late-filed contentions, the presiding officer has the authority to impose appropriate time limits. In this case, the Licensing Board had established a deadline using DEIS submission as a trigger for the submission of DEIS-related late-filed contentions. Although the original scheduling order directed the parties to file any contentions within 30 days of the public release of the DEIS, it contained the caveat that the Staff was to give at least 15 days' notice before the release to permit the parties to put their technical experts "on alert" so they could begin working immediately upon issuance. Accounting for the Staff's failure to give the full 15 days' notice of the release of the DEIS, the Board calculated the contention filing deadline as July 27, 2000. Because contentions Utah LL through Utah OO were filed 6 days past this deadline without any request to extend the deadline, the Board found good cause for late-filing was lacking and, after balancing this factor with the other four section 2.714(a) elements, concluded that the contentions were not admissible. *See* LBP-00-28, 52 NRC at 234-39.

II. ANALYSIS

A. Section 2.714(a)(1) Late-Filing Criteria

1. *Applicable Standard*

Section 2.714(b)(2)(iii) of Title 10 of the *Code of Federal Regulations* requires that a petitioner file its initial contentions based on an applicant's ER. However, a petitioner can "amend those contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement . . . or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's document." As recognized by the Commission in adopting this provision, however, it was

not intended to alter the standards in § 2.714(a) of [the] rules of practice as interpreted by NRC caselaw, e.g., *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041 (1983), respecting late-filed contentions nor [is it] intended to exempt environmental matters as a class from the application of those standards.

54 Fed. Reg. 33,168, 33,172 (Aug. 11, 1989). Thus, notwithstanding the fact that the relatively recent Staff DEIS and the PFS comments in response to it are the purported genesis of contention Utah PP, the State has the ultimate burden of demonstrating that contention Utah PP merits admission in accordance with the five-factor balancing test set forth in 10 C.F.R. § 2.714(a)(1) because the deadline for filing timely contentions in this proceeding expired over 3 years ago.

In evaluating the admissibility of a late-filed contention, the first and foremost factor in this appraisal is whether good cause exists that will excuse the late-filing of the contention. *See Commonwealth Edison Co.* (Braidwood Nuclear Power Station, Units 1 and 2), CLI-86-8, 23 NRC 241, 244 (1986). And relative to our evaluation of that factor here, as we have noted previously (albeit in a somewhat different context), the good cause element has two components that impact on our assessment of the timeliness of a contention's filing: (1) when was sufficient information reasonably available to support the submission of the late-filed contention; and (2) once the information was available, how long did it take for the contention admission request to be prepared and filed. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-99-3, 49 NRC 40, 46-48 (assessing late-filing factors relative to petition to intervene), *aff'd*, CLI-99-10, 49 NRC 318 (1999). Moreover, relative to the four other factors, in the absence of good cause there must be a compelling showing on the four remaining elements, of which factors two and four — availability of other means to protect the petitioner's interest and extent of representation of petitioner's interests by other parties — are to be given less weight than factors three and five — assistance in developing a strong record and broadening the issues/delaying

the proceeding. *See Braidwood*, CLI-86-8, 23 NRC at 244-45. We now turn to the application of the 10 C.F.R. § 2.714(a)(1) balancing factors.

2. Application of Late-Filing Factors to Contention Utah PP

We once again begin our analysis of the State's late-filed issue statement with the first and paramount factor — good cause for late-filing. The State argues that it first became aware of the change to the PFS shipping plan (i.e., the purported elimination of spacer cars between all cask cars) when the State received the PFS comments regarding the DEIS on September 25, 2000. *See* State Request at 2, 7-8; *id.*, Exh. 2, at 12 (Letter from John L. Donnell, PFS Project Director, to NRC Document Control Desk (Sept. 21, 2000)). These comments, the State claims, establish that the information provided by PFS differed from what the Staff had assumed to be the case when it presented its DEIS. According to the State, up to that point it had relied on the Staff DEIS and testimony given at the June 2000 evidentiary hearing held in Salt Lake City, Utah, both of which suggested that PFS would use a buffer car between each loaded railcar. *See* State Request at 2 & n.2 (citing DEIS at 5-45; John D. Parkyn Prefiled Testimony on Contention Utah E, Construction Costs (May 15, 2000) at 7, 8 (cost of buffer cars); Tr. at 1872, 1881-82, 1961, 2000). It was only after the September 21, 2000 PFS DEIS comments, which it received 4 days later, that the State became aware of the PFS design change. And since its contention Utah PP was filed on October 25, 2000, this is within the 30-day window prescribed by the Board in its original scheduling order. Moreover, the State declares, the contention conforms to the dictates of section 2.714(b)(2)(iii) in that the PFS comments on the DEIS differed significantly with the points addressed by the Staff in the DEIS and, as such, need to be addressed under NEPA. *See id.* at 8.

In response to these State claims, PFS and the Staff assert that information on the PFS railcar arrangement was available to the State as early as June 2000, as seen in the testimony of John D. Parkyn cited by the State, thus requiring the State to file this contention at the latest within 30 days of his testimony. *See* PFS Response at 3-5; Staff Response at 8-9. Further, according to the Staff, the contention could have been filed as early as December 1999, when PFS issued ER revision six indicating that buffer cars were associated with the security car and the mainline locomotives rather than the cask cars. *See* Staff Response at 8.

As for the issue of increased railcar weight, the Staff argues that the State does not even address good cause relating to this matter. The Staff asserts that the State has long been aware of the proposed weight of the railcars, as shown by its filing of contention Utah LL on August 2, 2000, in which the State asserted that the weight of a car would be approximately 211 tons. *See* [State] Request for Admission of Late-Filed Contentions Utah LL through OO (Aug. 2, 2000) at 6. Furthermore, the Staff declares, the document relied upon by the State as the basis

for its railcar weight claim has a publication date of 1958 and thus obviously is not recently available so as to justify good cause for late filing. *See* Staff Response at 6-7; *see also* PFS Response, Exh. 2 (168 Railway Equipment and Publication Co., *Railway Line Clearances and Car Dimensions Including Weight Limitations of Railroads in the United States, Canada, Mexico, and Cuba* (May 1958 ed.)).

We conclude the State has not satisfied its burden to show good cause for late-filing with respect to contention Utah PP. Assuming the original PFS application did not disclose the buffer car configuration with sufficient clarity, the State nonetheless had several opportunities to address this matter much earlier. There was sufficient information available in the ER within an appropriate time after the December 1999 application amendment to file a contention on the fixed components of the train if the State had any concerns about its environmental consequences. With respect to the placement of buffer cars, the ER then stated that:

For the duration of time that the first shipping cask is being moved from rail car to heavy haul trailer and delivered to the PFSF, a maximum of two (more likely one) other shipping cask rail cars would be parked on the adjacent rail sidings located at the ITP. These casks (or cask) would represent the remaining part of *the single purpose train (which would also include the security car and associated buffer car)*. *The mainline locomotives, associated buffer car, and empty cask cars awaiting return to the delivery cycle will be picked up by Union Pacific . . .*

[PFS], Environmental Report [for] Private Fuel Storage Facility, at 3.3-8 to -9 (rev. 6) (emphasis supplied); *see also* Staff Response at 8. This language clearly indicates that under the PFS protocol, the buffer car use was to be associated with the security car and the mainline locomotives: one buffer immediately behind the mainline locomotives and one in between the last cask car and the security car.

Yet, even if this ER amendment did not act as a trigger for a late-filed contention, testimony given at the June 2000 Salt Lake City evidentiary hearing by PFS Board of Managers Chairman John Parkyn clearly started the clock running regarding any DEIS-related contention concerning the number of spacer cars to be utilized. As both PFS and the Staff observe, the following testimony by Mr. Parkyn in connection with another contention — Utah E, Financial Assurance — was enough to make the State aware of PFS’s intention to use only two spacer cars:

Q. Mr. Parkyn, maybe you can explain what constitutes what I sort of think as a unit train for PFS in terms of the locomotive, the equipment. What is it that would be sort of a shipment that constitutes a full train?

A. Well, listing the fixed components that wouldn’t vary would be: two locomotives, the security car, and two buffer cars, one between the locomotive and the first fuel loaded car and

one between the last loaded fuel car and the security car which carries Staff. And then there would be one or more loaded fuel cars in the middle.

Tr. at 1881.²

Although the State seeks to rely on this colloquy as support for its good cause arguments, from the above statement it is apparent the State was on notice of the PFS railcar protocol by at least June 20, 2000, the day this testimony was elicited. Having had access to the Staff DEIS in essentially the same time frame, the State should have filed any contentions in connection with the spacer cars and the DEIS within the Board-specified window for DEIS-related late-filed contentions, i.e., by the end of July 2000. *See supra* note 1. Because it did not do so until October 25, 2000, however, the State failed to satisfy the good cause requirement of section 2.714(a)(1).³

Turning to the other factors in section 2.714(a)(1), as was noted above, in the absence of good cause, there must be a compelling showing by the State on the remaining four elements to allow admission of a late-filed contention. With regard to factors two and four — the availability of other means to protect the petitioner’s interest and the extent to which the petitioner’s interest will be represented by other parties — as both PFS and the Staff agree, and as we have noted in a similar situation in this proceeding, these factors weigh in favor of admissibility. *See* LBP-00-28, 52 NRC at 238 (State’s interest on DEIS-related contentions not otherwise represented and, although not a trivial opportunity for involvement in licensing process, ability to comment on DEIS not on same plane as rights that accrue in adjudicatory context).

With respect to the first of the more heavily weighted non-good cause elements — assistance in developing a strong record — the State claims that its witnesses, Dr. Marvin Resnikoff and Matthew R. Lamb of Radioactive Waste Management Associates, will contribute significant information to the record. In this regard, the State asserts that by reason of his extensive professional experience in SNF transportation issues, Dr. Resnikoff will be able to (1)

²This testimony, which was presented in the course of the State’s cross-examination of PFS witness Parkyn on contention Utah E/Confederated Tribes F, Financial Assurance, was part of a June 20, 2000 evidentiary session that was closed by the Board because it was anticipated that significant portions of the testimony would involve proprietary information. Subsequently, at the Board’s request, the parties reviewed this and other transcripts of closed sessions and provided the Board with (1) a joint filing indicating, among other things, that there was no objection to the public release of this portion of the hearing transcript, *see* Joint Filing on Portions of the Hearing Transcripts, Pre-Filed Testimony, and Exhibits Concerning Utah E That Can be Placed on the Public Record (Sept. 15, 2000) at 2; *id.*, App. A, at 4; and (2) a joint filing reflecting two proposed corrections relative to this segment of the transcript, *see* Joint Corrections to the Transcript of the Evidentiary Hearing (Sept. 15, 2000) at 10. The Board adopts the parties’ suggestions relative to the release of, and corrections to, this portion of the transcript.

³In this regard we note that, notwithstanding the fact that Mr. Parkyn’s description of the use of spacer cars was delivered while discussing a nonenvironmental matter, i.e., financial qualifications, this does not provide “good cause” for waiting until nearly 3 months later to file DEIS-related contention Utah PP. Information synthesis, particularly as it relates to information provided during cross-examination by and in the presence of counsel who subsequently submitted the late-filed contention request, is a burden the Intervenor must assume.

demonstrate the environmental impacts and risks posed when railcars containing SNF transportation casks are not separated by buffer cars; and (2) articulate the defects in the DEIS for failing to address the issue. Mr. Lamb, on the other hand, purportedly can ascertain rail weights for the proposed Maine to Utah route that is analyzed in the DEIS. *See* State Request at 9. PFS and the Staff assert, however, that the State's witnesses will not add to the development of a sound record because neither Dr. Resnikoff nor Mr. Lamb demonstrate any special expertise or experience in the areas of railcar or bridge design and their acceptable load levels. *See* PFS Response at 6-7; Staff Response at 10-11. Furthermore, according to PFS, the document *Railway Line Clearances* on which the State relies as a basis for this contention is totally obsolete, having been published in 1958, and thus would not aid in the creation of a sound record because it does not account for "42 years of technological change and railroad construction." PFS Response at 9 n.10; *see also* Staff Response at 11.

The State has failed to make a compelling showing for admission with regard to factor three. Although, as the State points out, Dr. Resnikoff has aided it in preparing various transportation comments on the DEIS and other environmental contentions relating to transportation issues, including admitted contention Utah V and rejected late-filed contentions Utah LL through Utah OO, *see* State Request at 9, and Dr. Resnikoff notes that he has "extensive professional experience in the areas of nuclear waste storage, transportation, and disposal," *see id.*, Exh. 1, at unnumbered p. 1 (Oct. 25, 2000 Declaration of Dr. Marvin Resnikoff), these assertions are wholly lacking in the detail necessary to bring this factor into play as providing significant support for contention admissibility. Moreover, Dr. Resnikoff's declaration that he "expect[s] to be able to expand upon and refine [his] testimony, after having an opportunity to review materials produced by the Applicant and the NRC Staff in discovery," *id.* at unnumbered p. 2, does nothing to enhance its present status as support for admissibility under this factor. As for witness Lamb, although the State proffers a detailed explanation of what Mr. Lamb will attest to, i.e., the rail load limits for United States railroads based on the 1958 version of the guidance publication *Railway Line Clearances*, *see* State Request at 5-8, 10, it offers no explanation of Mr. Lamb's qualifications to testify on this matter, other than a familiarity with the PFS license application, the DEIS, and the "general track loading and clearance requirements for railroads in the United States." *Id.*, Exh. 1, at unnumbered p. 4 (Oct. 25, 2000 Declaration of Matthew R. Lamb). In fact, his testimony appears to be derived from conversations with Federal Railroad Administration (FRA) official Gordon Davids, rather than from his own analysis of the issues. *See* Staff Response, Attach. B (E-Mail from Gordon Davids, FRA, to Matthew Lamb, Radioactive Waste Management Associates (Oct. 25, 2000) attached to October 25, 2000 Affidavit of William B. O'Sullivan), *see also* State Request at 5 nn.5&7, 5-6 n.9. Further, to the degree his testimony is based on the 1958 version of *Railway Line Clearances*,

his analysis undoubtedly will be less useful in light of changes in technology and construction of railroads, as is reflected in the more recent edition of *Railway Line Clearances* provided by PFS and the Staff. See PFS Response, Exh. 1 (208 Primedia Information, Inc., *Railway Line Clearances* (1998-1999 ed.)); Staff Response, Attach. A (210 Primedia Directories, *Railway Line Clearances* (2000-2001 ed.)). Accordingly, with regard to factor three, the State has not met its burden in showing it will aid in the development of a sound record, so that this factor provides little or no weight in favor of the admissibility of late-filed contention Utah PP.

In connection with factor five — broadening the issues/delaying the proceeding — the State declares that admission of late-filed contention Utah PP can be accommodated in the existing schedule and litigated with the other NEPA contentions that have already been admitted to the proceeding, which now are not scheduled for evidentiary hearing until November and December of 2001. See State Request at 10. PFS and the Staff disagree, asserting that a new contention on spacer cars and rail loads will broaden the issues and result in delay in the proceeding even though environmental contentions have not yet been adjudicated. Inclusion of a new contention at this phase of the hearing, they maintain, will require more time for discovery, summary disposition motions, and the preparation of testimony, which would impinge an already tight schedule. See PFS Response at 7; Staff Response at 12.

We conclude factor five weighs moderately in favor of admissibility. This is mainly because the intervening parties' NEPA-related contentions now are scheduled to be litigated in late 2001 as a result of a recent schedule change arising from the Applicant's submission of additional information to the Staff concerning several admitted contentions, which caused the Staff to delay issuance of the FEIS and prepare a supplement to its Safety Evaluation Report (SER). See Licensing Board Memorandum and Order (General Schedule Revision) (Feb. 22, 2001) at 1-2 (unpublished).

Given this analysis of the five factors, when the balance is finally struck, although factors two, four, and five provide some degree of support for admission of contention Utah PP, in light of the State's failing regarding element three, we do not find the overall balance to be compelling so as to outweigh the lack of good cause under factor one. This being the case, we deny admission of the State's late-filed contention Utah PP.⁴

⁴Our ruling on the late-filing criteria means we need not reach the matter of this contention's admissibility under the section 2.714(b), (d) criteria. We note, however, that we would have denied admission of contention Utah PP. Relying, among other things, on an essentially obsolete railway weight limitation document and an incorrect assumption about the number of axles that will be used on PFS railcars, this contention lacks an adequate basis and fails to demonstrate the existence of a material factual dispute.

III. CONCLUSION

Having failed to establish the requisite good cause for not raising its claims about a deficiency in the DEIS analysis of rail load related spent fuel transfer risk in the time frame provided for submitting DEIS-related late-filed contentions, the State also has failed to establish good cause for late-filing under the first and foremost 10 C.F.R. § 2.714(a)(1) factor for admitting late-filed contentions. Nor has it shown that factor three — ability to contribute to the record — provides support for admissibility. Although section 2.714(a)(1) factors two, four, and five — availability of other means to protect the petitioner's interests/extent of representation of petitioner's interests by other parties/broadening the issues—delaying the proceeding — weigh in favor of admitting the contention, they do not provide the requisite compelling showing that is necessary to overcome the lack of good cause under factor one, particularly given the State's failure to make a showing placing factor three on the admissibility side of the balance. Accordingly, the State's request for admission of late-filed contention Utah PP is rejected.

For the foregoing reasons, it is, this thirtieth day of March 2001, ORDERED that:

1. Relative to page 1881, lines 12-23, of the transcript of the Board's June 20, 2000 evidentiary hearing session regarding contention Utah E/Confederated Tribes F, Financial Assurance, the parties' September 15, 2000 joint filings regarding transcript release and transcript corrections are *granted*; and

2. The October 25, 2000 request of the State for admission of late-filed contention Utah PP, Exceedance of Rail Loading Capacities, is *denied*.

THE ATOMIC SAFETY AND
LICENSING BOARD⁵

G. Paul Bollwerk, III
ADMINISTRATIVE JUDGE

Dr. Jerry R. Kline
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
March 30, 2001

⁵ Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Applicant PFS; (2) Intervenors Skull Valley Band of Goshute Indians, Ohngo Gaudadeh Devia, Confederated Tribes of the Goshute Reservation, Southern Utah Wilderness Alliance, and the State; and (3) the Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

Samuel J. Collins, Director

In the Matter of

Docket No. 50-213
(License No. DPR-61)

CONNECTICUT YANKEE ATOMIC
POWER COMPANY
(Haddam Neck Plant)

March 20, 2001

The Petitioners requested that the U.S. Nuclear Regulatory Commission (NRC) take the following actions: (1) conduct a full investigation of Connecticut Yankee Atomic Power Company's (CYAPCO's) garment laundering practices and specifically of the September 20, 2000, incident at a public laundry facility in which the Petitioners contend that the Licensee may have been laundering radioactively contaminated clothing; (2) revoke CYAPCO's license, or suspend it until such time that an investigation is completed and any contamination found at the public laundry facility as a result of the incident is remediated; (3) report any violation of regulations to the Department of Justice; and (4) conduct an informal public hearing.

The final Director's Decision on this petition was issued on March 20, 2001. It stated that the first request was granted by an NRC inspection, which concluded that adequate controls were in place to assure that CYAPCO clothing had not and would not become contaminated, and that CYAPCO's garment practices are in compliance with NRC regulations and do not endanger the health and safety of the public. In response to the second request, NRC did not take immediate action because inspection findings demonstrated that there were no immediate safety concerns. Based on the conclusions of the inspection report, NRC will not take action to suspend or revoke CYAPCO's license as no violations occurred. Similarly, since no violations of NRC regulations were identified, the third request was considered not to warrant any action. Finally, the fourth request was granted in principle to the extent that the Petitioners were provided opportunities to

interact with the NRC Staff during its review of the petition, and the record of the NRC Staff review was available to the public. Since the issues of public health and safety and regulatory compliance submitted in the petition were resolved in a process open to the public, the NRC Staff does not plan to take any further action on this petition.

DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206

I. INTRODUCTION

By letter dated September 26, 2000, Rosemary Bassilakis and Deborah Katz (the Petitioners) of the Citizens Awareness Network filed a petition pursuant to Title 10 of the *Code of Federal Regulations*, section 2.206. The Petitioners requested that the U.S. Nuclear Regulatory Commission (NRC) take the following actions: (1) conduct a full investigation of Connecticut Yankee Atomic Power Company's (CYAPCO's or the Licensee's) garment laundering practices and specifically of the September 20, 2000, incident at a public laundry facility in which the Petitioners contend that the Licensee may have laundered radioactively contaminated clothing; (2) revoke CYAPCO's license, or suspend it until an investigation is completed and any contamination found as a result of that investigation is remediated; (3) report any violation of regulations to the Department of Justice; and (4) conduct an informal public hearing. As the basis for these requests, the petition states that on September 20, 2000, CYAPCO laundered bright yellow coveralls at a public laundromat in East Hampton, Connecticut. In addition, the petition also states that rubber boots and gloves from the Haddam Neck Plant are also washed at the laundromat on occasion. The petition contends that, although it is not clear whether or not the garments were radioactively contaminated, "Laundering the Haddam Neck reactor's protective garments at a public facility constitutes a serious loss of radiological control, and blatant disregard for public and worker health and safety, the environment, and NRC rules and regulations." In support of the claim, the petition cites a number of events that the Petitioners believe collectively "demonstrates an inability on the Licensee's part to follow NRC rules and regulations. . . ."

The Petitioners addressed the Petition Review Board (PRB) on October 10, 2000, in a telephone conference call to clarify the bases for the petition. The transcript of this discussion may be examined, and/or copied for a fee, at the NRC Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. The transcript (ADAMS Accession No. ML003768237) is also available at the ADAMS Public Library component of the NRC's Web site, <http://www.nrc.gov> (the Public Electronic Reading Room).

On November 9, 2000, the NRC sent the Petitioners a letter acknowledging that the petition met the requirements of 10 C.F.R. § 2.206 and would be processed accordingly. A *Federal Register* notice was published on November 16, 2000 (65 Fed. Reg. 69,346). In the letter and *Federal Register* notice, NRC explained that inspection activities conducted in response to the petition had demonstrated that there were no immediate safety concerns associated with the issues in the 2.206 petition. For this reason, NRC did not take immediate action with regard to the Petitioners' second request (i.e., revocation or suspension of CYAPCO's license).

A draft of this Director's Decision, and an opportunity to offer comments were sent to the Petitioner and the Licensee by letter dated December 19, 2000. The Petitioner's reply, the NRC Staff response to the Petitioners' reply, and the Licensee's reply are attached (not published) as Enclosures 1, 2, and 3, respectively.

II. DISCUSSION

As stated above, in response to the concerns identified in the petition, NRC Staff from Region I conducted an inspection of the Licensee's garment laundering practices for compliance with regulatory requirements and to ensure the health and safety of the public. The results of this inspection are given in NRC Integrated Inspection Report 05000213/2000002 (issued on November 13, 2000). The following section is an excerpt from the NRC Inspection Report. The report (ADAMS Accession No. ML003768686) is available in its entirety from the ADAMS Public Library component of the NRC's Web site, <http://www.nrc.gov> (the Public Electronic Reading Room).

R8.1 *Response to Laundry Concern*

a. *Inspection Scope (71801)*

The inspector reviewed the licensee's program of laundering protective clothing for compliance to regulatory requirements and to ensure the health and safety of the public.

b. *Observations*

On September 25, 2000, the Connecticut Department of Environmental Protection (DEP) notified the NRC that a citizen living near the Haddam Neck plant was concerned that yellow protective clothing from the facility was being laundered in a local public laundromat. The protective clothing was reported by the licensee's contractor to be from the onsite training facility.

On September 26, 2000, a radiological survey was performed by the Connecticut DEP in the concerned citizen's home. The DEP representative stated that he conducted the survey using both a NaI and a GM detector. No radioactive material above background was identified. The DEP representative stated that he discussed radiation effects, survey techniques, background radiation, and relative risks with the concerned individual and at that time the individual appeared satisfied. Earlier the same day, the DEP representative surveyed the training facility

yellow protective clothing and approximately twenty percent of the rubber gloves, booties, and other materials. No radioactivity above background was identified by the DEP representative in the training area.

On October 2, 2000, the NRC performed an onsite inspection. The inspector reviewed the licensee's protective clothing laundering program. The inspector discussed with cognizant licensee representatives the process by which contaminated protective clothing from the RCA [Radiologically Controlled Area] was laundered and the segregation of this laundry from non-contaminated protective clothing. The inspector observed handling of contaminated protective clothing during a radioactive laundry shipment. The clothing was collected from step-off-pads throughout the RCA and placed in transport containers. Once filled, they were locked and kept in the Radwaste Reduction Facility (RRF) waiting collection of enough containers for a shipment. The licensee stated that a contaminated laundry shipment was made approximately every two weeks. The inspector verified that shipping containers were maintained under lock and control by the radwaste and shipping groups. An empty covered trailer is positioned in the RCA at the truckbay entrance to the RRF. Its back doors are opened to load containers of protective clothing to be laundered and locked closed when not loading the trailer. Once the trailer is full, the trailer doors are locked and sealed with a tamper proof fastener to prevent unauthorized entry.

The licensee contracted with Interstate Nuclear Services (INS) in Springfield, Massachusetts for laundry of their potentially contaminated protective clothing. INS exchanges laundered clothing which was contained in a locked, tamper proof sealed trailer with used potentially contaminated protective clothing using the following procedure:

A licensee truck cab enters the RCA and hooks onto the trailer containing the contaminated clothing at the RRF. The contaminated clothing is taken out of the RCA under control of the Health Physics Department. The INS truck cab then hooks up to the contaminated clothing trailer and, after proper shipping surveys and instructions, departs for their Springfield Laundry Facility. The inspector verified by observation that trailers remain locked and the tamper proof seal remains intact. The incoming shipment of clean laundered protective clothing is taken by the licensee's truck cab into the RCA at the RRF truck door.

The inspector observed that a trailer of clean laundered protective clothing was locked and contained a tamper proof seal which remained intact until qualified radwaste personnel opened the trailer. At no time was either the outgoing or incoming laundry trailer opened outside of the controlled confines of the RRF in the RCA. The inspector concluded that the licensee maintains an adequate program to control shipments of potentially contaminated clothing to ensure only RCA items are shipped to and received from INS.

On October 3, 2000, the inspector discussed with cognizant licensee representatives controls of training protective clothing and new protective clothing stored in the warehouse. The licensee stated that prior to May 1998, all training for the Haddam Neck site was conducted at the Millstone training facility. This included practical factors training where trainees don protective clothing for mockup training sessions. Since May 1998, training has been conducted onsite at the EOF [Emergency Operations Facility] facility. In May 1998, new protective clothing was withdrawn from the warehouse and an inventory of coveralls, gloves, booties, as well as respirators was obtained and dedicated to training uses, with no contact or use in any radiological area. The licensee stated that, in order not to co-mingle this clothing with clothing from the RCA, this inventory was maintained separate. To ensure no possible cross contamination with potentially contaminated clothing at the INS facility, the licensee stated they contracted with a local laundry facility in East Hampton [Connecticut], since May 1998.

Clothing from the training area has been picked up and returned on approximately a weekly basis by representatives of the local laundry. The inspector noted that extra large coveralls were labeled "training" but none of the other coveralls and no gloves or booties were so labeled. The rubber gloves contained the trifoil insignia.

The inspector observed the survey of all training protective clothing by the licensee using a Small Article Monitor (SAM). The inspector reviewed the calibration and sensitivity of the SAM-9 monitor (serial #254) used for this survey. The monitor was calibrated to detect any significant level of radioactive material and verified to be more sensitive than the hand held NaI and GM detector used by the Connecticut DEP during their initial scan of training protective clothing. The licensee stated that a total of 751 individual items were surveyed, which constituted the entire inventory of training protective clothing and the additional clothing from the warehouse. The inspector verified that no radioactive material was detected above background during this survey of the training department and warehouse protective clothing.

c. Conclusions

The licensee established, implemented, and maintained an adequate program to launder potentially contaminated clothing from the RCA and had effective controls to ensure contaminated clothing did not come into contact with non-radiological control area clothing. The inspector verified that protective clothing at the licensee's training facility was free from radioactive contamination and that controls were in place to assure that training materials did not become contaminated.

In addition, the Licensee is evaluating additional measures that may be taken to avoid similar misperceptions in the future.

III. CONCLUSION

In response to the Petitioners' first request (i.e., NRC conduct a full investigation of CYAPCO's garment laundering practices and of the September 20, 2000, events), an NRC inspection was performed. The results of this inspection are described in the excerpt above. The NRC inspection report concluded that adequate controls were in place to assure that CYAPCO clothing had not and would not become contaminated, and CYAPCO's garment laundering practices are in compliance with NRC regulations and do not endanger the health and safety of the public. Based on NRC conducting an inspection of the Licensee's activities in question, the Petitioners' request was granted.

In response to the Petitioners' second request (i.e., NRC revoke or suspend CYAPCO's license until an investigation is completed and any contamination found as a result of that investigation is remediated), NRC did not take immediate action, because inspection findings demonstrated there were no immediate safety concerns. Based on the conclusions of the inspection report, NRC will not take action to suspend or revoke CYAPCO's license as no violations occurred.

As NRC has concluded that CYAPCO did not commit a violation of NRC regulations, the Petitioners' third request (i.e., any violations be reported to the Department of Justice) is considered to warrant no action.

The Petitioners' fourth request (i.e., NRC conduct an informal public hearing) has been granted in principle to the extent that the open nature of the process by which the issues have been resolved included: the public availability of the petition, the Petitioners' taking advantage of the opportunity to participate in a formal PRB review of the petition, the transcript from the PRB review being made publicly available, the public availability of the acknowledgment letter to the Petitioners, the *Federal Register* notice acknowledging NRC's receipt of the petition, NRC's publicly available Inspection Report, and finally NRC's providing advance copies of this Director's Decision to the Petitioners and Licensee for comment for the specific purpose of providing an additional opportunity to participate in the review process. These actions are considered to grant in part the request of the Petitioners that these issues be resolved in a public forum. Since the issues of public health and safety and regulatory compliance submitted by the Petitioners have been resolved, a hearing is not planned.

In conclusion, the issues raised in the September 26, 2000, petition have been resolved. Therefore the NRC Staff does not intend to take any further action on this petition. 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

Samuel J. Collins, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 20th day of March 2001.

Enclosures (not published):

1. Petitioner's reply to draft Director's Decision
2. NRC Staff response to Petitioner's reply
3. Licensee's reply to draft Director's Decision

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

~~ADICSEYADLCSNEAD~~

~~Before Administrative Judge~~

~~Charles Schroeder, Chairman
D. Richard Cole, Special Assistant~~

IntreMater of

~~Docket No. 0878MLA2
(SDP No. 0753MLA
(Site Decommissioning Plan))~~

~~MOLYCORP INC
(Washington, Pennsylvania)~~

~~April 20, 2001~~

In a proceeding involving a decommissioning plan for a materials site, the Presiding Officer approves a stipulation of all parties and terminates the proceeding.

MEMORANDUM AND ORDER
(Approving Stipulation and Terminating Proceeding)

This proceeding involves a proposed site decommissioning plan for Licensee Molycorp, Inc.'s (Molycorp) facility located in Washington, Pennsylvania. Molycorp's initial Site Decommissioning Plan (SDP) sought unrestricted decommissioning for most of the site but restricted decommissioning for a portion of the site, including an onsite permanent storage facility for decommissioning materials. Canton Township, which objected to the onsite storage of decommissioning materials, was admitted as an Intervenor in this proceeding by LBP-00-25, 52 NRC 144 (2000).

By letter dated January 3, 2001, from Molycorp to the NRC Staff, the Licensee formally withdrew its proposed amendment that called for onsite disposal of

decommissioning material. It advised that Molycorp would dispose of the decommissioning material off site and would seek unrestricted decommissioning of the entire site. Canton Township has no objection to the unrestricted decommissioning for the entire site. As a result, all parties have stipulated and agreed that Canton Township's hearing request be withdrawn and this proceeding terminated with prejudice.

In accordance with 10 C.F.R. § 2.1241, the Presiding Officer finds the stipulation, a copy of which is attached, to be fair and reasonable and hereby *terminates* this proceeding with prejudice.

IT IS SO ORDERED.

Charles Bechhoefer, Presiding Officer
ADMINISTRATIVE JUDGE

Rockville, Maryland
April 20, 2001

ATTACHMENT

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

~~ADMINISTRATIVE~~

~~Before Administrative Judge~~

~~Charles B. Hoover, Chairman
D. Richard Cole, Special Assistant~~

Intervenor of

~~Docket No. 00-075-01A2
(Site Decommissioning Plan)~~

~~MOLYCORP INC
(Washington, Pennsylvania)~~

**STIPULATION FOR WITHDRAWAL OF HEARING
REQUEST AND TERMINATION OF PROCEEDING**

Molycorp Inc. (“Molycorp”), Canton Township and the NRC Staff, through their respective counsel, submit the following stipulation for the dismissal of the request for hearing filed by Canton Township pursuant to a Notice of Opportunity for a Hearing published in the *Federal Register* on or about [on] November 16, 1999 regarding the Site Decommissioning Plan submitted by Molycorp for its Washington, Pennsylvania Facility, and for the termination of this proceeding. In support thereof, the parties state as follows:

1. This proceeding involves a Site Decommissioning Plan (SDP) for Molycorp Inc.’s (“Molycorp”) facility located in Washington, Pennsylvania. Molycorp’s SDP originally sought unrestricted decommissioning for the majority of the site, while also seeking restricted decommissioning of a portion of the site to include an on-site permanent storage facility for decommissioning materials.

2. By Memorandum and Order dated September 28, 2000, LBP-00-25, the Presiding Officer had, *inter alia*, granted Canton’s request for a hearing submitted in response to a Notice of Opportunity for Hearing relative to the Molycorp SDP

published in the *Federal Register* on about to [on] November 16, 1999 at pages 6227 [62,227] and 6228 [62,228].

3. Thereafter, by letter dated January 3, 2001, from Molycorp to the NRC, Molycorp formally withdrew its proposed License Amendment request submitted on July 14, 2000, which provides for on-site disposal of decommissioning materials. A copy of this letter is attached as Exhibit A.

4. Pursuant to Molycorp's withdrawal of its proposed License Amendment request providing for on-site disposal, the parties hereby stipulate and agree that the request for a hearing under Subpart L of 10 C.F.R. Part 2 submitted by Canton Township and granted by Memorandum and Order of this court dated September 28, 2000 is hereby withdrawn, and that this proceeding shall be terminated with prejudice.

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Molycorp

January 3, 2001

Mr. Larry Camper, Chief
Decommissioning Branch
US Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD 28052

Dear Mr. Camper

I am writing to notify you that Molycorp, Inc. is hereby withdrawing its proposed License Amendment request submitted on July 14, 2000, which provides for on-site disposal as detailed in Part 2 of Molycorp's Decommissioning Plan for the Washington, PA facility. While Molycorp still will decommission the facility as detailed in the approved Decommissioning Plan, Part 1, Molycorp will now dispose of the material off site and will ultimately seek a release of the site for unrestricted use.

However, due to factors beyond the control of Molycorp, Molycorp will not be able to finalize arrangements for off-site disposal and then complete the decommissioning within the time frame generally provided in 10 CFR §40.42. Accordingly, Molycorp is hereby also requesting an alternate schedule for the completion of decommissioning of the site, pursuant to §40.42(h)(2)(i). Molycorp's request for an alternate schedule will not increase the risk to public health and safety and/or the environment. A detailed schedule for the planned activities at Washington will be forwarded within 60 days.

Please call me if you have any questions.

Sincerely,

George W. Dawes
Project Manager

Xc: David Allard, PA DEP

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 No. 40-8681-MLA-9
(ASLBP No. 01-789-01-MLA)

INTERNATIONAL URANIUM (USA)
CORPORATION
(White Mesa Uranium Mill)

April 24, 2001

In this Memorandum and Order denying a hearing request in a Subpart L proceeding for lack of standing, the Presiding Officer concluded that the Petitioner failed to establish the requisite injury-in-fact.

RULES OF PRACTICE: STANDING TO INTERVENE
(INJURY IN FACT)

The existence of judicial standing hinges upon a demonstration of a present or future injury-in-fact that is arguably within the zone of interests protected by the governing statute(s). *Bennett v. Spear*, 520 U.S. 154, 162-63 (1997); *Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), CLI-93-16, 38 NRC 25, 32 (1993); *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-83-25, 18 NRC 327, 332 (1983).

RULES OF PRACTICE: STANDING TO INTERVENE (INJURY IN
FACT; ORGANIZATIONAL STANDING)

A petitioner cannot assert injury-in-fact to itself as an organization based upon nothing more than a broad interest — shared with many others — in the

preservation of the environment. *Sierra Club v. Morton*, 405 U.S. 727, 734-35 (1972). Nor can standing be founded on a petitioner's stated strong organizational interest in compliance with the dictates of federal and state laws and regulations. *Ten Applications for Low-Enriched Uranium Exports to EURATOM Member Nations*, CLI-77-24, 6 NRC 525, 531 (1977), citing *Warth v. Seldin*, 422 U.S. 490, 499 (1975); *Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1)*, CLI-83-25, 18 NRC 327, 333 (1983).

**RULES OF PRACTICE: STANDING TO INTERVENE
(INJURY IN FACT)**

To constitute an adequate showing of injury-in-fact within a cognizable sphere of interest "pleadings must be something more than an ingenious academic exercise in the conceivable. A plaintiff must allege that he has been or will in fact be perceptibly harmed by the challenged agency action, not that he can imagine circumstances in which he could be affected by the agency's action." *United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 412 U.S. 669, 688-89 (1973).

**MEMORANDUM AND ORDER
(Denying a Hearing Request for Lack of Standing)**

At hand is the February 7, 2001, hearing request of the Glen Canyon Group of the Sierra Club (Petitioner) directed to an application of the International Uranium (USA) Corporation (Licensee) to amend its source material license. In a March 14 answer, the Licensee opposed on several grounds the grant of the hearing request. By March 16 order, I authorized the Petitioner to respond to the Licensee's answer, which it did in a March 30 filing. Finally, on April 11, Judge Cole and I held a telephone conference with counsel and other representatives of the two parties for the purpose of discussing further some of the assertions in their written submissions. (The NRC Staff was not represented at the conference because it had notified me in a March 6 letter that, exercising the option provided it by 10 C.F.R. § 2.1213, it did not intend to participate in this proceeding.)

This matter is subject to the provisions of Subpart L of the Commission's Rules of Practice, which sets out the informal hearing procedures governing the adjudication of material licensing proceedings. 10 C.F.R. § 2.1201 *et seq.* Section 2.1205(e) spells out the required content of a hearing request submitted in a Subpart L proceeding. The request must describe "in detail" (1) the interest of the requestor in the proceeding; (2) how that interest might be affected by the results of the proceeding, with particular reference to the factors set out in

paragraph (h) of the section; and (3) the requestor's areas of concern about the licensing activity that is the subject matter of the proceeding.

For its part, in the instance of a timely filed hearing request such as this one, section 2.1205(h) of Subpart L charges the Presiding Officer with the duty of determining both that the areas of concern specified therein are germane to the subject matter of the proceeding and that the "judicial standards for standing" have been met by the hearing requestor. The Petitioner asserts that both of these requirements have been satisfied; the Licensee insists that neither has been met.

For the reasons set forth below, I conclude that the hearing request falls well short of establishing the Petitioner's standing to maintain this action. Without reaching any other issues that might be presented by the papers before me, I am therefore required by section 2.1205(h) to deny the hearing request.

I. BACKGROUND

A. Under the aegis of a source material license issued to it by the Commission in 1980, and renewed in 1985 and then again in 1997, the Licensee has been operating a uranium recovery facility (the White Mesa Uranium Mill) located near Blanding, Utah, for over two decades. According to an uncontroverted statement in the Licensee's March 14 submission (at 21), the mill has been processing conventional ores since 1980 and alternate feed materials since 1993.¹ Over the course of the life of the license, numerous amendments have been sought and obtained in connection with these activities.

The license amendment now being sought would allow the mill to receive and process up to 17,750 tons of alternate feed material from the Molycorp Site located in Mountain Pass, California. The hearing request under consideration was filed in response to a notice of opportunity for hearing on the proposed amendment that was published in the *Federal Register* on January 9, 2001 (66 Fed. Reg. 1702).

According to the notice, the Molycorp material is the result of the extraction of lanthanides and other rare earth materials and is currently being stored in ponds as lead sulfide sludge. The Licensee and Molycorp estimate "the average uranium content of the material to be approximately 0.15 percent, or greater." The former proposes to receive and process the material for that content and to dispose of the byproduct material in the mill's tailings cells.

By way of supplementary information, the notice refers, *inter alia*, to the Licensee's determination that the material does not contain listed hazardous waste

¹The Commission has an established policy with respect to whether particular uranium-bearing materials other than those qualifying as conventional ores (i.e., alternate feed materials) may be processed at a licensed uranium mill such as the White Mesa Mill. See 60 Fed. Reg. 49,296 (Sept. 22, 1995).

as defined in the Resource Recovery and Conservation Act, as amended, 42 U.S.C. §§ 6901-91. The notice also states that the material will be processed utilizing an acid leach, in existing mill equipment, to dissolve the uranium. The solution will then be advanced through the mill circuitry with no significant physical modifications.

The notice goes on to indicate that the material will be shipped from the Mountain Pass facility to the mill using exclusive-use trucks and in lined, covered, aluminum end-dump trailers. An estimated sixty to seventy trucks per week will carry the shipments over a period of 60 to 90 days. Finally, the notice refers to the fact that the NRC Staff will review the application under its current formal interim guidance on the use of uranium mill feed material other than natural ores and notes that it “has approved similar amendment requests in the past for separate alternate feed material under this license.”

B. In providing in section 2.1205(h) that the “judicial standard for standing” must be met in order to allow the grant of a Subpart L hearing request, the Rules of Practice go on in that subsection to stipulate that three factors, among others, must be considered: (1) the nature of the requestor’s right under the Atomic Energy Act to be made a party to the proceeding; (2) the nature and extent of the requestor’s property, financial, or other interest in the proceeding; and (3) the possible effect of any order that may be entered in the proceeding upon the requestor’s interest. In specifying these factors, the Commission likely had in mind that, as is now well settled, the existence of judicial standing hinges upon a demonstration of a present or future injury-in-fact that is arguably within the zone of interests protected by the governing statute(s). *See, e.g., Bennett v. Spear*, 520 U.S. 154, 162-63 (1997); *Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), CLI-93-16, 38 NRC 25, 32 (1993); *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-83-25, 18 NRC 327, 332 (1983).

In its hearing request, the Petitioner explicitly recognized that it had to demonstrate such an injury-in-fact. To that end, it furnished two affidavits in support of its claim that such a demonstration had been made.

The first, that of W. Herbert McHarg, was appended to the hearing request. In it, Mr. McHarg attested to his membership in the Petitioner’s organization and to a strong personal interest in the application of federal and state environmental and safety laws and regulations, as well as of the laws and regulations that govern administrative agencies and other administrative bodies — with particular reference to the National Environmental Policy Act. According to the affidavit, although he resides at a distance of 25 miles from the mill, vehicular travel in connection with his employment, bicycle trips, and hiking activities have brought Mr. McHarg in close proximity to its site. In this connection, he assertedly has suffered eye, nose, and skin irritation said to be caused by dust having as its source trucks hauling materials to the mill. Additionally, he is concerned about

the possibility of accidents involving those trucks. Finally, Mr. McHarg makes a passing reference, with no attempt at specificity, to drinking “from water that I believe may be affected” by the material that would be processed at the mill under the sought amendment.

The other affidavit, inadvertently omitted from the hearing request (although alluded to therein) and later accepted by me as a supplementation of the request, was that of Loren Morton. A senior hydrogeologist for the Division of Radiation Control in the Utah Department of Environmental Quality, Mr. Morton had prepared the affidavit in August 1998 in connection with another proceeding involving a license amendment application concerned with this mill. For reasons that were set forth in the affidavit, Mr. Morton expressed the opinion (at 7) that there is a “significant potential for undetected seepage discharge from the [mill’s] tailing cells to groundwater, and thus, to ‘waters of the state.’”

II. DISCUSSION

A. As is apparent from the written submissions of the parties, there is substantial disagreement between them on a variety of issues associated with the proposed license amendment. Among them are whether (1) the Molycorp material might contain listed hazardous waste; (2) that material is significantly different from the other conventional ores and alternate feed materials that have been processed at the mill under the existing license and amendments thereto; and (3) the grant of the proposed license amendment would be inconsistent with pertinent statutory and regulatory provisions, including those of the National Environmental Policy Act.

None of those questions need be explored here, however, unless it is first determined that the Petitioner has met its burden of demonstrating that the grant of the license amendment threatens it with injury-in-fact. In making that determination, two well-established legal principles come into play.

The first is that Petitioner cannot assert injury-in-fact to it as an organization based upon nothing more than a broad interest — shared with many others — in the preservation of the environment in the area of the mill. *See Sierra Club v. Morton*, 405 U.S. 727, 734-35 (1972). Nor can standing be founded on Petitioner’s stated strong organizational interest in compliance with the dictates of federal and state laws and regulations. The Commission has made it abundantly clear that the assertion of such a general interest — again, one that is not unique to the organization asserting it but rather is broadly held — cannot serve to confer standing. *See Ten Applications for Low-Enriched Uranium Exports to EURATOM Member Nations*, CLI-77-24, 6 NRC 525, 531 (1977), citing *Warth v. Seldin*, 422 U.S. 490, 499 (1975); *Three Mile Island, supra*, 18 NRC at 333.

The other governing principle relates to what constitutes an adequate showing of injury-in-fact within a cognizable sphere of interest. As noted last year in *Cabot Performance Materials* (Reading, Pennsylvania), LBP-00-13, 51 NRC 284, 289 (2000), that matter has received considerable judicial attention. Among the decisions addressing it is *United States v. Students Challenging Regulatory Agency Procedures (SCRAP)*, 412 U.S. 669, 688-89 (1973), in which the Supreme Court observed:

Of course, pleadings must be something more than an ingenious academic exercise in the conceivable. A plaintiff must allege that he has been or will in fact be perceptibly harmed by the challenged agency action, not that he can imagine circumstances in which he could be affected by the agency's action.

And, as *Cabot Performance Materials* went on to point out (*ibid.*), a like note had been struck many times in NRC adjudicatory decisions. It referred specifically in this regard to a Licensing Board summary some years ago of the results of a scrutiny of numerous Supreme Court holdings on the subject:

Although variously described, the asserted injury must be "distinct and palpable" and "particular [and] concrete," as opposed to being "conjectural . . . [,] hypothetical," or "abstract." The injury need not already have occurred but when future harm is asserted, it must be "threatened," "certainly impending," and "real and immediate."

Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Unit 1), LBP-92-4, 35 NRC 114, 121 (1992) (footnotes omitted), subsequently quoted in *Babcock and Wilcox* (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-93-4, 37 NRC 72, 81 (1993).²

B. Applying the foregoing settled principles to the content of the hearing request under present consideration, it is manifest that the Petitioner's attempted showing of injury-in-fact is inadequate. The short of the matter is that, given the teachings of *Sierra Club v. Morton* and *Warth v. Seldin*, *supra*, the Petitioner has no basis for claiming that, as an organization, it might sustain a legally cognizable injury from the mill activities involving the Molycorp material. Thus, of necessity, any standing to seek a hearing on the license amendment application must rest upon its acting in the capacity of the representative of its members (such as Mr. McHarg) who have occasion to find themselves, for one reason or another, in the vicinity of the mill. Upon analysis, however, the conclusion is compelled that neither of the affidavits offered in support of the hearing request serves to demonstrate that the activities covered by the proposed license amendment pose

²While the Commission reversed the Licensing Board's determination in *Perry* that standing was lacking in the circumstances of that case, it did so on a ground that is inapplicable here and, moreover, did not manifest disagreement with the Board's summary quoted in the text. See *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87 (1993).

a concrete threat of harm to such a member or members above and beyond what might have resulted from already licensed activities at the mill.

As has been seen, in terms of cognizable potential injury to Petitioner's members, those affidavits focus upon two aspects of the proposed activity in question: the transportation of the Molycorp material to the mill; and the storage, after the processing has taken place, of the byproduct material in the mill's tailings cells. Specifically, on the former score, the McHarg affidavit raises the specter of the creation of harmful dust as an incident of the movement of the lead sulfide sludge to the mill by truck and also alludes to the possibility of a traffic accident. For its part, the purpose of the Morton affidavit, prepared almost 3 years ago in connection with a prior license amendment application concerned with this mill, is to suggest the possibility of a leakage of the material in the tailings cells with a resultant contamination of otherwise potable groundwater. In that regard, while maintaining that he drinks from waters that he believes might be affected by the materials handled at the mill, Mr. McHarg provides not the slightest illumination respecting where those waters might be located.

It need not be here decided whether, and if so how much, weight might appropriately be attached to the averments in these affidavits were the Petitioner writing on a barren slate (i.e., were there no extended history of mill operation). For the slate in that respect is far from empty. Once again, over a period in excess of 20 years, this mill has been engaged in the processing of conventional ores or alternate feed materials under explicit NRC authorization. Whether or not, as the Licensee maintains, the Molycorp material is not significantly different in content from materials said to contain lead that were previously processed at the mill, this much appears clear: if granted, the license amendment in issue scarcely would break entirely new ground.

This being so, and turning first to the matter of the postulated possible leakage from the tailings cells into groundwater, it is of pivotal significance that neither the Morton affidavit nor anything else offered by the Petitioner in support of the hearing request calls attention to instances of such leakage in the past (or even directly asserts the likely existence of such instances). Nor is there an assigned reason why, because of its composition, the Molycorp material might give rise to a greater risk of such leakage than existed with regard to the materials previously processed at the mill. In other words, one has been given no cause by the Petitioner and its Morton affidavit to believe that the processing and storage activities sought to be authorized by this license amendment might pose a larger risk of injury to the Petitioner's members such as Mr. McHarg than that associated with the mill activities already licensed — which, insofar as now appears, have not occasioned any seepage into groundwater.

The transportation concerns set forth in the McHarg affidavit rest on an equally shaky foundation. One can readily accept his averment that past truck movements of materials to the mill have produced quantities of dust that have caused irritation

to the eyes, noses, and mouths of persons in the vicinity. That is an unfortunate and entirely foreseeable possible consequence of truck traffic on highways. But the truck movements to which Mr. McHarg refers seemingly were incident to previously licensed activities and, here too, there is no reason given why the transportation of the Molycorp material might have a still greater potential for dust production. Indeed, the Licensee suggests without contradiction that the precise opposite might be true. For, apart from the fact that, according to the application (as summarized in the *Federal Register* notice), the material will be transported in lined and covered trailers; as lead sulfide sludge it will be wet and thus presumably less likely to generate dust.³

At bottom, then, the Petitioner has not come close to fulfilling its burden of establishing a “distinct and palpable” — or as otherwise characterized “particular and concrete” — present or threatened injury-in-fact attributable to the activity to which the sought license amendment relates. *Perry, supra*. In a nutshell, it has demonstrated neither (1) that prior licensed source material processing activities at this mill have caused leakage of containments into groundwater nor (2) that the nature of the Molycorp material is such that there is a greater likelihood of such leakage if the license amendment in issue is granted. Further, there has been no showing that the transportation of the Molycorp material to the mill poses a threat not present with regard to the transportation of materials already authorized by the Commission. In these circumstances, the claim that activities under the proposed license amendment might cause incremental harm must be deemed to rest on nothing more than unfounded conjecture.

For the foregoing reasons, the hearing request is *denied* on the sole ground that the Petitioner has not demonstrated that it has the standing to obtain a hearing on the license amendment application in question.⁴ If so inclined, the Petitioner may appeal this Order to the Commission within ten (10) days of its service in the manner prescribed in 10 C.F.R. § 2.1205(o).

³Mr. McHarg’s additional concern regarding the potential for a traffic accident in the course of the transportation of the Molycorp material to the mill rests on no better footing. There is no claim here that that potential differs significantly, in either nature or magnitude, from the risk associated with the transportation to the mill of the materials that have been or will be received and processed there under Commission authority currently in effect. And no such possible difference on that score is readily apparent.

⁴It might be noted parenthetically that, just 2 months ago, another Presiding Officer denied a hearing request addressed to a license amendment application involving the receipt and processing at this mill of alternate feed material coming from a New Jersey site. Although the precise nature of the interest asserted in that case was not the same as that advanced here, the Presiding Officer reached the identical conclusion that the hearing requestor had failed to demonstrate the requisite injury-in-fact. *International Uranium (USA) Corp.* (White Mesa Uranium Mill), LBP-01-8, 53 NRC 204, 220 (2001).

It is so ORDERED.

BY THE PRESIDING OFFICER⁵

Alan S. Rosenthal
ADMINISTRATIVE JUDGE

Rockville, Maryland
April 24, 2001

⁵Copies of this Memorandum and Order were sent this date by facsimile transmission to (1) counsel for International Uranium (USA) Corporation; (2) counsel for the Glen Canyon Group of the Sierra Club; and (3) Ken Sleight of the Glen Canyon Group of the Sierra Club.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
Edward McGaffigan, Jr.
Jeffrey S. Merrifield

In the Matter of

Docket No. 50-423-LA-3

**NORTHEAST NUCLEAR ENERGY
COMPANY
(Millstone Nuclear Power Station,
Unit 3)**

May 10, 2001

In this 10 C.F.R. Part 2, Subpart K spent fuel pool expansion proceeding, the Commission affirms the Board's ruling in LBP-00-26 that the phrase "physical systems or processes" in General Design Criterion 62, 10 C.F.R. Part 50, Appendix A, comprehends the administrative and procedural measures necessary to implement or maintain such physical systems or processes. The Commission's decision has no effect on a pending motion for reconsideration of the Licensing Board's denial of Intervenors' motion to reopen the record.

REGULATIONS: INTERPRETATION (GDC 62)

GDC 62 does not prohibit so-called "administrative" criticality prevention measures such as the use of soluble boron and restrictions on fuel enrichment, burnup, and decay time.

REGULATIONS: INTERPRETATION (GENERAL DESIGN CRITERIA)

The general design criteria set out in 10 C.F.R. Part 50, Appendix A, are "cast in broad, general terms and constitute the minimum requirements for the principal

design criteria of water-cooled nuclear power plants. There are a variety of methods for demonstrating compliance with GDC.” See *Petition for Emergency and Remedial Action*, CLI-78-6, 7 NRC 400, 406 (1978). They include little implementing detail. The general design criteria are “only a regulatory beginning and not the end product.” *Nader v. NRC*, 513 F.2d 1045, 1052 (D.C. Cir. 1975).

REGULATIONS: INTERPRETATION (GENERAL RULES; GDC 62)

Interpretation of a regulation begins with the language and structure of the provision itself. See *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 299 (1997). GDC 62 instructs NRC licensees in general terms to prevent criticality “by physical systems or processes.” Intervenor see in this clause a prohibition against “administrative” measures (i.e., human intervention). But the text of GDC 62 contains no such restrictive provisions. In the context of regulations pertaining to nuclear power facilities, a “physical process” is a method of doing something, producing something, or accomplishing a specific result using the forces and operations of physics. Similarly, a “physical system” is an organized or established procedure or method based on the forces and operations of physics. See *Webster’s Third New International Dictionary (Unabridged)* 1706, 1808, 2322 (1993). Neither term excludes human intervention to set physical forces in motion or to monitor them. GDC 62 is not incompatible with “administrative” implementation of physical properties.

REGULATIONS: INTERPRETATION (GDC 62)

The nuclear power industry uses criticality control methods that require reliance on administrative measures. Those measures have evolved from the use of low-density storage racks to reliance on neutron-absorbing storage racks, to use of soluble boron, and, finally, to controlling reactivity (initial enrichment, burnup level, and decay time) of the fuel. The physical criticality control methods used over the years form a continuum that includes increasingly substantial administrative or human components. Although all of these storage methods have been found safe and all are based on physical processes or systems, Intervenor arbitrarily attempt to draw a line that would permit the use of neutron-absorbing racks, but nothing further along the continuum. There is no scientific or regulatory basis for drawing such a line between permissible and impermissible administrative controls. Indeed, GDC 62 itself does not use the term “administrative controls” or purport to prohibit them. Any attempted further distinction between classes of such controls is, at best, artificial.

REGULATIONS: INTERPRETATION (GDC 62)

GDC 62's use of the term "physical" simply reinforces an obvious point: effective criticality prevention requires protective physical measures. The regulatory term excludes, at the most, marginal (and implausible) criticality prevention schemes lacking any physical component, such as, perhaps, mere observation without accompanying physical mechanisms.

REGULATIONS: INTERPRETATION (GENERAL DESIGN CRITERIA; GDC 62)

General design criteria do not purport to prescribe "precise tests or methodologies." See *Petition for Emergency and Remedial Action*, CLI-78-6, 7 NRC 400, 406 (1978). Intervenors nonetheless would have us construe GDC 62 to distinguish between "one-time" and "ongoing" administrative controls and to allow only "one-time" controls. Nothing in the text of GDC 62 suggests that, when promulgating the rule, the Commission envisioned anything like Intervenors' complex approach, and we decline to adopt it today.

REGULATIONS: INTERPRETATION (GDC 62)

The criticality control measures proposed by the Licensee rely on "physical systems and processes" and do not violate GDC 62. So long as criticality is prevented by a physical process, the types of administrative procedures used to implement or maintain the process are simply not relevant, presuming, of course, that the procedures are safe.

REGULATIONS: INTERPRETATION (GDC 62)

The change in wording from the proposed rule to the final rule is explained as merely stating a nonbinding preference for the use of geometrically safe configurations. Procedural controls are inherent in the physical processes and systems available for criticality control; therefore, we find no significance in omitting the term "procedural controls" from the final rule.

REGULATIONS: INTERPRETATION (GDC 62)

At the time GDC 62 was promulgated, the use of higher density configurations for spent fuel storage was in its infancy. The use of configurations that were geometrically safe, without other criticality control measures, was standard in 1971. In historical context, the language of GDC 62 that criticality "shall be prevented by physical systems or processes, preferably by use of geometrically

safe configurations’’ reflected then-current practice. By using general (and flexible) language in GDC 62, the Commission left the door open to employ any other physical systems or processes that would, as technology developed, safely prevent criticality in the spent fuel pool. It is not reasonable to interpret a broadly phrased regulation, promulgated by an agency charged with oversight of an evolving technical industry, as barring the use of later technological developments.

REGULATIONS: INTERPRETATION (GENERAL RULES)

In construing a regulation’s meaning, it is necessary to examine the agency’s entire regulatory scheme. Regulations dealing with the same subject should be construed together, and a later regulation is presumed to be in accord with the policy embedded in prior regulations. *See Strickland v. United States*, 199 F.3d 1310, 1315 (Fed. Cir. 1999) (*citing* 2A Sutherland, *Statutory Construction* § 51.01 (4th ed. 1984)).

REGULATIONS: INTERPRETATION (10 C.F.R. § 50.68; GDC 62)

Section 50.68 of 10 C.F.R. expressly provides for the use of enrichment, burnup, and soluble boron as criticality control measures. Both the regulation and its history demonstrate that the Commission endorses the use of physical controls with significant procedural aspects for criticality control. The Commission was mindful of GDC 62 when it approved the use of administrative controls in 10 C.F.R. § 50.68. The Statement of Considerations refers specifically to GDC 62 as reinforcing the prevention of criticality in fuel storage and handling “through physical systems, processes, and safe geometrical configuration.” *See* “Criticality Accident Requirements,” 62 Fed. Reg. 63,825, 63,826 (Dec. 3, 1997).

REGULATIONS: INTERPRETATION (GENERAL RULES; GDC 62)

As the latest expression of the rulemakers’ intent, the more recent regulation prevails if there is a perceived conflict with an earlier regulation. *See* 2B Sutherland, *Statutory Construction* § 51.02 (1992). The specific provisions of 10 C.F.R. § 50.62 provide strong evidence for our current reading of the more general strictures of GDC 62.

NUCLEAR WASTE POLICY ACT: WASTE DISPOSAL

REGULATIONS: INTERPRETATION (GDC 62)

In 1982, the Nuclear Waste Policy Act (‘NWPA’) was enacted by Congress, recognizing that the accumulation of spent nuclear fuel is a national problem

and that federal efforts to devise a permanent solution to problems of civilian radioactive waste disposal have not been adequate. *See* 42 U.S.C. § 10131(a)(2)-(3). The NWPA established federal responsibility and a definite federal policy for the disposal of spent fuel. *See* 42 U.S.C. § 10131(b)(2). Further, the Act declared as one of its purposes the addition of new spent nuclear fuel storage capacity at civilian reactor sites. *See* 42 U.S.C. § 10151(b)(1). The NWPA directed nuclear power reactor operators to exercise their “primary responsibility” for interim storage of spent fuel “by maximizing, to the extent practical, the effective use of existing storage facilities at the site of each civilian nuclear power reactor, and by adding new onsite storage capacity in a timely manner where practical.” *See* 42 U.S.C. § 10151(a)(1). Under the NWPA, the Commission was to promulgate rules for an expedited hearing process on applications “to expand the spent nuclear fuel storage capacity at the site of civilian nuclear power reactor[s] through the use of high-density fuel storage racks.” *See* 42 U.S.C. § 10154. The Licensing Board’s understanding of GDC 62 is compatible with the NWPA, while Intervenor’s viewpoint cannot be reconciled with congressional policy on nuclear waste storage.

REGULATIONS: INTERPRETATION (GENERAL RULES; GDC 62)

“Agency practice, of course, is one indicator of how an agency interprets its regulations.” *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-6, 43 NRC 123, 129 (1996). *See also Public Service Co. of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-459, 7 NRC 179, 190 (1978) (reasonable interpretation of an act by officials charged with its administration entitled to deference). The NRC Staff has been authorizing credit for fuel enrichment and burnup limits for nearly 20 years. No criticality accidents have been reported in any spent fuel pool. *See* LBP-00-26, 52 NRC 181, 191 (2000). The NRC Staff has continuously interpreted GDC 62 in a manner consistent with the language of the criterion, the history of GDC 62, the practical realities of spent fuel storage, and the NWPA.

REGULATIONS: INTERPRETATION (GDC 62)

The phrase “physical systems or processes” in GDC 62 comprehends the administrative and procedural measures necessary to implement or maintain such physical systems or processes.

MEMORANDUM AND ORDER

This proceeding arises out of a request by Northeast Nuclear Energy Company (“NNECO”) for a license amendment to increase the storage capacity of Millstone Unit No. 3’s spent fuel pool from 756 assemblies to 1860 assemblies. The Connecticut Coalition Against Millstone (“CCAM”) and the Long Island Coalition Against Millstone (“CAM”) (collectively, “CCAM/CAM”) oppose the requested amendment.¹ The Licensing Board granted standing to CCAM and CAM as Intervenors and admitted three of their contentions for adjudication in a proceeding under 10 C.F.R. Part 2, Subpart K (10 C.F.R. §§ 2.1101-2.1117).² On October 26, 2000, the Board issued a Memorandum and Order that adopted an agreed-upon license condition resolving Contention 5,³ denied the request for an evidentiary hearing on other issues, and terminated the proceeding. *See* LBP-00-26, 52 NRC 181 (2000).

The Board ruled that there was no genuine dispute of fact or law meriting an evidentiary hearing regarding CCAM/CAM’s Contention 4, relating to the risk of criticality accidents. *See id.* at 200. The Board also denied an evidentiary hearing as to Contention 6, relating to the legal question whether an NRC rule, General Design Criterion 62 (“GDC 62”), allows the use of administrative controls (i.e., human oversight or monitoring of physical devices or systems) to prevent criticality in the spent fuel pool. *See id.* at 212-14. The Board held that administrative controls are permissible under GDC 62. *Id.* CCAM/CAM filed a joint petition for Commission review of LBP-00-26 concerning Contentions 4 and 6.

The Commission denied review regarding Contention 4, on the ground that the Board’s fact findings seemed reasonable. *See* CLI-01-3, 53 NRC 22, 25-27 (2001). As to Contention 6, the Commission noted that the Licensing Board in the pending *Shearon Harris* proceeding had reached the same conclusion as the Board in the instant case,⁴ and that the issue might recur. *See id.* at 28. Thus,

¹The NRC Staff issued the amendment on Nov. 28, 2000, after finding that it posed “no significant hazards considerations” under 10 C.F.R. § 50.92. *See* 65 Fed. Reg. 75,736 (Dec. 4, 2000).

²*See* LBP-00-2, 51 NRC 25 (2000). The Board admitted Contentions 4, 5, and 6 — all dealing with criticality questions — and rejected eight other contentions.

³In Contention 5, CCAM/CAM contested a proposed technical specification (“TS”) amendment that would have required surveillance of boron concentration in the spent fuel pool only during fuel movement. Previously, the TS required that soluble boron be maintained at a minimum of 1750 ppm, with surveillance every 72 hours, whenever spent fuel is stored. Intervenors queried whether the proposed change in surveillance schedule would lead to an increased likelihood of a criticality accident arising from a misloaded fuel assembly between fuel movements. The agreed-upon TS includes a requirement that soluble boron concentration be greater than or equal to 800 ppm and that the concentration be verified at least once every 7 days.

⁴*See Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-00-12, 51 NRC 247, 255-60 (2000). In *Shearon Harris* the Board of Commissioners of Orange County, North Carolina (“BCOC”) contended that the requirement of GDC 62 that criticality in a facility’s fuel storage and handling system must be prevented

(Continued)

the Commission granted review and directed the parties to address in particular the question whether GDC 62 permits a licensee to take credit in criticality calculations for fuel enrichment, burnup, and decay time limits. *See id.* We permitted the parties in the *Shearon Harris* proceeding (Carolina Power & Light Co. (“CP&L”) and BCOC) to file *amicus curiae* briefs, and they did so.

For the reasons stated below, we affirm the Board’s ruling regarding Contention 6.

I. BACKGROUND

In Contention 6, CCAM/CAM alleged that proposed criticality control measures would violate NRC regulations. CCAM/CAM relied on GDC 62, one of the General Design Criteria for Nuclear Power Plants listed in 10 C.F.R. Part 50, Appendix A. GDC 62 provides:

Prevention of criticality in fuel storage and handling. Criticality in the fuel storage and handling system shall be prevented by physical systems or processes, preferably by use of geometrically safe configurations.

See 10 C.F.R. Part 50, Appendix A (“General Design Criteria for Nuclear Power Plants”). CCAM/CAM contend that NNECO proposes to violate GDC 62 by using measures that CCAM/CAM characterize as “administrative” or “procedural” rather than “physical” to prevent criticality at Millstone 3. Credits for soluble boron in the pool water and for fuel enrichment, burnup, and decay time limits are the disputed “administrative” methods of criticality control, considered by CCAM/CAM to be precluded by GDC 62.

The Board rephrased Contention 6 as a question of law: “Does GDC 62 permit a licensee to take credit in criticality calculations for enrichment, burnup, and decay time limits, limits that will ultimately be enforced by administrative controls?” *See* LBP-00-2, 51 NRC at 41. The Board analyzed the parties’ arguments and answered the question in the affirmative. *See* LBP-00-26, 52 NRC at 212-14. To the Board, “such administrative controls are inherently comprehended within the phrase ‘physical systems or processes’ that appears in GDC 62.” *See id.* at 212. As noted above, we agreed to review the Board’s decision.

by “physical systems or processes, preferably by use of geometrically safe configurations,” precludes the use of administrative controls. BCOC characterized burnup and enrichment level controls and the presence of soluble boron in the spent fuel pool as forbidden administrative controls. *See id.* at 255. The Board found that, while geometric configuration is preferred for criticality control, the term “processes” in GDC 62 includes the administrative measures they encompass. *See id.* at 260.

II. DISCUSSION

The crux of the current appeal is the meaning of GDC 62; specifically, whether it prohibits so-called “administrative” criticality prevention measures such as the use of soluble boron and restrictions on fuel enrichment, burnup, and decay time. CCAM/CAM argue that the Board erred, *inter alia*, by violating basic principles of construing agency regulations and by failing to recognize a supposedly obvious distinction between measures that are fundamentally physical and those that are fundamentally procedural or administrative. BCOC’s *amicus* brief supports CCAM/CAM’s position, and CP&L’s *amicus* brief supports the NRC Staff’s and NNECO’s position.

In considering whether GDC 62 invalidates NNECO’s license amendment, we start with several observations apparent from the record in this case. *First*, after considering the parties’ competing expert presentations, the Board ruled that NNECO’s proposed criticality prevention measures provide an “adequate safety margin and defense-in-depth.” *See* LBP-00-26, 52 NRC at 200. Finding the Board’s factual determination “well grounded in the extensive original record,” we declined to review it. *See* CLI-01-3, 53 NRC at 26. *Second*, over the past 20 years, the NRC Staff frequently, perhaps as many as twenty times, has approved criticality prevention measures identical or equivalent to NNECO’s. *See* LBP-00-26, 52 NRC at 210. *Third*, these measures have proved effective, for there have been no criticality accidents in spent fuel pools. *See id.* at 191.

CCAM/CAM nonetheless argue that GDC 62, promulgated some 30 years ago, overrides all of this, and invalidates the criticality prevention measures that the NRC Staff has approved at Millstone (in this case) and at numerous other facilities. In CCAM/CAM’s view, when GDC 62 calls for preventing criticality in spent fuel pools through “physical systems or processes,” it creates a legal bar against using so-called “administrative” or “procedural” means — i.e., human intervention — to implement physical protections against criticality.

We find no persuasive support for CCAM/CAM’s position. On the contrary, we agree with the Board in this case, and with the *Shearon Harris* Board, that GDC 62 does not prohibit the criticality control measures challenged here. Nothing in GDC 62’s language, in its regulatory history, in related statutes and agency rules, or in NRC practice establishes a prohibition against human intervention advocated by CCAM/CAM.

A. The Language of GDC 62

At the outset, it is important to understand the nature of the general design criteria set out in 10 C.F.R. Part 50, Appendix A. As observed long ago, the GDC are “cast in broad, general terms and constitute the minimum requirements for the principal design criteria of water-cooled nuclear power plants. There are a variety

of methods for demonstrating compliance with GDC.” See *Petition for Emergency and Remedial Action*, CLI-78-6, 7 NRC 400, 406 (1978). They include little implementing detail. The general design criteria are “only a regulatory beginning and not the end product.” *Nader v. NRC*, 513 F.2d 1045, 1052 (D.C. Cir. 1975).

Unsurprisingly, then, GDC 62 speaks broadly and lacks specific directives. As with all rules, its interpretation begins with the language and structure of the provision itself. See *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 299 (1997). GDC 62 instructs NRC licensees in general terms to prevent criticality “by physical systems or processes.” CCAM/CAM see in this clause a prohibition against “administrative” measures (i.e., human intervention). But the text of GDC 62 contains no such restrictive provisions.

In the context of regulations pertaining to nuclear power facilities, the term “physical” means simply “characterized or produced by the forces and operations of physics.” See *Webster’s Third New International Dictionary (Unabridged)* 1706 (1993). The term “process” means “a particular method of doing something, producing something, or accomplishing a specific result.” See *id.* at 1808. And the term “system” is “an organized or established procedure or method.” See *id.* at 2322. Thus, a “physical process” is a method of doing something, producing something, or accomplishing a specific result using the forces and operations of physics. Similarly, a “physical system” is an organized or established procedure or method based on the forces and operations of physics. Neither term excludes human intervention to set physical forces in motion or to monitor them. On the contrary, as both Board decisions at issue here held, one of the regulatory terms, “processes,” appears to directly contemplate administrative controls. See LBP-00-26, 52 NRC at 212; LBP-00-12, 51 NRC at 260. As we further detail below, GDC 62 is not incompatible with “administrative” implementation of physical properties — which is what NNECO proposes to do here.

1. Physical Systems or Processes

A brief summary of the physical principles involved in achieving or preventing criticality will provide context for the language of GDC 62. Criticality is the achievement of a self-sustaining nuclear chain reaction. Fission can occur when a neutron is absorbed by uranium-235. Fission releases one or more neutrons, as well as energy and fission products. Neutrons resulting from fission have high energy (i.e., they are said to be “fast”) and cannot readily be captured in uranium-235 to produce additional fissions. The fast neutrons must lose energy in the presence of a moderator such as water to become “thermal” neutrons, which can be captured effectively by the remaining uranium-235 to produce additional nuclear fissions.

Not all of the thermal neutrons cause fission of uranium-235, as some of them leak out of the system and some are absorbed by nonproductive capture in the fuel, the moderator, or the structural materials. The nuclear chain reaction depends upon neutrons that are *effectively* absorbed by the fissile material to produce additional fission, resulting in additional neutrons. When the production of effective neutrons is sufficient for the process to continue on its own, generating one *effective* neutron for each one consumed, the system is denoted “critical.”

Controlling neutrons is the *physical* basis of all criticality control measures, and only physical measures can achieve this control. Four methods of criticality control are in common use: (1) geometric separation of fuel; (2) solid neutron absorbers; (3) soluble neutron absorbers; and (4) reactivity limits. All recognize the physical characteristics of the fuel, and their application includes consideration of such factors as the media surrounding the fuel. The reactivity of the fuel depends on its original enrichment, fuel burnup and decay time of the fission products, and the neutronic characteristics of the fuel array, including the geometry, external absorbers, and the media.

CCAM/CAM agree that two of these measures — geometric separation and use of solid boron — are physical systems or processes acceptable for criticality control under GDC 62.⁵ Varying the physical spacing between fuel assemblies changes the neutronic coupling between assemblies. Solid neutron absorbers physically remove neutrons that could cause fission. Although CCAM/CAM disagree, the remaining criticality control measures — soluble neutron absorbers and fuel reactivity limits — also depend on “physical” processes. Soluble neutron absorbers work on the same physical principle as solid neutron absorbers, and even CCAM/CAM find solid absorbers acceptable. Fuel reactivity limits also rest on laws of physics. Reactivity increases as the enrichment of the fuel increases because the production of neutrons is greater and because more fissile material is available. Fuel burnup is a well-understood physical process that both reduces the amount of fissile uranium in the fuel and replaces the uranium with other elements that are neutron absorbing. Decay time recognizes the physical phenomenon of reduction in the amount of fission products available in the spent fuel assemblies as they physically decay into other isotopes.

In short, only physical processes or systems are at issue in the instant case; therefore, the license amendment requested by NNECO complies with the terms of GDC 62. We agree with NNECO’s observation that its criticality control

⁵ See “Connecticut Coalition Against Millstone and Long Island Coalition Against Millstone Reply Brief on Appeal of LBP-00-26 at 1-2 (Mar. 15, 2001) (“CCAM/CAM Reply Brief”). BCOC also admits that the absence of water as a moderator is a physical system. See “Orange County’s Amicus Brief on Review of LBP-00-26” at 15 (Feb. 7, 2001) (“BCOC Brief”). Without a moderator, the neutrons are too “fast” and, therefore, ineffective in continuing the nuclear chain reaction. See “Connecticut Coalition Against Millstone and Long Island Coalition Against Millstone Brief on Review of LBP-00-26,” at 22-23 (Feb. 7, 2001) (“CCAM/CAM Brief”).

system is “physical, at every conceivable level — from the atomic to the system level.”⁶ As noted by the Board,

GDC 62 does indeed express a preference for certain types of engineered systems: the Intervenor’s desire to rely only on autonomous controls [such as (1) and (2), *supra*] appears to be a natural extension of the preference [for geometrically safe configurations] set forth in GDC 62. But it is just that: a preference, not a prohibition.

See LBP-00-26, 52 NRC at 213.⁷

2. *Procedural or Administrative Measures*

CCAM/CAM assert that the criticality control measures proposed by NNECO would violate GDC 62 because they involve the use of administrative measures, such as monitoring, placement of fuel assemblies, and burnup and decay calculations. But CCAM/CAM acknowledge that *every* physical criticality control measure, including those they find acceptable, includes administrative controls to some degree. See CCAM/CAM Brief at 23-25. CCAM/CAM attempt to distinguish one-time administrative controls — acceptable in their view — from ongoing administrative controls which they maintain are prohibited. For example, say CCAM/CAM, geometric separation of the spent fuel assemblies entails one-time administrative controls to ensure proper design, fabrication, and installation of racks in the spent fuel pool, whereas, by contrast, using burnup credit requires ongoing programming and inputting of data into computers, as well as surveillance of every fuel movement. According to CCAM/CAM, criticality prevention methods that employ complex, ongoing administrative controls provide more opportunities for a criticality event because of their greater reliance on human factors. See *id.* at 24-25.

To illustrate their point, CCAM/CAM have provided a summary of the evolution of criticality prevention in fuel pools. See CCAM/CAM Brief at 11-16. Noting the trend toward higher density fuel storage, CCAM/CAM assert that “the stringency of measures for criticality prevention at nuclear power plants has eroded over time in response to increasing demand for higher and higher density spent fuel storage.” See *id.* at 11. We disagree with the conclusion of CCAM/CAM that today’s measures for criticality control are insufficiently stringent or are unlawful under GDC 62.

⁶ See “Northeast Nuclear Energy Company’s Brief on Review of LBP-00-26 (Contention 6),” at 9 (Feb. 28, 2001) (“NNECO Brief”).

⁷ The Board renamed as “autonomous controls” the one-time controls, such as categories (1) and (2), *supra*, that are favored by Intervenor. “Such controls, once set in operation, do not require, as a regular event, external intervention.” See *id.*

The nuclear power industry does, indeed, use criticality control methods that require reliance on administrative measures. Those measures have evolved from the use of low-density storage racks to reliance on neutron-absorbing storage racks, to use of soluble boron, and, finally, to controlling reactivity (initial enrichment, burnup level, and decay time) of the fuel. The physical criticality control methods used over the years form a continuum that includes increasingly substantial administrative or human components. Although all of these storage methods have been found safe and all are based on physical processes or systems, CCAM/CAM arbitrarily attempt to draw a line that would permit the use of neutron-absorbing racks, but nothing further along the continuum. There is no scientific or regulatory basis for drawing such a line between permissible and impermissible administrative controls.⁸ Indeed, GDC 62 itself does not use the term “administrative controls” or purport to prohibit them. Any attempted further distinction between classes of such controls is, at best, artificial.

CCAM/CAM maintain that if we construe GDC 62 to allow administrative criticality controls, we would “read out of the rule” the word “physical.” *See* CCAM/CAM Brief at 17. This argument proves too much. As we have stressed, *all* criticality prevention methods currently in use, including those CCAM/CAM support, require administrative controls for safe and effective implementation. In practicality, GDC 62’s use of the term “physical” simply reinforces an obvious point: effective criticality prevention requires protective physical measures. The regulatory term excludes, at the most, marginal (and implausible) criticality prevention schemes lacking any physical component, such as, perhaps, mere observation without accompanying physical mechanisms.

Our reading of GDC 62 does not render it meaningless. As a “general” design criterion, GDC 62 reminds NRC licensees of the important “engineering goal” of preventing criticality, and requires licensees to meet that goal. *See Petition for Emergency and Remedial Action, CLI-78-6, 7 NRC at 406.* General design criteria do not purport to prescribe “precise tests or methodologies.” *See id.* CCAM/CAM nonetheless would have us construe GDC 62 to distinguish between “one-time” and “ongoing” administrative controls and to allow only “one-time” controls. Nothing in the text of GDC 62 suggests that, when promulgating the rule, the Commission envisioned anything like CCAM/CAM’s complex approach, and we decline to adopt it today.

We are satisfied, in short, that the criticality control measures proposed by NNECO rely on “physical systems or processes” and do not violate GDC 62. So long as criticality is prevented by a physical process, the types of administrative procedures used to implement or maintain the process are simply not relevant, presuming, of course, that the procedures are safe.

⁸The Board found that “there is no basis in law or language for differentiating between one type of administrative control and another.” *See* LBP-00-26, 52 NRC at 212.

B. History of GDC 62⁹

The history of GDC 62 supports our view of the meaning of its text. In the Commission's proposed rulemaking, the text of GDC 62 (then entitled GDC 66) was:

Criticality in new and spent fuel storage shall be prevented by physical systems or processes. Such means as geometrically safe configurations shall be emphasized over procedural controls.¹⁰

Like the final rule, the proposed rule stated that physical systems or processes were to be used as acceptable means of criticality control. Procedural controls, as mentioned in the second sentence of the proposed rule, were considered to be within the scope of physical systems or processes, although the proposed rule called for emphasis on "geometrically safe configurations."¹¹

The Nuclear Safety Information Center at Oak Ridge National Laboratory ("ORNL") filed comments on the proposed rule. ORNL stated that it did not believe that procedural controls to prevent criticality were "practical," and expressed concern over the proposed rule's use of the terms "processes" and "procedural controls." See LBP-00-26, 52 NRC at 205. Despite ORNL's concerns, GDC 62 was revised to its current form, which emphasizes but does not require geometrically safe configurations, leaves in place the term "processes," and does not prohibit procedural or administrative controls. An *amicus curiae*, BCOC, interprets the ORNL comment combined with the wording of the final rule as embodying a decision that "procedural controls" are not permitted because that term appeared in the 1967 proposed rule but did not appear in the 1971 final rule. See BCOC Brief at 11. In drawing this inference, BCOC forgets that procedural controls are part of every physical system used for criticality control, including the use of geometrically safe configurations; the type, extent, and timing of the administrative controls merely differ from one method to another. BCOC's position also does not take account of the final rule's retention of the term "processes," which implies a human role in triggering or overseeing criticality prevention through physical means. The change from the proposed rule to the final rule is thus better explained as merely stating a nonbinding preference for the use of geometrically safe configurations. Procedural controls, as discussed above and expressed in the proposed GDC 66, are inherent in the physical processes

⁹The Board discussed the rulemaking history of GDC 62 in greater detail than this decision. See LBP-00-26, 52 NRC at 204-06.

¹⁰See Proposed Rule, "Licensing of Production and Utilization Facilities: General Design Criteria for Nuclear Power Plant Construction Permits," 32 Fed. Reg. 10,213, 10,217 (July 11, 1967).

¹¹As noted by *amicus curiae*, CP&L, it would be meaningless to emphasize that geometrically safe configurations were preferred over a prohibited function. See "Carolina Power & Light's Brief Amicus Curiae Supporting Affirmance of the Licensing Board Decision in LBP-00-26," at 14 (Feb. 28, 2001) ("CP&L Brief").

and systems available for criticality control; therefore, we find no significance in omitting the term “procedural controls” from the final rule.¹²

Examining the history of criticality prevention, we observe that, at the time GDC 62 was promulgated, the use of higher density configurations for spent fuel storage was in its infancy. The use of configurations that were geometrically safe, without other criticality control measures, was standard in 1971. In historical context, the language of GDC 62 that criticality “shall be prevented by physical systems or processes, preferably by use of geometrically safe configurations” reflected then-current practice. By using general (and flexible) language in GDC 62, the Commission left the door open to employ any other physical systems or processes that would, as technology developed, safely prevent criticality in the spent fuel pool. It is not reasonable to interpret a broadly phrased regulation, promulgated by an agency charged with oversight of an evolving technical industry, as barring the use of later technological developments.

C. Subsequent Regulation: 10 C.F.R. § 50.68

In construing a regulation’s meaning, it is necessary to examine the agency’s entire regulatory scheme. Regulations dealing with the same subject should be construed together, and a later regulation is presumed to be in accord with the policy embedded in prior regulations. *See Strickland v. United States*, 199 F.3d 1310, 1315 (Fed. Cir. 1999) (*citing* 2A Sutherland, *Statutory Construction* § 51.01 (4th ed. 1984)). Recently (in 1998) the Commission promulgated a new rule, 10 C.F.R. § 50.68, dealing with “criticality accident requirements” that NRC licensees may satisfy in lieu of maintaining a monitoring system capable of detecting criticality. Section 50.68 expressly provides for the use of enrichment, burnup, and soluble boron as criticality control measures. Both the regulation and its history demonstrate that the Commission endorses the use of physical controls with significant procedural aspects for criticality control. The Commission was mindful of GDC 62 when it approved the use of administrative controls in 10 C.F.R. § 50.68. The Statement of Considerations refers specifically to GDC 62 as reinforcing the prevention of criticality in fuel storage and handling “through physical systems, processes, and safe geometrical configuration.” *See* “Criticality Accident Requirements,” 62 Fed. Reg. 63,825, 63,826 (Dec. 3, 1997).

The Statement of Considerations for the rule also includes the statement, “[n]uclear power plant licensees have *procedures* and the plants have design features to prevent inadvertent criticality. . . . The NRC believes the criticality

¹²The *Shearon Harris* Board interpreted the revision similarly, stating, “the agency revised the final rule to its present configuration by incorporating the second suggestion, i.e., to indicate that geometric configuration is a preference, but without deleting the reference to ‘processes’ or, it seems apparent, the administrative measures they encompass.” *See* LBP-00-12, 51 NRC at 260.

monitoring requirements of 10 C.F.R. § 70.24 are unnecessary as long as design and *administrative controls* are maintained.’’ See *id.* at 63,825-26 (emphasis supplied). Notably, the use of soluble boron is expressly permitted by 10 C.F.R. § 50.68(b)(4), which sets standards for the *k*-effective (i.e., the neutron multiplication factor, a measure of reactivity) of the spent fuel pool *with and without taking credit for soluble boron*. Moreover, 10 C.F.R. § 50.68(b)(7), providing that criticality monitors are not required if enrichment of the fresh fuel assemblies is maintained at a maximum of 5.0% by weight, specifically recognizes credit for fuel enrichment for criticality control.

Promulgated in 1998, 27 years after GDC 62, 10 C.F.R. § 50.68 belies the notion that GDC 62 should be construed narrowly, as CCAM/CAM suggest. As the latest expression of the rulemakers’ intent, the more recent regulation prevails if there is a perceived conflict with an earlier regulation. See 2B Sutherland, *Statutory Construction* § 51.02 (1992). The specific provisions of section 50.68 provide strong evidence for our current reading of the more general strictures of GDC 62.

D. Nuclear Waste Policy Act

In 1982, the Nuclear Waste Policy Act (“NWPA”) was enacted by Congress, recognizing that the accumulation of spent nuclear fuel is a national problem and that federal efforts to devise a permanent solution to problems of civilian radioactive waste disposal have not been adequate. See 42 U.S.C. § 10131(a)(2)-(3). The NWPA established federal responsibility and a definite federal policy for the disposal of spent fuel. See 42 U.S.C. § 10131(b)(2). Further, the Act declared as one of its purposes the addition of new spent nuclear fuel storage capacity at civilian reactor sites. See 42 U.S.C. § 10151(b)(1). The NWPA directed nuclear power reactor operators to exercise their “primary responsibility” for interim storage of spent fuel “by maximizing, to the extent practical, the effective use of existing storage facilities at the site of each civilian nuclear power reactor, and by adding new onsite storage capacity in a timely manner where practical.” See 42 U.S.C. § 10151(a)(1). Under the NWPA, the Commission was to promulgate rules for an expedited hearing process on applications “to expand the spent nuclear fuel storage capacity at the site of civilian nuclear power reactor[s] through the use of high-density fuel storage racks.” See 42 U.S.C. § 10154.¹³

Notwithstanding this congressional mandate encouraging high-density fuel storage at reactor sites, CCAM/CAM ask the Commission to interpret GDC 62 as forbidding physical measures, such as use of soluble boron and reactivity limits, that make high-density storage of spent nuclear fuel not only possible, but

¹³ Subpart K, added to 10 C.F.R. Part 2, implemented this congressional directive. The instant proceeding has been conducted according to Subpart K.

also safe. Such a reading of GDC 62 would prohibit safe and effective spent fuel storage expansion methods and frustrate the purpose of the NWPA. Thus, we conclude that the Board's understanding of GDC 62 is compatible with the NWPA, while CCAM/CAM's viewpoint cannot be reconciled with congressional policy on nuclear waste storage.

E. NRC Agency Practice

We turn next to NRC Staff practice and find that it reinforces our interpretation of GDC 62. "Agency practice, of course, is one indicator of how an agency interprets its regulations." *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-6, 43 NRC 123, 129 (1996).¹⁴ The NRC Staff has been authorizing credit for fuel enrichment and burnup limits for nearly 20 years.¹⁵ No criticality accidents have been reported in any spent fuel pool. *See* LBP-00-26, 52 NRC at 191. Notwithstanding this record of safety, the Staff has, according to CCAM/CAM, misunderstood and misapplied GDC 62 for that period of time. We disagree. The NRC Staff has continuously interpreted GDC 62 in a manner consistent with the language of the criterion, the history of GDC 62, the practical realities of spent fuel storage, and the NWPA.

F. CCAM/CAM's Motion for Reconsideration

One final point requires Commission attention. On December 18, 2000, CCAM/CAM filed a motion to reopen the record, based on recent reports of two fuel rods allegedly missing at NNECO's Millstone Unit No. 1 and alleged discovery violations by NNECO. We remanded that motion to the Board for its consideration regarding CCAM/CAM's Contention 4. *See* CLI-00-25, 52 NRC 355 (2000). The Board denied the motion¹⁶ and CCAM/CAM filed a motion for reconsideration by the Board. Our decision today has no effect on the pending motion for reconsideration.

¹⁴ *See also Public Service Co. of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-459, 7 NRC 179, 190 (1978) (reasonable interpretation of an act by officials charged with its administration entitled to deference).

¹⁵ *See* U.S. Nuclear Regulatory Commission, Draft Regulatory Guide, "Proposed Revision 2 to Regulatory Guide 1.13, 'Spent Fuel Storage Facility Design Basis'" (Dec. 1981). Although the regulatory guide was never issued in final form, it has been followed for 18 years or more as Staff policy. *See* "NRC Staff Response to 'Connecticut Coalition Against Millstone and Long Island Coalition Against Millstone Brief on Review of LBP-00-26' and 'Orange County's Amicus Brief on Review of LBP-00-26'" at 5, 14 (Feb. 28, 2001).

¹⁶ *See* "Memorandum and Order (Denying Motion to Reopen Record on Contention 4)," LBP-01-1, 53 NRC 75 (2001).

III. CONCLUSION

For the foregoing reasons, the Commission *affirms* the Board's ruling in LBP-00-26 as to CCAM/CAM's Contention 6 and *holds* that the phrase "physical systems or processes" in GDC 62 comprehends the administrative and procedural measures necessary to implement or maintain such physical systems or processes.

IT IS SO ORDERED.

For the Commission

ANDREW L. BATES for
ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 10th day of May 2001.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
Edward McGaffigan, Jr.
Jeffrey S. Merrifield

In the Matter of

Docket No. 50-400-LA

**CAROLINA POWER & LIGHT
COMPANY**

(Shearon Harris Nuclear Power Plant)

May 10, 2001

The Commission denies Intervenor's petition for review of three Licensing Board decisions (LBP-00-12, LBP-00-19, and LBP-01-9) that rejected challenges to issuance of a license amendment for spent fuel pool expansion. The Commission also denies Intervenor's request for a stay.

RULES OF PRACTICE: APPELLATE REVIEW

The Board's decisions for the most part rest on its own carefully rendered fact findings, an area where we repeatedly have declined to second-guess plausible Board decisions. *See, e.g., Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 45 (2001); *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 93 (1998); *Kenneth G. Pierce* (Shorewood, Illinois), CLI-95-6, 41 NRC 381, 382 (1995).

RULES OF PRACTICE: APPELLATE REVIEW

On a petition for review, Petitioner must adequately call the Commission's attention to claimed errors in the Board's approach. Here, Petitioner has submitted a complex set of pleadings that includes numerous detailed footnotes, attachments,

and incorporations by reference. We deem waived any arguments not raised before the Board or not clearly articulated in the petition for review. See *Hydro Resources, Inc.*, CLI-01-4, 53 NRC at 46; *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 194 (1999); *Curators of the University of Missouri*, CLI-95-1, 41 NRC 71, 132 n.81 (1995).

10 C.F.R. § 2.206

PUBLIC PETITIONS

Safety questions not properly raised in an adjudication may nonetheless be suitable for NRC consideration under its public petitioning process, 10 C.F.R. § 2.206. See *Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 NRC 266, 311 (2000); *International Uranium (USA) Corp.* (Receipt of Material from Tonawanda, New York), CLI-98-23, 48 NRC 259, 265-66 (1998).

RULES OF PRACTICE: HEARING PROCEDURES FOR SPENT FUEL POOL EXPANSION PROCEEDINGS

LICENSING BOARDS: AUTHORITY

Our Subpart K process empowers a licensing board to *resolve* fact questions, when it can do so accurately, at the abbreviated hearing stage.

RULES OF PRACTICE: HEARING PROCEDURES FOR SPENT FUEL POOL EXPANSION PROCEEDINGS; HEARING ON CONTENTIONS

Subpart K establishes a two-part test to determine whether a full evidentiary hearing is warranted: (1) there must be a genuine and substantial dispute of fact “which can only be resolved with sufficient accuracy” by a further adjudicatory hearing; and (2) the Commission’s decision “is likely to depend in whole or in part on the resolution of that dispute.” See 10 C.F.R. § 2.1115(b).

RULES OF PRACTICE: HEARING PROCEDURES FOR SPENT FUEL POOL EXPANSION PROCEEDINGS

REGULATIONS: INTERPRETATION (10 C.F.R. PART 2, SUBPART K)

NUCLEAR WASTE POLICY ACT: HEARING REQUIREMENTS

“In promulgating section 2.1115(b) of Subpart K, we used the same test described in the Nuclear Waste Policy Act of 1983 [‘NWPA’] at 42 U.S.C. § 10154(b)(1). We noted that

the statutory criteria are quite strict and are designed to ensure that the hearing is focused exclusively on real issues. They are similar to the standards under the Commission’s existing rule for determining whether summary disposition is warranted. They go further, however, in requiring a finding that adjudication is necessary to resolution of the dispute and in placing the burden of demonstrating the existence of a genuine and substantial dispute of material fact on the party requesting adjudication.”

See id. at 26 n.5, *quoting* Final Rule, “Hybrid Hearing Procedures for Expansion of Spent Nuclear Fuel Storage Capacity at Civilian Nuclear Power Reactors,” 50 Fed. Reg. 41,662, 41,667 (Oct. 15, 1985).

RULES OF PRACTICE: HEARING PROCEDURES FOR SPENT FUEL POOL EXPANSION PROCEEDINGS

NUCLEAR WASTE POLICY ACT: HEARING REQUIREMENTS

Subpart K derives from the NWPA, where Congress called on the Commission to “encourage and expedite” onsite spent fuel storage. *See* 42 U.S.C. § 10151(a)(2). To help accomplish this goal, the NWPA required the Commission, “at the request of any party,” to employ an abbreviated hearing process — i.e., discovery, written submissions, and oral argument. *See* 42 U.S.C. § 10154. The NWPA authorized the Commission to convene additional “adjudicatory” hearings “only” where critical fact questions could not otherwise be answered “with sufficient accuracy.” *See* 42 U.S.C. § 10154(b)(1)(A).

RULES OF PRACTICE: SUMMARY DISPOSITION

Our rules long have allowed summary disposition in cases where “there is no genuine issue as to any material fact” and where “the moving party is entitled to a decision as a matter of law.” *See* 10 C.F.R. § 2.749(d); *cf.* Fed. R. Civ. P. 56 (judicial summary judgment rule).

**RULES OF PRACTICE: HEARING PROCEDURES IN SPENT FUEL
POOL EXPANSION PROCEEDINGS**

**REGULATIONS: INTERPRETATION (10 C.F.R. PART 2,
SUBPART K)**

RULES OF PRACTICE: SUMMARY DISPOSITION

It seems unlikely to us that Congress intended the Commission to enact Subpart K simply to replicate the NRC's existing summary disposition practice. Congress "cannot be presumed to do a futile thing." *Halverson v. Slater*, 129 F.3d 180, 184 (D.C. Cir. 1997). *Accord Independent Insurance Agents of America, Inc. v. Hawke*, 211 F.3d 638, 643 (D.C. Cir. 2000). Hence, to give real-world meaning to Subpart K's abbreviated hearing process, we construe Subpart K to extend beyond the NRC's pre-existing summary disposition practice. Unlike our summary disposition rule, which requires an additional evidentiary hearing whenever a licensing board finds, based on the papers filed, that there remains a genuine issue of material fact, Subpart K's procedure authorizes the board to *resolve* disputed facts based on the evidentiary record made in the abbreviated hearing, without convening a full evidentiary hearing, if the board can do so with "sufficient accuracy."

**RULES OF PRACTICE: HEARING PROCEDURES FOR SPENT
FUEL POOL EXPANSION PROCEEDINGS**

**REGULATIONS: INTERPRETATION (10 C.F.R. PART 2,
SUBPART K)**

LICENSING BOARDS: RESOLUTION OF ISSUES

Subpart K directs the Board to "[d]ispose of any *issues* of law or *fact* not designated for resolution in an adjudicatory hearing." See 10 C.F.R. § 2.1115(a)(2) (emphasis added). "Issues" are, by definition, points of debate or dispute. To "dispose" of issues, a board must *resolve* them. To move from Subpart K's abbreviated hearing stage to an additional evidentiary hearing, a licensing board must make a specific determination that issues "can *only* be resolved with sufficient accuracy" at such a hearing. See 10 C.F.R. § 2.1115(b)(1) (emphasis added).

RULES OF PRACTICE: HEARING PROCEDURES FOR SPENT FUEL POOL EXPANSION PROCEEDINGS

REGULATIONS: INTERPRETATION (10 C.F.R. PART 2, SUBPART K)

EVIDENCE: EXPERT WITNESSES

RULES OF PRACTICE: EXPERT WITNESSES

The Statement of Considerations for Subpart K reinforces the rule's text:

The appropriate evidentiary weight to be given an expert's technical judgment will depend, for the most part, on the expert's testimony and professional qualifications. In some circumstances, it may be possible to make such a determination without the need for an adjudicatory hearing. The presiding officer must decide, based on the sworn testimony and sworn written submissions, whether the differing technical judgment gives rise to a genuine and substantial dispute of fact that *must* be resolved in an adjudicatory hearing.

See 50 Fed. Reg. at 41,667 (1985) (emphasis added).

RULES OF PRACTICE: HEARING PROCEDURES FOR SPENT FUEL POOL EXPANSION PROCEEDINGS

REGULATIONS: INTERPRETATION (10 C.F.R. PART 2, SUBPART K)

NUCLEAR WASTE POLICY ACT

The NWPA and our rule implementing it (Subpart K) contemplate merits rulings by licensing boards based on the parties' written submissions and oral arguments, except where a board expressly finds that "accuracy" demands a full-scale evidentiary hearing.

LICENSING BOARDS: RESOLUTION OF ISSUES

RULES OF PRACTICE: HEARING PROCEDURES FOR SPENT FUEL POOL EXPANSION PROCEEDINGS

Licensing boards are fully capable of making fair and reasonable merits decisions on technical issues after receiving written submissions and hearing oral arguments. The Commission is a technically oriented administrative agency, an orientation that is reflected in the makeup of its licensing boards. Most licensing boards have two, and all have at least one, technically trained member. In Subpart K cases, licensing boards are expected to assess the appropriate evidentiary weight to be given competing experts' technical judgments, as reflected in their

reports and affidavits. The inquiry is similar to that performed by presiding officers in materials licensing cases, where fact disputes normally are decided “on the papers,” with no live evidentiary hearing. *See, e.g., Hydro Resources, Inc.*, CLI-01-4, 53 NRC at 45; *Curators of the University of Missouri*, CLI-95-1, 41 NRC at 118-20. The NRC’s administrative judges, in other words, and the Commission itself, are accustomed to resolving technical disputes without resort to in-person testimony.

**RULES OF PRACTICE: HEARING PROCEDURES
FOR SPENT FUEL POOL EXPANSION PROCEEDINGS;
WITNESSES (CREDIBILITY)**

There may be issues, such as those involving witness credibility, that cannot be resolved absent face-to-face observation and assessment of the witness. Or there may be issues involving expert or other testimony where key questions require followup and dialogue to be answered “with sufficient accuracy.” In these kinds of cases, Subpart K contemplates further evidentiary hearings. Many issues, however, particularly those involving competing technical or expert presentations, frequently are amenable to resolution by a licensing board based on its evaluation of the thoroughness, sophistication, accuracy, and persuasiveness of the parties’ submissions.

**RULES OF PRACTICE: HEARING PROCEDURES FOR SPENT
FUEL POOL EXPANSION PROCEEDINGS; APPELLATE REVIEW
NUCLEAR WASTE POLICY ACT: HEARING REQUIREMENTS**

On a case-by-case basis, we generally will defer to our licensing boards’ judgment on when they will benefit from hearing live testimony and from direct questioning of experts or other witnesses. If a decision can be made judiciously on the basis of written submissions and oral argument, we expect our boards to follow the mandate of the NWPA and Subpart K to streamline spent fuel pool expansion proceedings by making the merits decision expeditiously, without additional evidentiary hearings. *See* 42 U.S.C. §§ 10151(a)(2), 10154.

**RULES OF PRACTICE: APPELLATE REVIEW
LICENSING BOARDS: RESOLUTION OF ISSUES**

The Commission is generally not inclined to upset the Board’s fact-driven findings and conclusions, particularly where it has weighed the affidavits or submissions of technical experts. Here, in our judgment, the Board analyzed the

parties' technical submissions carefully, and made intricate and well-supported findings in a 42-page opinion. We see no basis for the Commission, on appeal, to redo the Board's work.

NEPA: REQUIREMENT FOR ENVIRONMENTAL IMPACT STATEMENT; EIS (SEVERE ACCIDENTS; SPENT FUEL POOL; RULE OF REASON)

The Commission has never determined a threshold accident probability figure for imposing the requirement of preparing an EIS. Eleven years ago, the Commission indicated that such a threshold would be "better explored outside the scope of a particular case involving only a few parties," and declined "either to endorse or reject" an Appeal Board determination that an accident probability of 10^{-4} is remote and speculative. *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-90-4, 31 NRC 333, 335 (1990). In a later decision in that same proceeding, the Commission reiterated that "low probability is the key to applying NEPA's rule-of-reason test to contentions that allege that a specified accident scenario presents a significant environmental impact that must be evaluated." *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-90-7, 32 NRC 129, 131 (1990). Because we do not disturb the Board's finding of extremely low probability in this case, we need not decide here whether Orange County's 1.6×10^{-5} probability estimate is remote and speculative so as not to require preparation of an EIS.

RULES OF PRACTICE: HEARING PROCEDURES FOR SPENT FUEL POOL EXPANSION PROCEEDINGS; HEARING ON CONTENTIONS; BURDEN OF GOING FORWARD

The proponent of a contention must supply, at the written submission and oral argument stages of a Subpart K proceeding, all of the facts upon which it intends to rely at the formal evidentiary hearing, should one prove necessary. *See Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 3), CLI-01-3, 53 NRC 22, 27 (2001).

RULES OF PRACTICE: HEARING PROCEDURES FOR SPENT FUEL POOL EXPANSION PROCEEDINGS; HEARING ON CONTENTIONS

NUCLEAR WASTE POLICY ACT

We see no basis for upsetting the Board's probability estimate or its decision against a further evidentiary hearing. Even if a further evidentiary hearing were

convened, Intervenor apparently intends merely to reiterate its critique of the probabilistic risk assessment of others (the NRC Staff and the Licensee), but not to offer a fresh analysis of its own. Under these circumstances, scheduling a further hearing would serve only to delay these proceedings and increase the costs for all parties, in direct contravention of the NWPA.

RULES OF PRACTICE: APPELLATE REVIEW; CONTENTIONS (SPECIFICITY AND BASIS)

At the contentions stage of this litigation, Orange County offered no specific causes for spent fuel pool accidents other than the seven-step scenario admitted by the Board. Orange County cannot now transform vague references to potential spent fuel pool catastrophes into litigable contentions. *See Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 333-35 (1999) (NRC's "strict contention rule" requires "detailed pleadings").

RULES OF PRACTICE: APPELLATE REVIEW

APPELLATE REVIEW: RAISING MATTERS FOR FIRST TIME

Orange County expressly approved the final language of its admitted environmental contention. The County should not now be heard to complain that the contention as admitted was too narrow.

QUALITY ASSURANCE/QUALITY CONTROL

RULES OF PRACTICE: APPELLATE REVIEW

The Board did not give short shrift to Intervenor's quality assurance concerns. The Board admitted the issue for hearing, allowed discovery, obtained written evidence, and heard oral argument. The Board ultimately devoted some 11 pages of its order to discussing the quality assurance issue on the merits. *See LBP-00-12*, 51 NRC at 269-80. We do not ordinarily second-guess Board fact findings, particularly those reached with this degree of care.

RULES OF PRACTICE: NONTIMELY SUBMISSION OF CONTENTIONS

Intervenor maintains that the Board erred in refusing to consider its argument that the Licensee must seek a construction permit to use the piping and equipment that were abandoned in the early 1980s. The Board ruled that the construction permit claim was not a part of Intervenor's admitted contention and cannot be

admitted unless it fulfills the late-filing standards set out in 10 C.F.R. § 2.714(a). *See* LBP-00-12, 51 NRC at 281. Because Intervenor made no effort to address the late-filing standards, the Board precluded further consideration of the issue. *See id.* at 281-82. We agree with the Board. Intervenor was inexcusably late in attempting to introduce its construction permit claim.

CONSTRUCTION PERMITS: MATERIAL ALTERATION

The Board expressed skepticism that the amendment proposed by Licensee “is a ‘material alteration’ in the sense intended by the regulations so as to require a construction permit.” *See* LBP-00-12, 51 NRC at 281-82, *citing* 10 C.F.R. § 50.92(a). Alterations of the type that require a construction permit are those that involve substantial changes that, in effect, transform the facility into something it previously was not or that introduce significant new issues relating to the nature and function of the facility. *See Portland General Electric Co.* (Trojan Nuclear Plant), LBP-77-69, 6 NRC 1179, 1183 (1977). To trigger the need for a construction permit, the change must “essentially [render] major portions of the original safety analysis for the facility inapplicable to the modified facility.” *See id.*

STAYS PENDING APPELLATE REVIEW

RULES OF PRACTICE: STAY OF AGENCY ACTION (CRITERIA); STAY PENDING APPEAL

Stays pending appellate review are governed by 10 C.F.R. § 2.788. In determining whether to grant a stay, the Commission will consider:

- (1) Whether the moving party has made a strong showing that it is likely to prevail on the merits;
- (2) Whether the party will be irreparably injured unless a stay is granted;
- (3) Whether the granting of a stay would harm other parties; and
- (4) Where the public interest lies.

See 10 C.F.R. § 2.788(e).

RULES OF PRACTICE: STAY OF AGENCY ACTION; STAY PENDING APPEAL

Our decision today to deny Orange County’s petition for review terminates adjudicatory proceedings before the Commission, and renders moot the County’s motion for a stay pending appeal.

RULES OF PRACTICE: STAY PENDING APPEAL; STAY OF AGENCY ACTION (IRREPARABLE INJURY)

We took no action on Intervenor’s stay motion during our consideration of the Intervenor’s petition for review because we saw no possibility of irreparable injury. The record indicates that the injury asserted by Intervenor could not occur until at least July 2, 2001, when the Licensee expects to place spent fuel pools C and D into service following testing. Even after July 2, the additional spent fuel stored at Shearon Harris will total no more than 150 fuel elements in the short term (i.e., during 2001). Moreover, Intervenor’s claim of injury — offsite radiation exposure in the event of a spent fuel pool accident — is speculative, given the small likelihood of such an accident, and does not amount to the kind of “certain and great” harm necessary for a stay. *See Cuomo v. NRC*, 772 F.2d 972, 976 (D.C. Cir. 1985); *accord Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-820, 22 NRC 743, 747-48 & n.20 (1985).

RULES OF PRACTICE: STAY PENDING APPEAL; STAY OF AGENCY ACTION (IRREPARABLE INJURY)

Of the four stay factors, “the most crucial is whether irreparable injury will be incurred by the movant absent a stay.” *Alabama Power Co.* (Joseph M. Farley Nuclear Plant, Units 1 and 2), CLI-81-27, 14 NRC 795, 797 (1981). *Accord Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-9, 40 NRC 1, 7 (1994).

RULES OF PRACTICE: APPELLATE REVIEW; COMPLIANCE WITH COMMISSION RULES

The Commission’s rule providing for review of decisions of a presiding officer plainly states that a “petition for review . . . must be no longer than ten (10) pages.” *See* 10 C.F.R. § 2.786(b)(2). Orange County’s petition for review, although nominally confined to 10 pages, resorts to the use of voluminous footnotes, references to multipage sections of earlier filings, and supplementation with affidavits that include additional substantive arguments. This can only be viewed as an attempt to circumvent the intent of our page-limit rule. *See Production and Maintenance Employees Local 504 v. Roadmaster Corp.*, 954 F.2d 1397, 1406 (7th Cir. 1992); *see also Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-8, 29 NRC 399, 406 n.1 (1989). We do not condone Intervenor’s effort to evade our page-limits rule.

RULES OF PRACTICE: APPELLATE REVIEW; COMPLIANCE WITH COMMISSION RULES

Page limits “are intended to encourage parties to make their strongest arguments clearly and concisely, and to hold all parties to the same number of pages of argument.” *Hydro Resources, Inc.*, CLI-01-4, 53 NRC at 46. We expect parties in Commission proceedings to abide by our current page-limit rules, and if they cannot, to file a motion to enlarge the number of pages permitted.

MEMORANDUM AND ORDER

The Board of Commissioners of Orange County, North Carolina (“Orange County”), seeks Commission review of three Licensing Board decisions (LBP-00-12, LBP-00-19, and LBP-01-9) that, cumulatively, rejected Orange County’s challenges to a license amendment to expand spent fuel storage capacity at the Shearon Harris nuclear power reactor in North Carolina. Orange County also seeks a stay of the final Board decision (LBP-01-9) approving the amendment. We deny the petition for review and the request for a stay.

I. BACKGROUND

This proceeding began in December 1998, when Carolina Power & Light Company (“CP&L”) applied for a license amendment to increase the spent fuel storage capacity at its Shearon Harris plant. The Shearon Harris fuel handling building was originally designed and constructed with four separate storage pools to support four proposed nuclear units. Eventually, CP&L canceled three of the four Shearon Harris units, but in the meantime it had constructed all four of the storage pools. Only pools A and B, with a combined capacity of 1128 PWR fuel assemblies and 2541 BWR assemblies, are currently in service. In the license amendment at issue here, CP&L proposes to add fuel storage rack modules to spent fuel pools C and D and to place pool C in service. To activate pools C and D, CP&L must complete construction of the cooling system for the pools.

The Board granted Orange County intervenor status to challenge the application and admitted two of Orange County’s technical contentions. *See* LBP-99-25, 50 NRC 25 (1999). One admitted contention dealt with criticality control measures proposed by CP&L (enrichment, burnup, and soluble boron), and the other with quality assurance steps taken by CP&L regarding the piping that had been laid up after abandonment of construction of pools C and D. *See id.* As permitted by our rules, CP&L elected to utilize the so-called “hybrid hearing procedures” set up by 10 C.F.R. Part 2, Subpart K. *See* 10 C.F.R. § 2.1109. Under the Subpart K

process (10 C.F.R. §§ 2.1111-1115), the Board permitted a period for discovery, obtained the parties' written evidentiary submissions, heard oral argument, and ultimately rejected Orange County's two technical contentions on the merits. *See* LBP-00-12, 51 NRC 247, 282-83 (2000).

The Board found Orange County's criticality concerns at odds with "dispositive" regulatory history and practice, and with a recent NRC rule, 10 C.F.R. § 50.68, which "seems to contemplate the use of enrichment, burnup, and soluble boron as criticality control measures." 51 NRC at 260. As for Orange County's quality assurance-piping concerns, the Board found that CP&L and NRC Staff witnesses "with expertise in the fields of corrosion, welding, and ASME Code requirements attest . . . that the procedures that were used to substitute for construction records and examination during layup are adequate to assure a level of safety as required by the regulations." *Id.* at 278. The Board stressed that "even [Orange County's] witness" advocated "just what has been done." *Id.* The Board concluded that Orange County had presented "no genuine and substantial dispute of fact or law that can only be resolved with sufficient accuracy by the introduction of evidence in an evidentiary hearing." *Id.* at 282-83.

The Board subsequently admitted one of Orange County's environmental contentions (EC-6). *See* LBP-00-19, 52 NRC 85 (2000). Contention EC-6 posed the question whether a seven-step accident sequence, culminating in initiation of an exothermic oxidation reaction in spent fuel pools C and D, has "a probability sufficient to provide the beyond-remote-and-speculative 'trigger' that is needed to compel preparation of an EIS [environmental impact statement] relative to [the] proposed licensing action." *Id.* at 95. The seven-step sequence is as follows: (1) a degraded core accident; (2) containment failure or bypass; (3) loss of all spent fuel cooling and makeup systems; (4) extreme radiation doses precluding personnel access; (5) inability to restart any pool cooling or makeup systems due to extreme radiation doses; (6) loss of most or all pool water through evaporation; and (7) initiation of an exothermic oxidation reaction in pools C and D.

Again, pursuant to Subpart K, the Board allowed discovery, obtained written submissions from the parties, and heard oral argument.¹ On March 1, 2001,

¹ On December 21, 2000, after the Subpart K oral argument on Contention EC-6 but before issuance of the Board's merits ruling, the NRC Staff issued the license amendment. The NRC Staff made the license amendment immediately effective based on the Staff's final determination that the amendment involved no significant hazards consideration ("NSHC"). *See* 10 C.F.R. §§ 50.58(b)(5), 50.92. On December 22, Orange County petitioned for Commission review of the NSHC finding and requested a suspension and stay of the issuance of the license amendment. The Commission summarily rejected the petition, which is not permitted by our regulations. *See* CLI-01-7, 53 NRC 113, 118 (2001). Nonetheless, citing its "discretionary powers," the Commission sought additional information from the NRC Staff to determine whether "the Staff's NSHC determination requires further action by the Commission." *Id.* at 119. Further, "[t]o preserve the status quo," the Commission directed CP&L to store no spent fuel under the license amendment, pending a further order of the Commission or a Licensing Board decision approving the amendment, whichever came sooner. *See id.* The subsequent Board decision approving the Shearon Harris license amendment, which we decline to review today, renders the NSHC question inconsequential for this adjudication, and thus we do not address it further.

the Board decided Contention EC-6 on the merits. The Board ruled that: (1) the NRC Staff had met its burden to demonstrate that the accident scenario postulated by Orange County is “remote and speculative,” and thus does not warrant preparation of an EIS; and (2) Orange County had failed to show a “genuine and substantial dispute of fact or law that can only be resolved with sufficient accuracy” at a further evidentiary hearing. *See* LBP-01-9, 53 NRC 239, 271 (2001). After evaluating the parties’ expert submissions and probability assessments, the Board found the accident scenario’s probability to lie, “conservatively,” in the range of “2.0E-07 per reactor year (two occurrences in 10 million reactor years) or less,” a probability estimate the Board found to be “within the category of remote and speculative matters.” *Id.* at 267, 268. The Board accordingly authorized the immediate grant of CP&L’s license amendment, and dismissed the proceeding. *See id.* at 271.

On March 16, 2001, Orange County petitioned for review of LBP-00-12, LBP-00-19, and LBP-01-9 and requested an emergency stay of LBP-01-9’s authorization of the license grant.

II. DISCUSSION

Orange County alleges that the Board’s decisions meet the Commission’s standard for taking discretionary review because “they raise substantial questions with respect to their reliance on legal errors and clear factual errors. They also raise substantial and important questions of law, discretion and policy.”² We interpret Orange County’s petition as seeking review on the grounds that “[a] finding of material fact is clearly erroneous” under 10 C.F.R. § 2.786(b)(4)(i); “[a] necessary legal conclusion . . . is a departure from or contrary to established law” under 10 C.F.R. § 2.786(b)(4)(ii); and/or “[a] substantial and important question of law, policy or discretion has been raised” under 10 C.F.R. § 2.786(b)(4)(iii).³

We disagree with Orange County’s view of the case. As we see the record, the Board fully considered Orange County’s claims on the basis of extensive submissions, including Orange County’s, and resolved all issues reasonably. The Board’s decisions for the most part rest on its own carefully rendered fact findings, an area where we repeatedly have declined to second-guess plausible Board decisions. *See, e.g., Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 45 (2001); *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 93 (1998); *Kenneth G. Pierce* (Shorewood, Illinois), CLI-95-6, 41 NRC 381, 382 (1995).

² *See* “Orange County’s Petition for Review of LBP-00-12, LBP-00-19, and LBP-01-09,” at 7, Mar. 16, 2001 (“Orange County’s Petition”).

³ Section 2.786 applies to Subpart K by virtue of 10 C.F.R. § 2.1117, which makes Subpart G rules applicable “except where inconsistent” with Subpart K. Subpart K has no rule of its own for petitions for review.

On a petition for review, Orange County must adequately call the Commission's attention to claimed errors in the Board's approach. Here, Orange County has submitted a complex set of pleadings that includes numerous detailed footnotes, attachments, and incorporations by reference. *See* Section F of this Order, *infra*. We deem waived any arguments not raised before the Board or not clearly articulated in the petition for review. *See Hydro Resources, Inc.*, CLI-01-4, 53 NRC at 46; *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 194 (1999); *Curators of the University of Missouri*, CLI-95-1, 41 NRC 71, 132 n.81 (1995). Below, we discuss what we take to be Orange County's principal grievances, and explain why, in our judgment, they do not justify plenary Commission appellate review.⁴

A. Resolving Fact Questions in Subpart K Proceedings

We turn first to a preliminary matter that pervades Orange County's petition. The petition depends largely on the proposition that the County met its burden to justify moving forward from a Subpart K abbreviated hearing — i.e., the submission of written materials plus oral argument — to a full trial-type evidentiary hearing. According to Orange County, a factual disagreement between its expert and those of CP&L and the NRC Staff is enough to trigger a full evidentiary hearing. We think that Orange County's position oversimplifies our Subpart K process — which empowers a licensing board to *resolve* fact questions, when it can do so accurately, at the abbreviated hearing stage.

Subpart K establishes a two-part test to determine whether a full evidentiary hearing is warranted: (1) there must be a genuine and substantial dispute of fact “which can only be resolved with sufficient accuracy” by a further adjudicatory hearing; and (2) the Commission's decision “is likely to depend in whole or in part on the resolution of that dispute.” *See* 10 C.F.R. § 2.1115(b). Earlier this year, we elaborated on the meaning of Subpart K by pointing to language from the Statement of Considerations for the rule. *See Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 3), CLI-01-3, 53 NRC 22 (2001). Specifically, we stated:

In promulgating section 2.1115(b) of Subpart K, we used the same test described in the Nuclear Waste Policy Act of 1983 [“NWPA”] at 42 U.S.C. § 10154(b)(1). We noted that

the statutory criteria are quite strict and are designed to ensure that the hearing is focused exclusively on real issues. They are similar to the standards under the Commission's existing rule for determining whether summary disposition is warranted. They go further,

⁴ Safety questions not properly raised in an adjudication may nonetheless be suitable for NRC consideration under its public petitioning process, 10 C.F.R. § 2.206. *See Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 NRC 266, 311 (2000); *International Uranium (USA) Corp.* (Receipt of Material from Tonawanda, New York), CLI-98-23, 48 NRC 259, 265-66 (1998).

however, in requiring a finding that adjudication is necessary to resolution of the dispute and in placing the burden of demonstrating the existence of a genuine and substantial dispute of material fact on the party requesting adjudication.

See id. at 26 n.5, quoting Final Rule, “Hybrid Hearing Procedures for Expansion of Spent Nuclear Fuel Storage Capacity at Civilian Nuclear Power Reactors,” 50 Fed. Reg. 41,662, 41,667 (Oct. 15, 1985).

Subpart K derives from the NWPAs, where Congress called on the Commission to “encourage and expedite” onsite spent fuel storage. *See* 42 U.S.C. § 10151(a)(2). To help accomplish this goal, the NWPAs required the Commission, “at the request of any party,” to employ an abbreviated hearing process — i.e., discovery, written submissions, and oral argument. *See* 42 U.S.C. § 10154. The NWPAs authorized the Commission to convene additional “adjudicatory” hearings “only” where critical fact questions could not otherwise be answered “with sufficient accuracy.” *See* 42 U.S.C. § 10154(b)(1)(A). Our later-enacted Subpart K codifies in our rules the congressionally mandated abbreviated hearing process. *See* 10 C.F.R. §§ 2.1111-2.1115.

As noted in the congressional debate on the NWPAs, the abbreviated hearing process was, when enacted, a “totally new procedure to be incorporated into the NRC licensing process.” *See* 128 Cong. Rec. S15,644 (daily ed. Dec. 20, 1982) (statement of Sen. Mitchell). The purpose of the abbreviated hearing was “to speed up the licensing of onsite storage expansion.” *See id.* The “criteria by which the Commission may decide that a full adjudicatory hearing is necessary are extremely narrow.” *See id.*⁵

Orange County apparently understands Subpart K as demanding a full evidentiary hearing whenever an intervenor presents *any* material facts or expert opinion that contests positions taken by the license applicant or the NRC Staff. The County thus seemingly views Subpart K merely as an alternate form of “summary disposition.” Our rules long have allowed summary disposition in cases where “there is no genuine issue as to any material fact” and where “the moving party is entitled to a decision as a matter of law.” *See* 10 C.F.R. § 2.749(d); *cf.* Fed. R. Civ. P. 56 (judicial summary judgment rule). Obviously, if Orange County were correct that material fact disputes invariably require a full evidentiary hearing, there would be no real difference between our traditional summary disposition practice and Subpart K.

As a simple historical matter, however, it seems unlikely to us that Congress intended the Commission to enact Subpart K simply to replicate the NRC’s existing summary disposition practice. (The Commission’s summary disposition

⁵ Senator Mitchell made his comments in the context of speaking in favor of his amendment, which would have prohibited use of the abbreviated hearing process in the case of an application proposing the use of a new technology to increase onsite spent fuel storage capacity.

rule dates from 1972; Subpart K dates from 1985). Congress “cannot be presumed to do a futile thing.” *Halverson v. Slater*, 129 F.3d 180, 184 (D.C. Cir. 1997). *Accord Independent Insurance Agents of America, Inc. v. Hawke*, 211 F.3d 638, 643 (D.C. Cir. 2000). Hence, to give real-world meaning to Subpart K’s abbreviated hearing process, we construe Subpart K to extend beyond the NRC’s pre-existing summary disposition practice. Unlike our summary disposition rule, which requires an additional evidentiary hearing whenever a licensing board finds, based on the papers filed, that there remains a genuine issue of material fact, Subpart K’s “totally new procedure” (128 Cong. Rec. at S15,644) authorizes the board to *resolve* disputed facts based on the evidentiary record made in the abbreviated hearing, without convening a full evidentiary hearing, if the board can do so with “sufficient accuracy.”

The text of Subpart K (which repeats, *verbatim*, the pertinent text of the NWPA) makes this clear. Subpart K directs the Board to “[d]ispose of any issues of law or fact not designated for resolution in an adjudicatory hearing.” See 10 C.F.R. § 2.1115(a)(2) (emphasis added). “Issues” are, by definition, points of debate or dispute. To “dispose” of issues a board must *resolve* them. To move from Subpart K’s abbreviated hearing stage to an additional evidentiary hearing, a licensing board must make a specific determination that issues “can *only* be resolved with sufficient accuracy” at such a hearing. See 10 C.F.R. § 2.1115(b)(1) (emphasis added).

The Statement of Considerations for Subpart K reinforces the rule’s text:

The appropriate evidentiary weight to be given an expert’s technical judgment will depend, for the most part, on the expert’s testimony and professional qualifications. In some circumstances, it may be possible to make such a determination without the need for an adjudicatory hearing. The presiding officer must decide, based on the sworn testimony and sworn written submissions, whether the differing technical judgment gives rise to a genuine and substantial dispute of fact that *must* be resolved in an adjudicatory hearing.

See 50 Fed. Reg. at 41,667 (1985) (emphasis added).

The short of the matter is that the NWPA and our rule implementing it (Subpart K) contemplate merits rulings by licensing boards based on the parties’ written submissions and oral arguments, except where a board expressly finds that “accuracy” demands a full-scale evidentiary hearing. Subpart K’s abbreviated hearing approach is in harmony with other NRC rules, such as Subparts L and M, that authorize informal adjudicatory decision-making without the panoply of full trial-type processes. See 10 C.F.R. § 2.1201 *et seq.* (Subpart L); 10 C.F.R. § 2.1301 *et seq.* (Subpart M).

Licensing boards are fully capable of making fair and reasonable merits decisions on technical issues after receiving written submissions and hearing oral arguments. The Commission is a technically oriented administrative agency, an orientation that is reflected in the makeup of its licensing boards. Most licensing

boards have two, and all have at least one, technically trained member. In Subpart K cases, licensing boards are expected to assess the appropriate evidentiary weight to be given competing experts' technical judgments, as reflected in their reports and affidavits. The inquiry is similar to that performed by presiding officers in materials licensing cases, where fact disputes normally are decided "on the papers," with no live evidentiary hearing. *See, e.g., Hydro Resources, Inc.*, CLI-01-4, 53 NRC at 45; *Curators of the University of Missouri*, CLI-95-1, 41 NRC at 118-20. The NRC's administrative judges, in other words, and the Commission itself, are accustomed to resolving technical disputes without resort to in-person testimony.

There may, of course, be issues, such as those involving witness credibility, that cannot be resolved absent face-to-face observation and assessment of the witness.⁶ Or there may be issues involving expert or other testimony where key questions require followup and dialogue to be answered "with sufficient accuracy." In these kinds of cases, Subpart K contemplates further evidentiary hearings. Many issues, however, particularly those involving competing technical or expert presentations, frequently are amenable to resolution by a licensing board based on its evaluation of the thoroughness, sophistication, accuracy, and persuasiveness of the parties' submissions.

The Commission does not have extensive experience with Subpart K proceedings to date. On a case-by-case basis, we generally will defer to our licensing boards' judgment on when they will benefit from hearing live testimony and from direct questioning of experts or other witnesses. If, however, a decision can be made judiciously on the basis of written submissions and oral argument, we expect our boards to follow the mandate of the NWPA and Subpart K to streamline spent fuel pool expansion proceedings by making the merits decision expeditiously, without additional evidentiary hearings. *See* 42 U.S.C. §§ 10151(a)(2), 10154.

B. Review of LBP-01-9

In LBP-01-9, 53 NRC 239, the Board addressed the question whether the seven-step severe accident sequence postulated by Orange County is remote and speculative so as not to warrant the preparation of an EIS before issuance of

⁶ If, for example, the color indicated on a gauge is critical in determining the outcome of a matter, and witness A gives an affidavit stating that the gauge light was red, and witness B gives an affidavit stating that the light was green, with nothing more (such as corroborating affidavits or other documentary evidence that tends to establish the color of the gauge light), the merits of the case cannot be decided adequately or fairly based on the written submissions alone. The decision-maker must examine the live witnesses to determine, at a minimum, their demeanor, their biases, and whether they have any defects in vision. Most technical issues before NRC licensing boards fall outside this "red light/green light" category of factual disputes, which hinge on credibility of witnesses. They are more closely akin to evaluating whether the gauge was properly designed or was functioning correctly at the critical time — issues which, depending on the caliber and completeness of written submissions, may or may not necessitate hearing testimony from live witnesses.

the license amendment requested by CP&L. Orange County contends that the Board misapplied the Subpart K standard regarding going forward to a formal evidentiary hearing, that it improperly decided the merits of the dispute, and that it arbitrarily ignored or rejected Orange County's factual evidence without providing a reasoned explanation.

We disagree. As we see the case, the Board acted reasonably. It carefully described and assessed the procedures performed and assumptions made by all of the parties in answering the Board's questions regarding the probability of occurrence of the seven-step accident sequence. The Board presented a step-by-step critique of the parties' efforts, noting areas of agreement and disagreement between them, and registering its conclusions about the propriety of various assumptions made by the parties' technical witnesses. The Board's explanation of its approach was measured and persuasive.

While finding some differences in the parties' approaches up and down the accident sequence, the Board found that the cardinal points of divergence between the NRC Staff and Orange County take place at steps 4, 5, and 6. *See* LBP-01-9, 53 NRC at 258-65. At step 4 (extreme radiation levels precluding personnel access), the Board characterized Orange County's analysis as "simplistic," as it was based on the "unrealistically conservative" assumption that a fixed amount of radioactive material deposits evenly in a 200-meter circle. *Id.* at 260. The Board favored use of the Staff's more sophisticated and realistic dispersion modeling. *Id.* At step 5 (inability to restart cooling or makeup systems due to extreme radiation doses), the Board refused to accept Orange County's "unsupported surmise" that, in order to restore cooling or makeup systems, CP&L workers would be unwilling to accept 25-rem doses, which are within EPA guidelines for emergencies. *Id.* at 263. The Board deemed the NRC Staff's analysis, by contrast, "reasonably thorough and credible based on existing regulations and guidance for exposure to emergency workers." *Id.* At step 6 (loss of most or all pool water through evaporation), the Board found that Orange County, in its "assignment of certainty to this step of the sequence," had not "adequately accounted" for the "myriad ways" to get recovery makeup water into the pools. *Id.* at 265. All of the parties accepted a probability of 1.0 for step 7, initiation of an exothermic oxidation reaction in the spent fuel pools after loss of most or all of the pool water through evaporation. *See id.* at 266.

The NRC Staff, after its extensive analysis, assigned a value of 2.0×10^{-7} (once in 5 million reactor years) to the overall probability of the seven-step scenario. *See id.* After analysis by its contractor, CP&L found the probability to be even smaller — 2.7×10^{-8} .⁷ *See id.* Orange County's estimate, based on the opinion of

⁷The Board viewed CP&L's analysis, enhanced by a probabilistic risk assessment, as "a beneficial, although not dispositive, confirmation of the validity of the Staff's analysis to the degree the CP&L analysis yielded a probability estimate that was equal to or lower than the Staff's estimate." *Id.* at 252.

its sole witness, Dr. Gordon Thompson, is 1.6×10^{-5} . *See id.* For the reasons given in its order and summarized above, the Board accepted the Staff's figure, labeled it conservative, and concluded that the seven-step accident scenario is remote and speculative.⁸ *See id.* at 268. As we mentioned at the outset of today's decision, the Commission is generally not inclined to upset the Board's fact-driven findings and conclusions, particularly where it has weighed the affidavits or submissions of technical experts. Here, in our judgment, the Board analyzed the parties' technical submissions carefully, and made intricate and well-supported findings in a 42-page opinion. We see no basis for the Commission, on appeal, to redo the Board's work.

As we held in Section A, *supra*, the Board possessed authority under Subpart K to reach a merits decision rather than designate disputed issues of fact for resolution at a formal evidentiary hearing. *See* 10 C.F.R. § 2.1115(a)(1). None of the disputed issues, the Board found (LBP-01-9, 53 NRC at 271), could be resolved with sufficient accuracy *only* by the introduction of additional evidence at a formal hearing. *See* 10 C.F.R. § 2.1115(b)(1). This was a reasonable finding. Orange County did not challenge the qualifications of any of the Staff's or CP&L's technical witnesses. On behalf of Orange County, Dr. Thompson made suggestions regarding steps he thought should be taken to improve the analytical work done by the Staff and CP&L;⁹ however, his own analysis did not take these steps. The proponent of a contention must supply, at the written submission and oral argument stages of a Subpart K proceeding, all of the facts upon which it intends to rely at the formal evidentiary hearing, should one prove necessary. *See Millstone*, CLI-01-3, 53 NRC at 27.

⁸The Commission has never determined a threshold accident probability figure for imposing the requirement of preparing an EIS. Eleven years ago, the Commission indicated that such a threshold would be "better explored outside the scope of a particular case involving only a few parties," and declined "either to endorse or reject" an Appeal Board determination that an accident probability of 10^{-4} is remote and speculative. *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-90-4, 31 NRC 333, 335 (1990). In a later decision in that same proceeding, the Commission reiterated that "low probability is the key to applying NEPA's rule-of-reason test to contentions that allege that a specified accident scenario presents a significant environmental impact that must be evaluated." *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-90-7, 32 NRC 129, 131 (1990). Because we do not disturb the Board's finding of extremely low probability in this case, we need not decide here whether Orange County's 1.6×10^{-5} probability estimate is remote and speculative so as not to require preparation of an EIS. The Board itself similarly declined to draw a "line in the sand." *See* LBP-01-9, 53 NRC at 268.

⁹In an extensive affidavit filed in conjunction with Orange County's stay motion, Dr. Thompson advanced numerous technical criticisms of the Board's ruling in LBP-01-9. Among other things, he challenges the NRC Staff's "ARCON" methodology for modeling dispersion of radioactive materials. The ARCON model used by the Staff is conservative, takes into account site-specific meteorological conditions, and considers building wake effects to a limited degree. As in the case of all atmospheric dispersion models, the results from the ARCON model are subject to some degree of uncertainty. Despite its limitations, the ARCON model remains useful in determining whether the accident scenario at issue here is remote and speculative. The bottom line is that the Board found the NRC Staff's analysis "credible" in its own right and more persuasive than that of Dr. Thompson. *See* LBP-01-9, 53 NRC 259-60.

Notably, as the Board stressed, the NRC Staff and CP&L subjected their analytical work to peer review. *See* LBP-01-9, 53 NRC at 268-69. Orange County's expert, Dr. Thompson, did not. *See id.* at 268. The Board found that

in the absence of any specific evidence of bias or mistake, the . . . internal review of the components of its contention EC-6 probability analysis by Staff senior technical or supervisory personnel who were not involved in preparing the Staff's analysis is adequate in this context to provide the Board with confidence in the reliability of the Staff analysis regarding all of the important issues associated with each step of the postulated sequence.

Id. at 269.

In sum, we see no basis for upsetting the Board's probability estimate or its decision against a further evidentiary hearing. Even if a further evidentiary hearing were convened, Orange County apparently intends merely to reiterate its critique of the probabilistic risk assessment of others (the NRC Staff and CP&L), but not to offer a fresh analysis of its own. *See* "Official Transcript of Proceedings" at 479-81 (Dec. 7, 2000). Under these circumstances, scheduling a further hearing would serve only to delay these proceedings and increase the costs for all parties, in direct contravention of the NWPA.

C. Review of LBP-00-19

Orange County contests the form in which Contention EC-6 was admitted. Specifically, Orange County faults the Board for limiting its inquiry to a specific seven-step accident scenario rather than focusing on the broader issue of the overall probability of a spent fuel pool accident at Shearon Harris. Orange County claims that it pleaded the broad accident probability issue with basis and specificity.

The crux of Orange County's environmental contention is that the NRC ought to have issued an environmental impact statement in connection with the license amendment requested by CP&L. *See* "Orange County's Request for Admission of Late-Filed Environmental Contentions" (Jan. 31, 1999). The Board focused on whether the specific accident proposed by Orange County in basis F.1 of the contention "has a probability sufficient to provide the beyond-remote-and-speculative 'trigger' that is needed to compel preparation of an EIS." *See* LBP-00-19, 52 NRC at 95. That accident scenario was articulated by CP&L in its contentions response. Orange County, in its contentions reply, agreed that CP&L's summary was "reasonable," but suggested rewording two phrases. *See* "Orange County's Reply to Applicant's and Staff's Oppositions to Request for Admission of Late-Filed Environmental Contentions" at 8 (Mar. 13, 2000). The Board adopted Orange County's rewording suggestions, and the contention was admitted.

At the contentions stage of this litigation, Orange County offered no specific causes for spent fuel pool accidents other than the seven-step scenario admitted by the Board. Orange County cannot now transform vague references to potential spent fuel pool catastrophes into litigable contentions. *See Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 333-35 (1999) (NRC’s “strict contention rule” requires “detailed pleadings”). Moreover, Orange County expressly approved the final language of its admitted environmental contention. The County should not now be heard to complain that the contention as admitted was too narrow. Therefore, we see no basis for the County’s petition to review LBP-00-19.

D. Review of LBP-00-12

Orange County contends that the Board erred in LBP-00-12 by (1) ruling that the use of procedural and administrative measures for criticality control in the spent fuel pools is permissible; (2) ignoring Orange County’s evidence regarding quality assurance issues; and (3) refusing to consider Orange County’s argument that CP&L must seek a construction permit to use piping and equipment that was installed in the early 1980s and not used. We turn now to individual discussion of these asserted points of error.

1. Criticality Controls

Orange County alleged that criticality control measures proposed by CP&L would violate NRC regulations. Specifically, Orange County relies on General Design Criterion 62 (GDC 62), one of the General Design Criteria for Nuclear Power Plants listed in 10 C.F.R. Part 50, Appendix A. GDC 62 provides, “Criticality in the fuel storage and handling system shall be prevented by physical systems or processes, preferably by use of geometrically safe configurations.” *See* 10 C.F.R. Part 50, Appendix A (“General Design Criteria for Nuclear Power Plants”). Orange County maintains that the use of soluble boron and credits for fuel enrichment, burnup, and decay time limits are not “physical systems or processes,” and thus violate GDC 62.

In another case we decide today, involving the Millstone spent fuel pool, we hold that the phrase “physical systems or processes” in GDC 62 does not prohibit the same administrative and procedural measures opposed by Orange County in the present case. *See Northeast Nuclear Energy Co.*, (Millstone Nuclear Power Station, Unit 3), CLI-01-10, 53 NRC 353 (2001). At the Commission’s invitation, Orange County and CP&L participated in *Millstone* as *amici curiae*. In view of our *Millstone* decision, nothing remains of the GDC 62 issue for further Commission review.

2. *Quality Assurance Issues*

Orange County contends that the Board ignored a significant portion of its evidentiary case on quality assurance issues and cites, in particular, alleged deficiencies in CP&L's video camera inspections of the piping system at issue in this license amendment application. Orange County maintains that the inspections covered only the embedded welds and not the embedded piping. Further, Orange County states that the Board assumed that the piping was inspected and failed to address evidence that only the welds were inspected.

Orange County's claim is incorrect. The Board specifically found that "all fifteen embedded welds *and their associated piping* were inspected using a high resolution camera, taking high quality pictures of everything inside the piping, longitudinal welds, circumferential welds, and piping surfaces." *See* LBP-00-12, 51 NRC at 276 (citation omitted and emphasis added). The Board pointed out that an NRC Staff expert had reviewed the videotapes from the remote camera examinations of ten of the fifteen embedded welds. *Id.* at 277. From the review and analysis of the videotapes and from available documentation, the NRC Staff "concluded that the piping and welds are conservatively designed; are several times thicker than required by ASME Code; are generally in good condition with some minor, but no major, defects; and have leaktight integrity." *Id.* The Board also stated that the steps advocated by Orange County's own expert are "just what has been done." *Id.* at 278.

On a more general plane, it hardly can be said that the Board gave short shrift to Orange County's quality assurance concerns. The Board admitted the issue for hearing, allowed discovery, obtained written evidence, and heard oral argument. The Board ultimately devoted some 11 pages of its order to discussing the quality assurance issue on the merits. *See id.* at 269-80. As we have stressed throughout today's decision, we do not ordinarily second-guess Board fact findings, particularly those reached with this degree of care. Orange County has given us no reason to do so here.

3. *Construction Permit*

Orange County maintains that the Board erred in refusing to consider its argument that CP&L must seek a construction permit to use the piping and equipment that were abandoned in the early 1980s. The Board ruled that the construction permit claim was not a part of Orange County's admitted contention and cannot be admitted unless it fulfills the late-filing standards set out in 10 C.F.R. § 2.714(a). *See* LBP-00-12, 51 NRC at 281. Because Orange County made no effort to address the late-filing standards, the Board precluded further consideration of the issue. *See id.* at 281-82. The Board also expressed skepticism that the amendment proposed by CP&L "is a 'material alteration' in the sense

intended by the regulations so as to require a construction permit.” *See id.* at 281-82, *citing* 10 C.F.R. § 50.92(a).

We agree with the Board. Orange County was inexcusably late in attempting to introduce its construction permit claim. In addition to the claim’s untimeliness, it seemingly lacks merit as a legal matter. While the term “material” is susceptible of various meanings, longstanding NRC Staff practice indicates that alterations of the type that require a construction permit are those that involve substantial changes that, in effect, transform the facility into something it previously was not or that introduce significant new issues relating to the nature and function of the facility. *See Portland General Electric Co. (Trojan Nuclear Plant), LBP-77-69, 6 NRC 1179, 1183 (1977)*.¹⁰ To trigger the need for a construction permit, the change must “essentially [render] major portions of the original safety analysis for the facility inapplicable to the modified facility.” *See id.* The present case involves activation of already-built spent fuel pools, whose safety can be (and has been) adequately evaluated in the context of an ordinary license amendment. This seems to us a sensible approach.

E. Orange County’s Request for Emergency Stay

In addition to seeking Commission appellate review, Orange County requested an emergency stay of LBP-01-9, pending appeal, insofar as that decision allowed the CP&L license amendment to take effect. Stays pending appellate review are governed by 10 C.F.R. § 2.788. In determining whether to grant a stay, the Commission will consider:

- (1) Whether the moving party has made a strong showing that it is likely to prevail on the merits;
- (2) Whether the party will be irreparably injured unless a stay is granted;
- (3) Whether the granting of a stay would harm other parties; and
- (4) Where the public interest lies.

See 10 C.F.R. § 2.788(e). Our decision today to deny Orange County’s petition for review terminates adjudicatory proceedings before the Commission, and renders moot the County’s motion for a stay pending appeal. Accordingly we deny it.

We took no action on Orange County’s stay motion during our consideration of the County’s petition for review because we saw no possibility of irreparable injury. The record indicates that the injury asserted by the County could not occur

¹⁰The example the Licensing Board cited in *Trojan* was a construction permit issued for alterations in the University of Maryland’s research reactor. *See id.* There, the alterations involved complete removal of the existing control rods, rod drive mechanisms, core instrumentation and control room equipment and replacement of these components with components of a different design. *See id.* The dearth of other examples of post-operating license amendment construction permits supports our view that such permits are necessary only in cases of dramatic or transforming changes in existing facilities.

until at least July 2, 2001, when CP&L expects to place spent fuel pools C and D into service following testing. See Affidavit of R. Steven Edwards and Robert K. Kunita ¶ 11 (Mar. 29, 2001). Even after July 2, the additional spent fuel stored at Shearon Harris will total no more than 150 fuel elements in the short term (i.e., during 2001). See *id.* ¶ 15. Moreover, Orange County's claim of injury — offsite radiation exposure in the event of a spent fuel pool accident — is speculative, given the small likelihood of such an accident, and does not amount to the kind of "certain and great" harm necessary for a stay. See *Cuomo v. NRC*, 772 F.2d 972, 976 (D.C. Cir. 1985); accord *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-820, 22 NRC 743, 747-48 & n.20 (1985).

Of the four stay factors, "the most crucial is whether irreparable injury will be incurred by the movant absent a stay." *Alabama Power Co.* (Joseph M. Farley Nuclear Plant, Units 1 and 2), CLI-81-27, 14 NRC 795, 797 (1981). Accord *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-9, 40 NRC 1, 7 (1994). Here there was (and is) no such injury.

F. Compliance with Commission Adjudicatory Rules

We close on a procedural note. The Commission's rule providing for review of decisions of a presiding officer plainly states that a "petition for review . . . must be no longer than ten (10) pages." See 10 C.F.R. § 2.786(b)(2). Orange County's petition for review, although nominally confined to 10 pages, resorts to the use of voluminous footnotes, references to multipage sections of earlier filings, and supplementation with affidavits that include additional substantive arguments. This can only be viewed as an attempt to circumvent the intent of our page-limit rule. See *Production and Maintenance Employees Local 504 v. Roadmaster Corp.*, 954 F.2d 1397, 1406 (7th Cir. 1992); see also *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-8, 29 NRC 399, 406 n.1 (1989). While we did not strike Orange County's petition, and we expanded other parties' page limits to allow them to respond fully to Orange County's submission, we do not condone the County's effort to evade our page-limits rule.

Page limits "are intended to encourage parties to make their strongest arguments clearly and concisely, and to hold all parties to the same number of pages of argument." *Hydro Resources, Inc.*, CLI-01-4, 53 NRC at 46. We are quite aware that our current 10-page limit for petitions for review (and responses) requires the parties to be direct and concise. This may be difficult in cases where, as here, the issues are numerous and complex. Hence, Orange County's effort to find creative means to avoid the page limits is in a sense understandable. Indeed, the Commission itself has invited public comment on a proposed rule that would, among other procedural reforms, increase the pages permitted for a petition for review from 10 to 25. See "Changes to Adjudicatory Process: Proposed Rule," 66 Fed. Reg. 19,610, 19,626 (Apr. 16, 2001).

For now, though, we advise NRC litigants against taking Orange County's self-help approach. We expect parties in Commission proceedings to abide by our current page-limit rules, and if they cannot, to file a motion to enlarge the number of pages permitted. In the future, the Commission may exercise its authority to deal more harshly with attempts to circumvent page-limit or other procedural rules.

III. CONCLUSION

For the foregoing reasons, the Commission (1) *denies* Orange County's petition for review of the Board rulings in LBP-00-12, LBP-00-19, and LBP-01-9; and (2) *denies* Orange County's request for an emergency stay of LBP-01-9.

IT IS SO ORDERED.

For the Commission

ANDREW L. BATES for
ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 10th day of May 2001.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Thomas S. Moore, Presiding Officer
Thomas D. Murphy, Special Assistant

In the Matter of

Docket No. 40-8968-ML
(ASLBP No. 95-706-01-ML)

HYDRO RESOURCES, INC.
(P.O. Box 15910, Rio Rancho, NM 87174)

May 2, 2001

ORDER

In CLI-01-4, 53 NRC 31, 71 (2001), the Commission remanded this proceeding to the Presiding Officer for further proceedings. The Commission also ordered Hydro Resources, Inc. (HRI), within 3 months of its decision, to “indicate on the record whether it wishes to retain its full license and proceed to hearing, or modify it to cover only the Section 8 site.” 53 NRC at 44. Finally, the Commission directed the Presiding Officer “to consult with the parties and to establish a precise schedule for further proceedings.” *Id.* In accordance with the Commission’s instructions, the Presiding Officer will hold a telephone scheduling conference with the parties to this proceeding on Thursday, May 10, 2001, at 11 a.m. eastern daylight time. Counsel for all parties shall participate. To participate, counsel for each of the parties shall call 301-231-5539 and enter passcode 2162# at a few minutes before 11 a.m. eastern daylight time on the date of the telephone conference.

Previously in another aspect of this proceeding, the Presiding Officer, on January 30, 2001, issued an order setting a telephone conference for February 7, 2001, at 3:00 p.m. with instructions for counsel to call into a bridge telephone number. That order was served upon all parties and counsel for all affected parties were provided a copy by e-mail that same day. On February 7th, counsel for

all affected parties, except HRI's counsel of record, Mr. Anthony J. Thompson, timely called in to participate. Mr. Thompson, however, did not participate. Neither did Mr. Thompson inform the Presiding Officer he was unavailable for the conference, move to reschedule the conference, or arrange for different counsel to represent HRI. While counsel for the other parties patiently waited for the telephone conference to begin, the Presiding Officer attempted to contact Mr. Thompson, only to learn that he was unavailable. Eventually another attorney from Mr. Thompson's office was located to participate on HRI's behalf in the telephone conference. To date, Mr. Thompson has made no filing informing counsel for the other parties or the Presiding Officer why he ignored the January 30, 2001 order setting the telephone conference. Similarly, Mr. Thompson has made no filing apologizing to participating counsel or the Presiding Officer for delaying the conference and inconveniencing them.

In the event Mr. Thompson, other counsel for HRI, or any other party's counsel, cannot participate in the May 10, 2001 telephone conference, counsel should inform the Presiding Officer by close of official NRC business hours Monday, May 7, 2001, by e-mail (TSM2@NRC.GOV) or facsimile notice (301-415-5599). Any counsel wishing to change the date of the conference should also provide the Presiding Officer by the same date and time three alternative dates and times acceptable to all other counsel. Any failure to comply with the provisions of this Order will be viewed with disfavor. Because HRI's counsel has previously ignored one scheduling order of the Presiding Officer, counsel for HRI would be well advised scrupulously to avoid causing any further unnecessary delay or injecting any further inefficiency into this proceeding in the future.

At the May 10, 2001 telephone conference, counsel for each party should be prepared to discuss a schedule for the conduct of the remainder of the proceeding. Bearing in mind the time limits set forth in the Commission's Rules of Practice, counsel for each party should prepare a complete proposed schedule for completing the proceeding. Counsel should either e-mail or fax the proposed schedule to the Presiding Officer and counsel for each of the other parties by close of NRC official business hours on Tuesday, May 8, 2001, along with a brief listing and appropriate explanation of any other matters that counsel would like addressed during the telephone conference. In addition, counsel for each party should set forth his or her views on whether each of the remaining sites covered by HRI's license should be considered together, or separately and consecutively.

Because the Commission remanded the proceeding to the Presiding Officer and there are no other portions of the proceeding still before the Commission, the Presiding Officer has had jurisdiction over the entire proceeding since the Commission's remand. Rather than file an appropriate notice with the Presiding Officer complying with the Commission's directions to indicate on the record whether it wished to retain its full license and proceed to hearing or, alternatively, modify its license, Mr. Thompson had hand-delivered a letter, dated April 30,

2001, and addressed to the Chairman of the Commission, to the Chairman. His office then e-mailed a copy of the letter to the Presiding Officer after the close of official NRC business hours and apparently served the letter upon other parties by regular mail. Instead of waiting for the Presiding Officer to establish a schedule as directed by the Commission, Mr. Thompson, through his letter, instructs the Commission on how it should order the Presiding Officer to conduct the proceeding. So that there is no misunderstanding, Mr. Thompson should be aware that a hand-delivered letter to the Chairman of the Commission is not a proper notice "on the record" that HRI wishes to retain its full license when jurisdiction of the proceeding resides in the Presiding Officer. Further, Mr. Thompson should be aware that, even though this proceeding is being conducted pursuant to 10 C.F.R. Part 2, Subpart L, of the Commission's Rules of Practice, "letter practice" is not the appropriate form for filings before the Presiding Officer. Mr. Thompson may, of course, write letters to whomever and for whatever purposes he chooses on whatever topics he pleases, with one exception. In this proceeding, all written communications to the Presiding Officer should be by appropriate pleadings properly served on all parties.

Finally, it appears from the certificate of service attached to Mr. Thompson's April 30, 2001, letter that HRI may be using an out-of-date service list. Because of the age of this proceeding, Mr. Thompson should provide the Presiding Officer and counsel for the other parties by May 7, 2001, a complete up-to-date service list of all parties that includes the complete mailing address, e-mail address, and facsimile number of each party's counsel.

It is so ORDERED.

By the Presiding Officer

Thomas S. Moore
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 2, 2001

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Charles Bechhoefer, Chairman
Dr. Richard F. Cole
Dr. Charles N. Kelber

In the Matter of

Docket No. 50-423-LA-3
(ASLBP No. 00-771-01-LA-R)
(Facility Operating
License NPF-49)

DOMINION NUCLEAR
CONNECTICUT, INC.¹
(Millstone Nuclear Power Station,
Unit 3)

May 10, 2001

The Atomic Safety and Licensing Board grants a motion by the Intervenors to reconsider its decision in LBP-01-1 which denied Intervenors' motion to reopen the record, and reopens the record to consider new information bearing upon the resolution of an existing contention.

MOTION FOR RECONSIDERATION: SCOPE OF ISSUES

Although some decisions hold that motions for reconsideration are generally disfavored when premised on new arguments or evidence rather than errors in the existing record, there also are cases that permit reconsideration based on new facts not available at the time of the decision in question and relevant to the

¹Effective March 31, 2001, Dominion Nuclear Connecticut, Inc. (DNC), became the operating licensee for Millstone Unit 3, in place of Northeast Nuclear Energy Company (NNECO). See Letter from David A. Repka, Esq., counsel for both NNECO and DNC, to Licensing Board (Apr. 6, 2001).

particular issue under consideration, which clarify information previously relied on and are potentially sufficient to change the result previously reached. *See, e.g., Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-17, 48 NRC 69 (1998); *Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), LBP-93-21, 38 NRC 143 (1993); *see also Central Electric Power Cooperative, Inc.* (Virgil C. Summer Nuclear Station, Unit 1), CLI-81-26, 14 NRC 787, 790 (1981).

LICENSING BOARDS: JURISDICTION

Licensing Boards have no authority to initiate investigations but only to resolve particular issues before them.

TECHNICAL ISSUES DISCUSSED

The following technical issues are discussed: Administrative controls on spent fuel pool storage, Fuel-rod misplacements, Licensee Event Reports (LERs).

MEMORANDUM AND ORDER (CCAM/CAM Motion for Reconsideration of LBP-01-1)

Pending before this Atomic Safety and Licensing Board is the motion of the Intervenor, the Connecticut Coalition Against Millstone (CCAM) and the Long Island Coalition Against Millstone (CAM) (collectively referenced as CCAM/CAM) to reconsider our order in LBP-01-1, 53 NRC 75 (2001), that denied their request to reopen the record. For reasons set forth below, we are granting CCAM/CAM's motion and reopening the record.

I. BACKGROUND

This proceeding involves an application to increase the capacity of the spent fuel pool (SFP) of the Millstone Nuclear Power Station, Unit 3 (Millstone-3). Based on the Licensee's election, it is subject to the hybrid hearing procedures of 10 C.F.R. Part 2, Subpart K. *See* LBP-00-26, 52 NRC 181, 184 (2000).

Three contentions were previously admitted into controversy in this proceeding, one of which (Contention 4) concerned whether the then-licensee, Northeast Nuclear Energy Company (NNECO) (currently DNC — *see* note 1 *supra*) was able or willing to carry out administrative controls for the SFP adequately. On October 26, 2000, the Atomic Safety and Licensing Board issued a Memorandum

and Order that, with respect to Contention 4, ruled that “NNECO has demonstrated that it can adhere to administrative controls, with adequate safety margin and defense-in-depth, without posing an undue or unnecessary risk to plant workers or the public.” LBP-00-26, 52 NRC at 200.

Thereafter, on December 18, 2000, CCAM/CAM filed a motion to reopen the record on Contention 4, based on newly developing information. In the Licensing Board’s January 17, 2001 Memorandum and Order (Denying Motion to Reopen Record on Contention 4), LBP-01-1, 53 NRC 75 (2001), this Board determined that the motion to reopen the record should be denied for failure of CCAM/CAM to demonstrate that the new information they proffered would cause us to reach a result different from that reached in LBP-00-26.

The new information consisted of recent matters of public record, stemming from NNECO’s [DNC’s] decommissioning of Millstone-1, concerning NNECO’s report that it could not confirm the location of two fuel pins (or rods) at the Millstone Unit 1 (Millstone-1) SFP. On January 16, 2001, NNECO provided the Licensing Board and parties with copies of the Unit 1 Licensee Event Report (LER) 2000-02-00, filed (by NNECO with the Staff) on January 11, 2001.² The LER stated that the two irradiated fuel rods are from a fuel assembly that was disassembled in 1972 for inspection, that the two rods were displaced during the re-assembly of the assembly, that in 1979 and 1980 the displaced rods were physically verified to be stored in a canister in the Millstone-1 SFP, that the rods and canister are no longer in the SFP location documented in 1979-80, and that “[r]ecords retrieved to date do not document their relocation or disposition.” LER at 1.

The LER goes on to hypothesize that the rods either remained stored in the SFP or were shipped in a shielded cask to a facility licensed to accept radioactive material. It states that NNECO had established a response team to investigate the location of the fuel rods, that several named actions had been completed, and that the investigation is ongoing. *Id.* at 3. According to CCAM/CAM, a public meeting of the Connecticut Nuclear Energy Advisory Committee (CNEAC)³ to discuss work at Millstone-1 was held in Waterbury, Connecticut, on January 4, 2001, and was attended by Mr. Joseph H. Besade, a member of CCAM and one of CCAM/CAM’s declarants, At that meeting, the Decommissioning Director

²The LER itself was dated “01/15/2001.”

³Connecticut Nuclear Energy Advisory Committee Subcommittee Meeting on Decommissioning: Millstone Proceeding (Jan. 4, 2001). The reports of events at the CNEAC meeting were based on the declaration of Joseph H. Besade, a member of CCAM who attended and videotaped the CNEAC meeting. Such declaration was attached to CCAM/CAM’s reconsideration motion. *See* Decl. of Joseph H. Besade in support of [CCAM/CAM] Motion for Reconsideration (Jan. 29, 2001). A copy of the videotape was included in CCAM/CAM’s motion and was served on the Board and parties. In addition, as set forth in our Memorandum (Transcript of Meeting of Connecticut Nuclear Energy Advisory Committee) dated March 16, 2001, the Licensing Board acquired an audio tape of the transcript of the January 4, 2001 CNEAC meeting and has relied on it in issuing this Memorandum and Order. Pages 7-36 of that transcript include a detailed discussion of the investigations being carried out by DNC to determine the disposition or location of the missing fuel rods.

of Millstone-1, Bryan Ford (an employee not of NNECO (or DNC) but of Entergy Corp., the decommissioning contractor for Millstone-1), described the investigation of the fate of the missing fuel. He stated that such investigation is following two tracks: (1) an investigation of the Millstone-1 SFP itself to determine whether the pins may still be there (and in what location), and (2) a comprehensive records review of all potentially pertinent records going back over the last 20 years, to determine whether the rods were removed from the pool and shipped offsite. NNECO [DNC] indicated at the CNEAC meeting that the latter review “is going to take some time” because it involves the retrieval and review of “potentially hundreds of thousands of pages of documents for the scope of what we’re looking at.”⁴

In declining to reopen the record in LBP-01-1, we ruled that the loss of accountability for the fuel pins had apparently occurred as early as September 1980, long before the shutdown in 1996 and later restart in 1998 of Unit 3. We also acknowledged that, in LBP-00-26, we relied in part on affidavits to the effect that, following the Unit 3 restart, NNECO had demonstrated its ability to carry out administrative controls adequately. (The NRC Staff witnesses, James C. Linville, Jr., and Antone C. Cerne, Jr., filed updated affidavits, dated January 8, 2001, to the same effect.) *See* LBP-01-1, 53 NRC at 80 n.4.⁵ In denying reopening, we pointed to the disappearance of the fuel rods as early as 1980 and the improved performance of NNECO personnel following the reactor’s restart in 1998 as demonstrating that the loss of the particular fuel rods had no bearing on NNECO’s [DNC’s] current ability or willingness to carry out administrative controls in the SFP adequately.

In LBP-01-1, however, we further noted that, on January 16, 2001, shortly before our issuance of that decision on January 17, 2001, CCAM/CAM moved for permission to respond to NNECO’s January 8, 2001 filing in opposition to the motion to reopen. We denied CCAM/CAM’s motion, although advising CCAM/CAM of their right to file a petition for reconsideration of LBP-01-1. *See* LBP-01-1, 53 NRC at 81 n.6.

II. CCAM/CAM MOTION

On January 29, 2001, CCAM/CAM timely filed a motion for reconsideration of LBP-01-1, which is currently before us for resolution. This motion is supported by the declarations of David A. Lochbaum and Joseph H. Besade. In this motion, CCAM/CAM reiterate their previous claim (based on reports of NNECO to the

⁴Transcript of January 4, 2001 CNEAC meeting at 8.

⁵In particular, *see* Aff. of James C. Linville, Jr., in support of NRC Staff Response Opposing Intervenors’ Motion to Reopen, attached to NRC Staff Response Opposing Intervenors’ Motion to Reopen (Jan. 8, 2001); Aff. of Antone C. Cerne, Jr., in support of NRC Staff Response Opposing Intervenors’ Motion to Reopen (Jan. 8, 2001).

NRC that we referenced in LBP-01-1) that NNECO's inability to account for the two missing fuel rods indicates its lack of ability to carry out administrative controls successfully. CCAM/CAM also reiterate and expand upon their claim that NNECO had failed to respond adequately to discovery requests of CCAM/CAM that, if answered properly, would have revealed NNECO's uncovering of failures of administrative controls at Millstone-1, to the effect that "there were questions about the spent fuel pool configuration control" [at Millstone-1].⁶

Further, based upon the declaration of Mr. Besade, CCAM/CAM reference the January 4, 2001 CNEAC meeting described earlier, at which "NNECO representatives appeared to comment on the issue of the missing spent fuel rods."⁷ CCAM/CAM claim that the NNECO representatives "reported that they still were unable to account for the missing spent fuel rods."⁸ According to CCAM/CAM, these representatives also acknowledged that "recent *mandatory inventories*" of the Millstone-1 SFP had "failed to detect that two irradiated spent fuel rods could not be accounted for" and that "NNECO did not provide NRC with a confirmation that Unit 1 was operating in conformance with its licensing and design basis in response to the 50.54(f) confirmatory order."⁹

Finally, CCAM/CAM reference the same LER that we described earlier (2000-02-00, dated January 15, 2001) (a copy of which is also attached to the declaration of David A. Lochbaum), issued by Bryan Ford, the Decommissioning Director of the Millstone-1 facility. According to CCAM/CAM, the LER states in pertinent part that "[d]uring a reconciliation and verification of the Millstone Unit 1 spent nuclear fuel records, Unit 1 personnel *concluded* that the location of two full-length irradiated fuel rods could not be determined, and was not properly tracked in the Special Nuclear Material (SNM) records."¹⁰

Based on the foregoing, CCAM/CAM claim that standards for reopening the record have been satisfied and, in particular, that a materially different result would be or would have been likely had the newly proffered evidence been considered initially. CCAM/CAM specify that (1) NNECO is operating Millstone-1 outside its design basis because of a "failure of adherence to administrative controls for a period of perhaps twenty years and counting";¹¹ (2) "material facts regarding the missing fuel rods are in dispute and should be addressed";¹² (3) NNECO's agent "has implicitly conceded that failure to adhere to administrative controls over spent fuel storage can challenge criticality margins";¹³ (4) "this extraordinary

⁶ [CCAM/CAM] Motion for Reconsideration [of LBP-01-1] (January 29, 2001) at 2 (emphasis omitted).

⁷ CCAM/CAM Motion for Reconsideration at 4.

⁸ *Id.*

⁹ *Id.* (emphasis supplied).

¹⁰ CCAM/CAM Motion at 4 (emphasis added by CCAM/CAM, footnote omitted).

¹¹ *Id.* at 5.

¹² *Id.* at 6.

¹³ *Id.* at 7.

circumstance illustrates the folly of trading physical protection for administrative controls”;¹⁴ (5) the new administrative controls at Millstone-3 “require far more attention to complexity than maintaining controls to prevent spent fuel rods from leaving the spent fuel pool”;¹⁵ (6) referring to the Millstone-3 restart, the “ability of NNECO [currently DNC] to adhere to administrative controls has not been assessed”;¹⁶ and (7) “the Licensing Board itself should mount an investigation.”¹⁷ Based on these considerations, CCAM/CAM argue that their motion for reconsideration should be granted and that a full and complete record be developed at a full evidentiary hearing on Contention 4.

III. NNECO [DNC] AND STAFF RESPONSES

In responses filed on February 13, 2001, and February 20, 2001, respectively, both DNC and the Staff oppose CCAM/CAM’s motion for reconsideration of LBP-01-1.¹⁸ They assert that CCAM/CAM have failed to show any error in LBP-01-1 that warrants reconsideration.

DNC initially asserts that the new information provided by CCAM/CAM in their motion for reconsideration, included in attached declarations of David Lochbaum and Joseph Besade, should have been provided with the initial motion to reopen (denied by LBP-01-1). DNC concludes this information is untimely without adequate explanation and, accordingly (along with arguments based thereon), should not be considered. We reject this claim at the outset, inasmuch as certain information discussed in the declarations — particularly the CNEAC meeting referenced by Mr. Besade and the LER discussed by Mr. Lochbaum — did not arise (or was not readily available) until subsequent to the date (December 18, 2000) on which CCAM/CAM filed their motion to reopen.¹⁹

For its part, the Staff maintains that motions for reconsideration are generally disfavored when premised on new arguments or evidence rather than errors in the existing record. Although there is some precedent to this effect, there also are cases that permit reconsideration based on new facts not available at the time of the decision in question and relevant to the particular issue under consideration, which clarify information previously relied on and are potentially sufficient to

¹⁴ *Id.*

¹⁵ *Id.* at 8.

¹⁶ *Id.*

¹⁷ *Id.* at 9.

¹⁸ [NNECO’s] Response in Opposition to Motion for Reconsideration of LBP-01-01 (February 13, 2001) [hereinafter, DNC Response]; NRC Staff Response in Opposition to Intervenor’s Motion for Reconsideration (February 20, 2001) [hereinafter Staff Response].

¹⁹ We note that, had CCAM/CAM waited to develop further information in support of their motion to reopen, they might have raised a question as to the motion’s timeliness under 10 C.F.R. § 2.734(a)(1). In LBP-01-1, we determined that the motion had been timely filed. *See* LBP-01-1, 53 NRC at 78. *But see* note 21, *infra*.

change the result previously reached. *See, e.g., Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-17, 48 NRC 69 (1998); *Georgia Power Co.* (Vogle Electric Generating Plant, Units 1 and 2), LBP-93-21, 38 NRC 143 (1993); *see also Central Electric Power Cooperative, Inc.* (Virgil C. Summer Nuclear Station, Unit 1), CLI-81-26, 14 NRC 787, 790 (1981) (“Motions to reconsider should be associated with requests for re-evaluation of an order in light of an elaboration upon, or refinement of, arguments previously advanced.”) Given the particular circumstances present in this case, where the new information was initially sought to be presented as part of the motion to reopen,²⁰ we reject the Staff’s request for us to deny the motion on procedural grounds and proceed to consider CCAM/CAM’s current motion for reconsideration on the merits — indeed, essentially as a supplemented motion to reopen.²¹ (All parties in their filings have addressed the merits of the motion.)

On the merits, DNC claims that the Unit-1 issue remains a matter to be resolved by DNC and the NRC Staff through the normal regulatory process, and that it is a matter very distinct from Contention 4 and would not lead, or be likely to lead, to a different result in this proceeding.²² DNC and the Staff each assert that CCAM/CAM’s arguments are repetitious of claims previously made and rejected in LBP-01-1. DNC characterizes CCAM/CAM’s claim that Unit 1 was operated outside its design basis as “premature” and not relevant to the current issue.²³ The Staff also deems the claim to be irrelevant to the contention.²⁴ DNC further faults CCAM/CAM for ignoring the affidavits of the NRC Staff on which we relied in LBP-01-1, to the effect that NNECO [DNC] has demonstrated — notwithstanding the Unit 1 issue — that it can carry out administrative controls.²⁵ DNC adds that, in LBP-00-26, we already found that fuel misplacements can and do occur and that the Unit-1 issue, taken in its least favorable light, simply supports that assumption.²⁶

²⁰ We reiterate that, shortly prior to our ruling in LBP-01-1, CCAM/CAM advised that it wished to file additional information in support of its motion, but that we denied that request based on the circumstance that CCAM/CAM might file a motion for reconsideration, if warranted. *See* LBP-01-1, 53 NRC at 81 n.6.

²¹ We note, additionally, that CCAM/CAM’s January 29, 2001 Motion for Reconsideration would also appear to satisfy the criteria for a Motion to Reopen the Record, as set forth in 10 C.F.R. § 2.734(a): it was timely filed, given the significance of the events occurring at the January 4, 2001 CNEAC meeting, as well as the advice provided in LBP-01-1, 53 NRC at 81 n.6; it addresses a significant safety issue; and it demonstrates that a materially different result would be or would have been likely had *all* of the newly proffered evidence been considered initially. Further, as provided by 10 C.F.R. § 2.734(b), the motion was accompanied by affidavits or declarations. The declaration of Mr. Besade, in particular his report of the CNEAC meeting, provides significant material in our consideration of the CCAM/CAM motion.

²² *See* DNC Response at 4.

²³ *Id.* at 5.

²⁴ NRC Response at 6.

²⁵ *Id.* at 5-6.

²⁶ As for CCAM/CAM’s assertion that the LER includes a determination on the risk of criticality in the event the unaccounted-for fuel pins were placed next to reactive fuel, and that this is a concession that a failure to adhere to administrative controls “can challenge criticality margins,” DNC deems such assertion to be “absurd,” inasmuch as DNC “routinely considers risks related to hypothetical hazards” (an analysis called for by the LER itself). *Id.* at 6-7.

DNC next counters arguments made in the respective declarations of Mr. Lochbaum and Mr. Besade. With respect to Mr. Lochbaum, DNC attempts to portray the “flawed logic and the lack of supporting analysis” of Mr. Lochbaum, in using the missing fuel pins as an example of their claim that the “added complexity” of administrative controls (one of the elements of Contention 4) can lead to fuel handling errors, and hence criticality in the SFP.²⁷ DNC asserts that Mr. Lochbaum does not and cannot know what caused the Unit-1 accountability failure and has provided no reasonable basis (human factors or otherwise) to equate the Unit-1 accounting procedures with the Unit-3 fuel handling procedures. The Staff presents a similar argument, attributing DNC’s performance of a criticality calculation as necessary in calculating K_{eff} rather than evidence of a potential criticality, as claimed by CCAM/CAM.²⁸ DNC and the Staff conclude that CCAM/CAM’s argument is not persuasive and certainly not a reason to reconsider LBP-01-1.²⁹ DNC repeats that, in LBP-00-26, we assumed that fuel handling errors can occur and that the potential for such errors poses no undue risk of criticality. And DNC again states that spent fuel reactivity limits have not been violated at either Unit 1 or Unit 3 and the margin-of-safety against criticality at Unit 3 has been “unequivocally demonstrated.”³⁰

Next, DNC and the Staff each assert that, as we found earlier, the procedural issues raised by CCAM/CAM do not warrant reopening the record. DNC reiterates that it has satisfied all its discovery obligations in this proceeding. Both DNC and the Staff claim that the asserted failure of DNC to respond to a Staff request for information should not be considered a failure by DNC inasmuch as, in the circumstances, no response was required.³¹ Further, DNC and the Staff each assert that the Licensing Board has no authority to instigate an investigation of this matter, as requested by CCAM/CAM.³²

Finally, with respect to CCAM/CAM’s claim that we have placed too much reliance on the Millstone recovery period and subsequent startup, inasmuch as it was “heavily managed, supervised and supported” by the NRC Staff,’ ’ DNC states that this is an argument that could have been made earlier but was not.³³ In any event, DNC treats the argument as “overwhelmed” by evidence presented in the record.³⁴

²⁷ *Id.* at 8.

²⁸ See Staff Response at 7.

²⁹ DNC Response at 7-8; Staff Response at 8.

³⁰ *Id.* at 9.

³¹ See DNC Response at 11-12; Staff Response at 5-6. As set forth by both parties, a response would have been required only were Millstone-1 to be restarted.

³² See DNC Response at 11-12; Staff Response at 10-11.

³³ DNC Response at 12.

³⁴ See *id.*

With respect to the declaration of Mr. Besade, DNC first expresses doubt as to its relevance. DNC characterizes Mr. Besade's reference to a Millstone-1 asset schedule (as adding support to CCAM/CAM's claims concerning reporting and discovery) as misplaced. According to DNC, "[t]he schedule merely reflects NNECO's belief regarding the contents of the Unit 1 pool, as of the date it was made"³⁵

DNC acknowledges that, over the years, it has conducted periodic inventories. But it claims that, at the CNEAC meeting attended by Mr. Besade (a videotape of which was attached to CCAM/CAM's motion), the Unit 1 issue was not discovered during the semiannual inventories recorded by the asset schedule but, rather, during records reviews in connection with decommissioning. DNC concludes:

While at this time it is still speculation as to precisely how the issue escaped earlier detection, we can say the periodic inventories are conducted with respect to fuel bundles shown on the [SFP] map. Those inventories would have been conducted against the current records at the time. As discussed in the LER, the two fuel pins . . . have not been shown on the [SFP] map since mid-1980. It appears, therefore, that after mid-1980, because there was no entry on the map, there was no trigger for an inventory to confirm the physical presence of the two pins. Only when the 1980 records discrepancy was identified in 2000 was further inquiry prompted.³⁶

IV. LICENSING BOARD ANALYSIS

We indicated earlier that, for the reasons stated, we would not base our decision on CCAM/CAM's motion on the procedural deficiencies asserted by DNC or the Staff but, rather, on the merits. After reviewing each of the parties' presentations, it is clear that many of CCAM/CAM's claims have little merit in terms of reconsidering our prior decision in LBP-01-1 not to reopen the record. For example, none of the new information provided by CCAM/CAM undercuts our prior decision that there was no necessity, following the issuance of LBP-00-26, for NNECO to update its earlier responses to CCAM/CAM discovery following its determination that two fuel rods were missing. The asserted failure of NNECO [DNC] to respond to a particular Staff Millstone-1 inquiry under 10 C.F.R. § 50.54(f) is likewise of no significance, given the lack of any requirement for a response in the particular circumstance.

Similarly, we reject CCAM/CAM's argument that we accorded undue emphasis to DNC's performance following the Millstone-3 restart. Such performance was crucial to our ruling in LBP-01-1, and it will be crucial to our ruling here inasmuch

³⁵DNC Response at 13. DNC adds that the "schedule lists a fuel storage container with fuel pins. That container is in the Unit 1 [SFP]. Obviously, the two pins have *not* been found, at least to date, in that container." *Id.* at 13 n.15.

³⁶DNC Response at 13-14 (emphasis in original).

as this was the period during which Millstone-3's management restructuring was put into effect and would reflect its current ability or willingness to carry out administrative controls successfully. Further, we have no authority to initiate our own investigation. Our authority extends only to the resolution of particular issues before us.

Additionally, we also find as not persuasive the argument advanced by CCAM/CAM that, because the LER filed on January 11, 2001, includes a determination of the risk of criticality in the event the unaccounted-for fuel pins were placed next to reactive fuel, a concession has been made [by DNC] that a failure to adhere to administrative controls "can challenge criticality margins."³⁷ Whenever fissile material is moved, prudence dictates that an analysis of effects on reactivity be made. In the current instance, however, the relatively small amount of fissile material involved provides assurance that existing margins of safety will not be compromised.³⁸ Quantifying the encroachment on the margins does, of course, require a calculation. Moreover, it is not the potential criticality that imparts significance to the missing fuel rods. Rather, it is the adequacy *vel non* of the administrative controls needed to identify the location of those fuel rods.

The one matter giving support — indeed, persuasive support — to CCAM/CAM's current motion is the loss of the fuel rods itself and the failure of DNC thus far, after more than 4 months' search, to have located the rods or accounted for their disposition. This failure in accounting for fuel stored in an SFP has caused us to reexamine our previous reliance, in substantial part, on the aforementioned affidavits of Mr. Linville and Mr. Cerne. Mr. Cerne's affidavit focused on work at Millstone-3 and ignored work at Millstone-1, which has been in the decommissioning process since 1995. As for Mr. Linville, his June 30, 2000 affidavit (updated by his January 8, 2001 affidavit) does refer to errors at Unit 1, although not, of course, to the missing fuel rods under consideration here. In reviewing operations since restart, however, Mr. Linville's affidavits include remarks solely focused on Unit 3 (inasmuch as Unit 1 did not restart). Thus, there is no information in Mr. Linville's affidavits that bears on the relationship, if any, between the errors leading to the misplacement or loss of the two fuel rods from the Millstone-1 SFP and current operations at the Unit-3 SFP. While there was no reason at the time for any of the parties to concern themselves with the record of work at Unit 1, there is now reason — based on reports concerning the CNEAC meeting and the LER itself — to look at such a record to discern, at the least, whether there is any common link either in procedures or execution of procedures between the accountability failure at Unit 1 and the present methods (or personnel) in use at Millstone-3.

³⁷ CCAM/CAM Motion at 7.

³⁸ See Aff. of Laurence I. Kopp and Anthony C. Attard, dated January 8, 2001, ¶ 6.

Based on the record before us, the loss could credibly be attributable to a failure of the administrative controls governing accountability for fuel rods in the Millstone-1 SFP. Indeed, as emphasized by CCAM/CAM, the reference by Mr. Ford (on behalf of NNECO/DNC) at the CNEAC meeting to a periodic inventory system at Millstone-1 (CNEAC transcript (Jan. 4, 2001) at 15), together with NNECO's acknowledgment that the missing rods were only identified through the decommissioning process and not through the inventory (*id.* at 48), appears to suggest a failure of the governing administrative controls at Millstone-1. In such a case, we would need to determine the extent to which the failure of administrative controls at the Millstone-1 SFP could carry over to the successful implementation of administrative controls at the Millstone-3 SFP.³⁹

Taking into account these considerations, and in view of the significance of the loss of control over Special Nuclear Material (*see* 10 C.F.R. Part 74, Subpart A), we find it appropriate to grant CCAM/CAM's motion for reconsideration of LBP-01-1 at this time and to reopen the record on Contention 4, to the extent it bears upon both the adequacy of administrative controls at the Millstone-3 SFP and DNC's ability or willingness to implement such controls successfully. The scope of this reconsideration is limited to the procedures or controls for management of the SFPs and their modes of execution that may be common to Millstone-1 and Millstone-3.

Further, we solicit the parties' views on the next step to follow. We are hereby scheduling a telephone prehearing conference for Thursday, May 24, 2001, beginning at 9:30 a.m. (EDT), to consider such matters as:

- (1) The procedural requirements of the reopened hearing — i.e., whether affidavits or declarations (together with oral argument), as contemplated by Subpart K, are sufficient to resolve this issue or, alternatively, whether a full evidentiary hearing (as sought by CCAM/CAM) is necessary or warranted. Further, the parties are invited to address whether further discovery may be necessary or warranted and, if so, under what standards and schedule.
- (2) Should further hearing activities await the conclusion of DNC's investigation and its report on its search for the missing fuel rods?
- (3) The effect of this ruling on the Board's immediate effectiveness finding. *See* LBP-00-26, 52 NRC at 214, Part F, ¶¶ 2 and 4. In other words, should the current authorization for DNC to use administrative controls in the Millstone-3 SFP remain in effect pending the ongoing litigation in the reopened hearing. *See, e.g., Philadelphia Electric Co.* (Limerick Generating Station, Unit 2), CLI-89-17, 30 NRC 105 (1989);

³⁹ There may, of course, be reasons for loss of the fuel rods that have nothing to do with the exercise of administrative controls over movement and storage of fuel in an SFP — for example, a failure to make a proper record of an offsite shipment of fuel would not constitute a failure of such type of administrative controls.

Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-395, 5 NRC 772, 784-85 (1977).

- (4) Other matters that may bear on the reopened hearing.

V. ORDER

For the reasons set forth above, it is, this 10th day of May 2001, ORDERED:

1. The Licensing Board hereby *grants* CCAM/CAM's motion for reconsideration of LBP-01-1, or alternatively its renewed motion to reopen the record on Contention 4, limited to the issue set forth above.

2. The views of all parties are invited with respect to the appropriate procedures to be followed at the reopened hearing. Such views on procedures should be filed (and furnished by e-mail) no later than Tuesday, May 22, 2001. Parties should discuss procedural options and further discovery among themselves prior to submitting their recommendations as to procedures, so that, if possible, there will be no disagreement as to procedures to be followed.

3. A telephone prehearing conference is hereby scheduled for Thursday, May 24, 2001, beginning at 9:30 a.m. EDT, to resolve any disagreements, particularly with respect to procedures. At that time, the Board expects to prescribe procedures for the reopened hearing and to establish (if necessary) further discovery schedules.

THE ATOMIC SAFETY AND
LICENSING BOARD

Charles Bechhoefer, Chairman
ADMINISTRATIVE JUDGE

Dr. Richard F. Cole
ADMINISTRATIVE JUDGE

Dr. Charles N. Kelber
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 10, 2001

[Copies of this Memorandum and Order have been transmitted this date by e-mail transmission to counsel for each of the parties.]

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Charles Bechhoefer, Chairman
Dr. Richard F. Cole
Ann Marshall Young

In the Matter of

Docket No. 50-440-CivP
(ASLBP No. 01-784-01-CivP)
(EA 99-012)
(Operating License
No. NPF-58)

FIRSTENERGY NUCLEAR
OPERATING COMPANY (FENOC)
(Perry Nuclear Power Plant, Unit 1)

May 31, 2001

The Atomic Safety and Licensing Board approves a settlement agreement between the parties and terminates the proceeding.

MEMORANDUM AND ORDER
(Approving Settlement Agreement and Terminating Proceeding)

This proceeding concerns an August 3, 2000 Order Imposing a Civil Monetary Penalty of \$110,000, 65 Fed. Reg. 49,610-11 (Aug. 14, 2000), resulting from an alleged violation by FirstEnergy Nuclear Operating Company (FENOC or Licensee) of NRC's employee-protection regulations. The alleged Severity Level II violation was based upon the asserted discrimination by a management official against an employee for engaging in protected activities (i.e., testifying in a whistleblowing case before the Department of Labor).

On October 18, 2000, FENOC filed a timely request for a hearing. By Memorandum and Order dated November 7, 2000, this Board granted FENOC's request and, on the same date, issued a Notice of Hearing. *See* 65 Fed. Reg. 68,163 (Nov. 14, 2000). In the same order, and in accord with the October 31, 2000 request of both parties to the proceeding (FENOC and the NRC Staff), we suspended further proceedings for a discrete time period to allow the parties an opportunity to pursue settlement negotiations. Upon further requests by both parties in order to facilitate settlement of the case, by Orders dated December 4, 2000, January 25, 2001, February 8, 2001, March 16, 2001, and May 4, 2001, we granted further extensions of the suspense period, the last suspension extending until June 19, 2001.

As part of their settlement negotiations, the parties jointly requested the appointment of a settlement judge. On March 16, 2001, a settlement judge was appointed. Based in part on the efforts of the settlement judge, who held formal mediation sessions with counsel on March 21, 2001, and with the parties and counsel on May 8, 2001, the parties, on May 22, 2001, filed a joint motion for the Licensing Board to approve a settlement agreement and terminate the proceeding. The agreement provides, *inter alia*, for an \$80,000 civil monetary penalty, based on a Severity Level III violation. The parties express the view that settlement in accord with the agreement (a copy of which is attached to this Memorandum and Order) is in the public interest.

Under 10 C.F.R. § 2.203, the Licensing Board is authorized to approve a stipulation for the compromise of a civil penalty, "according due weight to the position of the staff." Given Staff approval of the stipulation in this case, the Licensing Board hereby *approves* the stipulation and *terminates* the proceeding.

IT IS SO ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Charles Bechhoefer, Chairman
ADMINISTRATIVE JUDGE

Dr. Richard F. Cole (by CB)
ADMINISTRATIVE JUDGE

Ann Marshall Young
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 31, 2001

[Copies of this Memorandum and Order (including the attachment) have been transmitted this date by e-mail to counsel for each of the parties.]

ATTACHMENT

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of

**Docket No. 50-440-CIVP
(ASLBP No. 01-784-01-CivP)
(EA 99-012)
(Operating License
No. NPF-58)**

**FIRSTENERGY NUCLEAR
OPERATING COMPANY
(Perry Nuclear Power Plant, Unit 1)**

SETTLEMENT AGREEMENT

The United States Nuclear Regulatory Commission (hereinafter "NRC") and FirstEnergy Nuclear Operating Company (hereinafter "FENOC"), in consideration of the promises and representations contained in this document, hereby agree as follows:

1. On August 3, 2000, the NRC issued an Order Imposing Civil Monetary Penalty ("Order") in Enforcement Action 99-012 (EA 99-012) with respect to an alleged violation by FENOC. That Order asserted that, as described in a Notice of Violation and Proposed Imposition of Civil Penalty ("Notice") sent to FENOC by letter dated May 20, 1999, Centerior Energy Corporation¹ (Commission licensee of the Perry Nuclear Power Plant ("Perry") prior to the FirstEnergy merger, thereafter and subsequent thereto FENOC), discriminated against a Radiation Protection Supervisor (RPS) on July 16-17, 1997, for engaging in protected activities within the scope of 10 C.F.R. § 50.7. The alleged discrimination consisted of verbal counseling on July 16, 1997, and the placement of a July 17, 1997 memorandum documenting same in the RPS's section personnel file

¹Prior to NRC approval of the transfer of operating authority of Perry to FENOC, a new company, 63 Fed. Reg. 67,939 (Dec. 9, 1998), The Cleveland Electric Illuminating Company and Centerior Service Company were agents for the licensed owners of Perry and had exclusive responsibility for, and control over, the construction, operation, and maintenance of Perry. *Id.*

on July 22, 1997, and subsequently removed from the file on February 4, 1998. The protected activities pertained to a deposition that the RPS was to give (and subsequently gave) in the pre-hearing discovery phase of a Department of Labor Section 211 proceeding concerning alleged employment discrimination by Centerior Energy involving a co-worker of the RPS. The Order imposed a civil monetary penalty in the amount of \$110,000 based upon a Severity Level II violation.

2. On October 18, 2000, FENOC requested an enforcement hearing in response to the Order entered in EA 99-012 in order to present to an Atomic Safety and Licensing Board (hereinafter "Licensing Board") testimony and evidence to contest the alleged violation of 10 C.F.R. § 50.7 and the Order as unjustified under the evidence and applicable regulations and law, as well as to pursue resolution pursuant to 10 C.F.R. § 2.203.

3. By Memorandum and Order dated November 7, 2000, the presiding Licensing Board granted the request of FENOC for a hearing and also granted the Joint Motion of FENOC and the NRC Staff to suspend proceedings to afford said parties an opportunity to pursue settlement negotiations.

4. As the result of the above, FENOC and the NRC have concluded that it is in the respective interests of FENOC and the NRC, as well as the public interest, to settle the dispute at issue in EA 99-012. Such settlement is encouraged by 10 C.F.R. § 2.203. Therefore, FENOC and the NRC agree as follows:

- A. The NRC and FENOC will jointly move the Board to approve this Settlement Agreement and to terminate this proceeding, pursuant to 10 C.F.R. § 2.203.
- B. Although there has not been any adjudication of any violation of 10 C.F.R. § 50.7 by FENOC, as a full and final settlement of the dispute at issue in EA 99-012, and as a compromise of disputed claims, FENOC does not contest the existence of a Severity Level III violation in response to the Notice sent to FENOC by NRC of May 20, 1999 referenced and described in paragraph 1 above.
- C. The NRC agrees to reduce the amount of civil monetary penalty imposed by the Order to \$80,000 and the Severity Level of the violation to Severity Level III.
- D. As provided for in NUREG-1600, NRC Enforcement Policy, Paragraph C.2.a, Civil Penalty Assessment, Initial Escalated Action, escalated enforcement actions may impact discretion decisions for subsequent escalated actions for up to a two-year period. For this enforcement action, the NRC agrees that the two-year period is considered to have started on January 26, 1999 (the date of the letter from NRC Region III to FENOC re: Predecisional Enforcement Conference) and will have terminated on January 26, 2001, after which EA-99-012 will not be considered by the NRC in deciding subsequent escalated enforcement action involving

FENOC as operator of Perry. Accordingly, this voluntary Settlement Agreement has no other use, nor can it create any new legal rights or liabilities, except as a full and final settlement of this matter.

- E. Within seven (7) business days of notice of approval of this Settlement Agreement by the presiding Licensing Board, FENOC agrees to pay a \$80,000 civil monetary penalty. Such payment shall be made by check, draft, money order, or electronic transfer, payable to the Treasurer of the United States and such check, draft, or statement indicating the date and time when an electronic transfer was made shall be mailed to Frank J. Congel, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738.
- F. This Settlement Agreement constitutes final disposition of the matters giving rise to EA 99-012 and to this litigation. In consideration of the Terms of this Agreement, the NRC will assert no further enforcement or other claims, in any form or forum, related to the matters addressed in EA 99-012 and the underlying inspection report, Notice, and correspondence, and FENOC will not pursue any further hearings on, or judicial review of, EA 99-012.

IN WITNESS WHEREOF, FENOC and the NRC have caused this Settlement Agreement to be executed by their duly authorized representatives.

FIRSTENERGY NUCLEAR OPERATING
COMPANY

UNITED STATES NUCLEAR
REGULATORY COMMISSION

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United States Nuclear Regulatory
Commission
11555 White Flint North
Rockville, MD 20852-2738

Dated: May 22, 2001.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of

Docket No. 72-22-ISFSI
(ASLBP No. 97-732-02-ISFSI)

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage
Installation)

May 31, 2001

In this proceeding concerning the application of Private Fuel Storage, L.L.C. (PFS), under 10 C.F.R. Part 72 to construct and operate an independent spent fuel storage installation (ISFSI), acting pursuant to 10 C.F.R. § 2.749, the Licensing Board (1) grants in part and denies in part a PFS request for summary disposition in its favor in connection with the remaining issues in contention Utah K/Confederated Tribes B, Inadequate Consideration of Credible Accidents; (2) denies a PFS motion to strike portions of Intervenor State of Utah's summary disposition motion response and accompanying supporting materials; and (3) refers to the Commission that portion of its determination regarding the regulatory standard to be applied to assess credible aircraft crash hazards for ISFSIs.

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

Under 10 C.F.R. § 2.749(a), (d), summary disposition may be entered with respect to any matter (or all of the matters) in a proceeding if the motion, along with any appropriate supporting material, shows that there is "no genuine issue as

to any material fact and that the moving party is entitled to a decision as a matter of law.” The movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts not at issue and any supporting materials (including affidavits, discovery responses, and documents) that accompany its dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials, or the movant’s facts will be deemed admitted. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

TECHNICAL ISSUES DISCUSSED

The following technical issues are discussed: Ground Ordnance, Cruise Missile, and Aircraft Crash Probabilities.

MEMORANDUM AND ORDER

(Granting in Part and Denying in Part Summary Disposition Motion Regarding Contention Utah K/Confederated Tribes B; Referring Ruling on Aircraft Crash Hazard Regulatory Standard to the Commission)

Pending before the Licensing Board in this 10 C.F.R. Part 72 proceeding concerning the application of Private Fuel Storage, L.L.C. (PFS), for authorization to construct and operate an independent spent fuel storage installation (ISFSI) in Skull Valley, Utah, is a motion for summary disposition filed by PFS regarding contention Utah K/Confederated Tribes B, Inadequate Consideration of Credible Accidents. With contention Utah K/Confederated Tribes B, Intervenors State of Utah (State) and the Confederated Tribes of the Goshute Nation (Confederated Tribes) challenge the sufficiency of PFS consideration of credible accident scenarios caused by external events and facilities that could affect the proposed facility. The PFS asks that summary disposition be granted in its favor on contention Utah K/Confederated Tribes B, a request that is supported in part by the NRC Staff and opposed by the State, as the lead Intervenor for this contention. In addition, PFS has filed a motion to strike portions of the State’s responsive pleading and the accompanying supporting materials, which the State opposes and the Staff supports.

For the reasons set forth below, we deny the PFS motion to strike, grant in part and deny in part the PFS dispositive motion, and refer to the Commission

that portion of our determination regarding the regulatory standard to be applied to assess credible aircraft crash hazards for ISFSIs.

I. BACKGROUND

In its April 1999 decision ruling on the parties' standing and litigable issues, the Licensing Board admitted portions of then-separate contentions Utah K and Confederated Tribes B and consolidated them for consideration in the proceeding. *See* LBP-98-7, 47 NRC 142, 190-91, 234-35, 247-48, *reconsideration granted in part and denied in part on other grounds*, LBP-98-10, 47 NRC 288, *aff'd on other grounds*, CLI-98-13, 48 NRC 26 (1998). As admitted,¹ the contention reads:

The Applicant has inadequately considered credible accidents caused by external events and facilities affecting the ISFSI and the intermodal transfer site, including the cumulative effects of the nearby hazardous waste and military testing facilities in the vicinity and the effects of wildfires.

Id. at 253. In admitting this contention, however, the Board also limited the scope of the contention to the following issues: (1) the impact upon the ISFSI from (a) accidents involving materials or activities at or emanating from the (i) Tekoi Rocket Engine Test Facility (Tekoi), (ii) Salt Lake City International Airport (SLCIA), (iii) Dugway Proving Ground (DPG), including Michael Army Airfield (MAAF), (iv) Hill Air Force Base (HAFB), and (v) the Utah Test and Training Range (UTTR), and (b) wildfires occurring in Skull Valley, Utah; and (2) the impact upon the PFS Rowley Junction Intermodal Transfer Point (ITP) of (a) materials or activities from the above specified facilities; or (b) hazardous materials that pass through the ITP from the Laidlaw hazardous waste incinerator, the Envirocare low-level radioactive and mixed waste landfill, or the Laidlaw Clive Hazardous Waste Facility or Grassy Mountain hazardous waste landfill.

On June 7, 1999, PFS filed a motion for partial summary disposition of contention Utah K/Confederated Tribes B, requesting a ruling in its favor on all non-ITP related aspects of the contention. A central premise of this motion was that there was no genuine dispute of fact as to whether accidents at the PFS facility relative to the above-referenced facilities posed a credible threat of radioactive release that could result in radiation levels above acceptable regulatory limits. *See* [PFS] Motion for Partial Summary Disposition of [Contention Utah K/Confederated Tribes B] (June 7, 1999) at 2-18. In addition, PFS asked for

¹ As admitted, the contention also included a portion of a contention submitted by former intervenors Castle Rock Land and Livestock, L.C., and the Skull Valley Co., Ltd. (Castle Rock/Skull Valley). *See* LBP-98-7, 47 NRC at 214. That portion, however, was dismissed upon Castle Rock/Skull Valley's withdrawal from this proceeding in 1999. *See* LBP-99-6, 49 NRC 114, 120-21 (1999).

summary disposition on the portion of the contention regarding the potential impacts on the PFS ISFSI from wildfires. *See id.* at 18-20. The Staff supported this PFS motion except as it related to military aircraft crashes, for which the Staff declared it had not yet completed an analysis. *See* NRC Staff's Response to [PFS] Motion for Partial Summary Disposition of [Contention Utah K/Confederated Tribes B] (July 22, 1999) at 1-2. The State opposed the PFS motion in all respects except for the issue of aircraft crashes, on which it submitted a separate, unopposed request for deferral pending a Staff determination of its position on the matter. *See* [State] Opposition to [PFS] Motion for Partial Summary Disposition of [Contention Utah K/Confederated Tribes B] (July 22, 1999) at 2, 4-12.

After considering the various submissions by the parties, in an August 30, 1999 ruling, the Board granted in part, denied in part, and deferred in part the PFS motion. *See* LBP-99-35, 50 NRC 180 (1999). Specifically, the Board (a) granted the motion with regard to Tekoi based on the State's withdrawal of its remaining argument regarding that facility; (b) denied the motion with respect to SLCIA given that at least two issues — the higher commercial aircraft risks posed by descending aircraft as compared to cruising aircraft and the higher risks based on the growth of aircraft takeoffs and landings — were found to present disputed material issues of fact; (c) relative to the DPG-related matters, granted the motion in part regarding the testing/storage of chemical munitions and agents, testing of biological materials, transportation of biological, chemical, and hazardous materials, ordnance disposal/unexploded ordnance, and MAAF landings of aircraft carrying "hung bombs" and the X-33 experimental space plane issues, denied the motion in part in connection with the firing of conventional ground weapons in military testing or training matter, and deferred aircraft crash-related issues pending further Staff action; (d) in connection with UTTR and HAFB issues, deferred military aircraft crash-related issues pending a Staff position, including the firing of air-delivered munitions, and denied the motion as to cruise missiles; (e) granted the motion with respect to the wildfires issue; and (f) deferred ruling on the aircraft accident cumulative impacts issue pending a Staff position on military aircraft crashes. *See id.* at 200-01. Thereafter, based on a ruling regarding contention Utah B, License Needed for Intermodal Transfer Facility, made that same day, *see* LBP-99-34, 50 NRC 168 (1999), the Board determined that the ITP-related portions of this contention should be dismissed, denied a PFS request for reconsideration on the DPG ground weapons testing and training matter, and clarified that its ruling on UTTR-related non-cruise missile overflights was an acknowledgment of the Staff's "no position" determination on Skull Valley military overflights. *See* LBP-99-39, 50 NRC 232, 236-38 (1999).

As a result of these various rulings, the Board approved a revised contention Utah K/Confederated Tribes B that provides:

CONTENTION: The Applicant has inadequately considered credible accidents caused by external events and facilities affecting the ISFSI, including the cumulative effects of military testing facilities in the vicinity.

Id. at 240.

On September 29, 2000, the Staff presented its revised Safety Evaluation Report (SER), in which it presented an analysis regarding aspects of the PFS facility that are at issue relative to this motion. In that report, with regard to the issue of crash hazards, the Staff concluded that the “cumulative probability of a civilian or military aircraft crashing at or affecting the Facility is below the threshold probability criterion of 10^{-6} per year . . . [and] there is reasonable assurance that civilian or military air crashes would not pose a hazard to the Facility.” SER at 15-81. Thereafter, pursuant to 10 C.F.R. § 2.749 and in accordance with a Board scheduling order, *see* Licensing Board Order (General Schedule Revision, Withdrawal of Contentions Utah H and Utah U, and Status of Contention Utah GG) (Sept. 5, 2000) (unpublished), in late December 2000 PFS filed the motion for summary disposition regarding contention Utah K/Confederated Tribes B now before us, which is supported by a statement of material facts not in dispute, five affidavits of supporting declarants, and the deposition of a State witness. *See* [PFS] Motion for Summary Disposition of [Contention Utah K/Confederated Tribes B] (Dec. 30, 2000) [hereinafter PFS Dispositive Motion]; *see also id.* Statement of Material Facts [hereinafter PFS Undisputed Facts]; *id.* Attach. A (Declaration of George Carruth) [hereinafter Carruth Declaration]; *id.* Attach. B (Declaration of George Wagner and David Girman) [hereinafter Wagner/Girman Declaration]; *id.* Attach. C (Declaration of James L. Cole, Jr., Wayne O. Jefferson, Jr., and Ronald E. Fly) [hereinafter Cole/Jefferson/Fly Declaration]; *id.* Attach. D (Declaration of Jeffrey R. Johns) [hereinafter Johns Declaration]; *id.* Attach. E (Declaration of Stephen A. Vigeant); *id.* Attach. F (Deposition of Hugh H. Horstman) [hereinafter Horstman Deposition].

In late January 2001, the Staff and the State filed responses to the PFS dispositive motion. *See* NRC Staff’s Response to [PFS] Motion for Summary Disposition of Utah Contention K/Confederated Tribes Contention B (Jan. 30, 2001) [hereinafter Staff Response]; [State] Response to [PFS] Motion for Summary Disposition on Utah Contention K/Confederated Tribes Contention B (Jan. 30, 2000) [hereinafter State Response]. In support of its response generally opposing the PFS motion, the State included a statement of disputed and relevant material facts and two affidavits. *See* State Response, [State] Statement of Disputed and Relevant Material Facts [hereinafter State Disputed Facts]; *id.* Exh. 1 (Declaration of Dr. Marvin Resnikoff Regarding Material Facts in Dispute with Respect to Contention K) [hereinafter Resnikoff Declaration]; *id.* Exh. 2 (Declaration of Lieutenant Colonel Hugh L. Horstman, Air Force (Retired) in Support of [State] Response to [PFS] Motion for Summary

Disposition of Contention Utah K and Confederated Tribes B) [hereinafter Horstman Declaration]. The Staff also included an affidavit of two witnesses in support of its position that portions of the PFS motion should be granted. *See* Staff Response, unnumbered attach. (Affidavit of Amitava Ghosh and Kazimieras Campe Concerning Utah Contention K/Confederated Tribes B) [hereinafter Ghosh/Campe Declaration]. Finally, the Staff's pleading engendered a February 9, 2001 State reply opposing the Staff conclusion that summary disposition is appropriate relative to some remaining portions of Contention Utah K/Confederated Tribes B. *See* [State] Reply to Staff's Response to [PFS] Motion for Summary Disposition on [Contention Utah K/Confederated Tribes B] (Feb. 9, 2001) [hereinafter State Reply].

That same date, PFS submitted a motion to strike portions of the State's January 30, 2001 Response, requesting that the Board excise portions of the purported expert testimony of State affiants Dr. Marvin Resnikoff and Lieutenant Colonel Hugh Horstman, and associated exhibits and portions of the State's response, that PFS asserts are improper.² *See* [PFS] Motion to Strike Portions of [State] Response to [PFS] Motion for Summary Disposition on Utah Contention K/Confederated Tribes Contention B (Feb. 9, 2001 [hereinafter PFS Motion to Strike]. The State and the Staff each filed responses to the PFS motion to strike, the former opposing the motion and the latter supporting its requested action. *See* [State] Response to [PFS] Motion to Strike Portions of [State] Response to [PFS] Motion for Summary Disposition on Utah Contention K/Confederated Tribes Contention B (Feb. 20, 2001) [hereinafter State Motion to Strike Response]; NRC Staff Response to [PFS] Motion to Strike Portions of [State] Response to [PFS] Motion for Summary Disposition on Utah Contention K/Confederated Tribes Contention B (Feb. 20, 2001) [hereinafter Staff Motion to Strike Response].

II. ANALYSIS

A. Summary Disposition Standards

We have articulated the standard governing Board consideration of a motion for summary disposition several times in this proceeding in ruling on previous PFS motions. We will rely on the same standard noted below in ruling on the present PFS motion for summary disposition:

Under 10 C.F.R. § 2.749(a), (d), summary disposition may be entered with respect to any matter (or all of the matters) in a proceeding if the motion, along with any appropriate

²With the exception of a PFS protest regarding Dr. Resnikoff's expertise in the area of cruise missiles, which is discussed in section II.B.2 below, there have been no party objections to the qualifications or expertise of the various declarants whose statements are relied upon to provide support for other parties' assertions regarding the material factual matters at issue in connection with contention Utah K/Confederated Tribes B.

supporting material, shows that there is “no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.” The movant bears the initial burden of making the requisite showing that there is no genuine issue as to any material fact, which it attempts to do by means of a required statement of material facts not at issue and any supporting materials (including affidavits, discovery responses, and documents) that accompany its dispositive motion. An opposing party must counter each adequately supported material fact with its own statement of material facts in dispute and supporting materials, or the movant’s facts will be deemed admitted. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

LBP-99-23, 49 NRC 485, 491 (1999); LBP-99-35, 50 NRC 180, 184 (1999).

With these general principles in mind, we now turn to the PFS summary disposition motion regarding contention Utah K/Confederated Tribes B.

B. Application to Contention Utah K/Confederated Tribes B

1. Use of Military Ordnance at DPG

a. PFS Position

PFS proffers seven undisputed material facts, designated as A1 through A7, in support of its argument that the use of military ordnance on DPG will not pose a threat to the PFS ISFSI. *See* PFS Undisputed Facts at 1-2. Relying on testimony provided by Dr. George Carruth, a retired DPG Commander and former Chief of the Chemical and Nuclear Biological and Chemical Defense Division for the United States Army who also has experience developing requirements documents for dry storage of spent nuclear fuel (SNF) similar to the PFS fuel, *see* Carruth Declaration at 1-2 & Exh. 1 (Carruth curriculum vitae), PFS proffers the following bases for this conclusion: (1) the firing of weapons is covered by stringent safety procedures; (2) the firing position closest to the PFS facility is more than 15 miles away; (3) the ranges of the weapons, aside from the Army Multiple Launch Rocket System (MLRS), are insufficient to reach the PFS site from the DPG firing positions; and (4) the weapons, including the MLRS, are fired away from the PFS ISFSI. *See* PFS Dispositive Motion at 4-5.

Regarding the presence of the MLRS, PFS declares that the Army’s manual on the MLRS clearly delineates the area at risk from the firing of such rockets as a maximum of 20 miles to the front of the MLRS and 2 miles to either side of the line on which the rockets are fired. This area is limited, according to PFS, because of specific design features in the MLRS launcher and rockets (i.e., free-flight/unguided trajectory that eliminates guidance system failures and post-launch deployed missile fins that maintain launcher-imparted spin stability) that are intended to ensure that the rockets fly where they are aimed. *See id.* at 5; Carruth Declaration at 5-6. Additionally, PFS argues that the firing points and impact locations used for the MLRS at DPG pose no hazard to the ISFSI. It asserts

that MLRS rockets have been launched at the DPG only twice in the past 12 years, once into the Causeway impact area, some 37 miles southwest of the PFS site, and once into the Wig Mountain impact area, which at 17 miles to the southwest is the closest DPG impact site to the PFS facility. In the former instance, the rockets were fired directly away from the PFS site, so that any area of risk would extend only to the thousand-yard risk area (440-yard launcher danger area and additional 550-yard noise hazard area) directly behind the MLRS launcher, while in the latter instance both the firing and impact points were located at a distance from the PFS site well beyond the maximum range of the MLRS rockets. Furthermore, PFS argues that because of the location of the DPG firing points, any rockets fired in the future into the Wig Mountain impact area would be fired away from the PFS site, thus causing little risk to the ISFSI. PFS thus contends it is entitled to summary disposition with respect to MLRS launches at the DPG. *See* PFS Dispositive Motion at 5-6; Carruth Declaration at 6-9.

b. Staff Position

The Staff does not find a basis for challenging any of the seven undisputed material factual statements asserted by PFS on this issue. *See* Staff Response at 1-2, 9. In support of this conclusion, the Staff relies on the joint affidavit of Amitava Ghosh, a principal engineer for Staff contractor Southwest Research Institute, and Kazimieras Campe, a Senior Reactor Engineer in the Probabilistic Safety Assessment Branch of the NRC Office of Nuclear Reactor Regulation, both of whom indicate they reviewed the PFS analysis regarding the probability that a rocket deployed from the DPG would impact the PFS site, and helped prepare the Staff's September 29, 2000 SER review of the PFS-provided information in which the Staff concluded there is reasonable assurance that the MLRS testing at DPG would not pose a hazard to the PFS facility. *See id.* at 6-7; Ghosh/Campe Declaration 2 (citing Sept. 29, 2000 SER at 15-81 to -84). The Staff thus maintains that the PFS analysis with respect to this issue is sufficient and there are no longer any material facts in dispute.

c. State Position

Although noting its concern that the PFS evaluation of risks from munitions is "simplistic and does not adequately characterize the probability of a potentially catastrophic munition strike against the facility," the State declares that it no longer contests the evaluation of risks from munitions launched from the DPG. State Response at 5.

d. Board Ruling

Based on the material factual findings put forth by PFS on this matter, with which the Staff agrees and which the State does not contest, we conclude there is no remaining genuine issue as to any material fact on this aspect of contention Utah K/Confederated Tribes B, and thus grant the PFS motion with respect to the issue of ground-launched munitions from the DPG.

2. Cruise Missile Testing Hazards

a. PFS Position

PFS delineates ten undisputed material facts, numbered B1 through B10, that it declares support summary disposition in its favor regarding the portion of contention Utah K/Confederated Tribes B that addresses cruise missile testing on the UTTR. *See* PFS Undisputed Facts at 2-4. PFS asserts that the cruise missile launches from the UTTR pose no hazard to the PFS site, as outlined in the joint affidavit of United States Navy Rear Admiral (retired) George F.A. Wagner, an associate at Burdeshaw Associates, Ltd. (BAL), who is asserted to have particular expertise in the area of cruise missile testing and operations, and United States Air Force Reserve Lieutenant David Girman, also a BAL associate, who is identified as being knowledgeable about the safety of the cruise missile tests that are conducted on the UTTR. *See* Wagner/Girman Declaration & Exhs. 1-2 (Wagner and Girman curriculum vitae).

In the context of its material factual statements and the supporting joint affidavit, PFS maintains that the cruise missile launches are generally confined to the northern and western portions of the UTTR, at least 30 statute miles from the PFS site, with the launch aircraft approaches to the missile release points normally being made north to south or east to west so as to result in launches being directed away from the proposed ISFSI. Additionally, cruise missile targets on the UTTR are more than 18 miles away from the site, and the Air Force anticipates testing only six cruise missiles per year. Further in support of its position, PFS maintains that the Air Force applies rigorous pre-launch planning, safety review, and preparation processes to cruise missile tests. Also significant, according to PFS, is the Air Force use of a minimum 2 nautical miles separation distance between missile flight pathways and inhabited areas within the UTTR, including the seventeen inhabited areas in Skull Valley. In fact, according to PFS, because of these inhabited areas, Army laboratories, MAAF, and various DPG artillery training ranges, the Air Force does not fly cruise missiles over the eastern portion of DPG. Indeed, PFS declares, as a result of Skull Valley and DPG flight restrictions, missile performance standards, and UTTR missile target placement, the Air Force does not plot cruise missile flight patterns to pass within 10 nautical miles of the PFS site. Finally, PFS notes that the closest cruise missile crash that

has occurred was over 18 miles from the proposed PFS site. *See* PFS Dispositive Motion at 6-7.

In addition to these air space restrictions, in support of its summary disposition request PFS describes the Flight Termination System (FTS) that is required to be installed in all cruise missiles prior to any testing on the UTTR and is designed to destroy the weapons promptly by terminating their flight paths in the event of an anomaly, either on command or automatically if contact is lost by the base or aircraft that is supporting the test. According to PFS, the FTS is designed to bring the cruise missile down within the 2 nautical mile separation distance between missile flight paths and inhabited areas. Further, PFS maintains that the UTTR and the Air Force 49th Test Squadron, which is responsible for all cruise missile testing, are aware of no instances of known FTS failure or any instance in which a cruise missile has hit the ground more than 1 mile from its intended flight path. Considering the distance between planned missile flight paths and the PFS site, PFS argues that in the event of an anomaly the FTS would bring the cruise missile to the ground a safe distance from the PFS facility. *See id.* at 6-8.

Thus, regarding its assertion that a cruise missile strike at the proposed PFS ISFSI is not a credible event, PFS concludes that the undisputed material facts it outlines concerning pre-launch safety review of missile testing, the distance between the planned missile flight paths and the PFS site, and the presence of the FTS, combined with the fact that only a small number of missiles will be launched each year on the UTTR, demonstrate that it is entitled to summary disposition in its favor on this portion of contention Utah K/Confederated Tribes B regarding cruise missile launches from the UTTR. *See id.* at 8.

b. Staff Position

Because PFS included information in its summary disposition motion that was not reflected in the PFS information the Staff had before it during SER preparation, the Staff declares that it takes no position regarding the PFS undisputed material facts concerning cruise missile testing. *See* Staff Response at 5 & n.5, 8 nn.6, 8.

c. State Position

In opposing the PFS motion, the State disputes one material fact proposed by PFS, item B10. Although acknowledging that cruise missiles may be “tracked carefully” and an FTS may be available to be activated to destroy the missile, the State contests the significance of these facts in terms of the PFS conclusion that a cruise missile crash at its facility is not a credible event. Pointing to a December 1997 incident in which a cruise missile crashed in the vicinity of a university astronomical observation site that was attributed to a loss of

communication between ground and air controllers trying to pass off manual control of the missile, and to sources that indicate “three cruise missiles have crashed outside intended land boundaries of the [UTTR] between June 1999 and September 2000,” the State declares that even with the FTS in place, such a system will fail to protect if it is not activated, therefore possibly causing damage to an unintended area. State Disputed Facts at 1-2 (citing State Response, Exh. 3 (Accident Investigation Board Report, United States Air Force AGM-129 Advanced Cruise Missile (Dec. 10, 1997)); *id.* Exh. 5 (Letter from Captain Mary A. Enges-Maas, United States Air Force, to Connie Nakahara, State of Utah Department of Environmental Quality (Aug. 23, 1999) at 2); *id.* Exh. 6 (Michael Vigh, *Stray Missile Hits Desert: No Injuries as Cruise Unit Crashes in Remote West Tooele County*, Salt Lake Tribune, Mar. 25, 2000, at D1; *Air Force to Take Months to Probe Missile Crash*, Salt Lake Tribune, Sept. 30, 2000, at A4.). Based on the PFS assumption that six cruise missiles will be tested per year in the UTTR, the Staff’s SER estimation that one to two missiles go out of control during every 150 tests, and a comparison of the size of the UTTR restricted area to the effective area of the PFS facility, proffered State expert Dr. Marvin Resnikoff has calculated that the probability of a cruise missile impacting the PFS site is between 2.78E-07 to 5.55E-07 per year, which he asserts should be included in the overall cumulative hazard probability estimate. *See* Resnikoff Declaration at 16-18 & Exh. I (Probability of Cruise Missile Impacting PFS Facility).

d. PFS Motion to Strike

As part of its January 2000 motion to strike, PFS has challenged certain testimony given by Dr. Resnikoff, including his cruise missile statements, because he is a “technically unqualified witness.” PFS Motion to Strike at 4. Regarding the issue of cruise missiles, PFS challenges Dr. Resnikoff’s probability calculation because Dr. Resnikoff does not have the qualifications necessary to “derive the proper input values to the calculation.” *Id.* at 5. Specifically, PFS alleges that although his background makes him qualified to perform the mathematical functions necessary to arrive at a probability figure, his statements should be disregarded because, lacking any experience as an aeronautical engineer, a military officer, or a former defense contractor with cruise missile operational experience, he is not qualified to assess the inputs necessary to make those calculations because he is unfamiliar with the process of analyzing cruise missile crashes or the hazards posed to ground facilities. *See id.* at 5-6. For its part, the Staff supported the PFS motion to strike Dr. Resnikoff’s testimony. *See* Staff Motion to Strike Response at 1.

In its response, the State argues that the PFS motion to strike “should be denied in toto in that it attacks expert witness declarations, not pleadings,” and because it is essentially a reply to the State response to the PFS dispositive motion by

which PFS attempts to fill in the gaps of the arguments it made in that dispositive motion. State Motion to Strike Response at 3-4.

e. Board Ruling

Of the ten cruise missile-related items identified by PFS in its undisputed material facts statement, the first nine are uncontested by the State. These include: (1) the distances and location of the PFS site relative to the UTTR and the DPG; (2) the types of cruise missiles utilized at these sites, along with their speeds and flight altitude ranges; (3) Air Force plans to conduct six cruise missile tests per year on the UTTR; (4) the extensive planning that is applied to cruise missile tests to ensure their safety; (5) the Air Force use of a minimum distance of 2 nautical miles between missile flight paths and inhabited areas; (6) the Air Force plotting of cruise missile flights to avoid passing within 10 nautical miles of the PFS site due to factors such as the location of inhabited areas, performance characteristics of missiles, and the location of missile targets on the UTTR; (7) the fact that the cruise missile crash impact closest to the PFS site was 18 miles away; (8) the requirement that cruise missiles have an FTS system because of their capability to exceed range boundaries; and (9) relative to FTS performance history and technical capability of bringing down an errant missile, the lack of an instance in which an FTS has failed or a cruise missile has come down more than a mile from its intended flight path. The State has, however, attempted to raise a material factual dispute with regard to the final item: the PFS declaration that the cruise missiles are accurately tracked and that the FTS may be activated at any time by range safety officers. According to the State, this statement about cruise missiles tracking accuracy and the availability of the FTS does not account for the fact, as illustrated in the 1997 incident, that the FTS must be activated, or that incidents, such as the three recent events, can occur outside the UTTR. The State's premise for its factual dispute is that, as the 1997 crash illustrates, there is the possibility that the FTS might not be activated so that the missile could crash and that, as happened in the three cited incidents in 1999 and 2000, such a crash could happen in areas outside the UTTR, including at the PFS facility. The State declares that this significantly undercuts the PFS conclusion that such an incident is not credible and establishes the validity of Dr. Resnikoff's crash probability calculation.

The problem for the State is that the information it relies upon to establish such a material dispute does not, in fact, do so. PFS has asserted, based on sworn descriptions of discussions with Air Force officials, that the cruise missiles that have crashed have not strayed more than 1 mile from their planned flight path. Further, PFS has declared, based on these discussions, that being aware of inhabited areas around the PFS facility, Air Force planners will not establish cruise missile flight paths any closer than 10 nautical miles from the facility,

thus providing a significant temporal buffer for FTS activation if a cruise missile should suddenly go awry during a test, thereby making such an incident extremely unlikely. Nothing provided by the State creates a material factual dispute with this conclusion.

The portion of the 1997 cruise missile crash report provided by the State does indicate that the FTS was not activated before the crash. It also indicates, however, that the crash, which occurred when a communications problem that delayed a planned manual control handoff between the ground control center and the air control center was not corrected in time to make necessary course corrections, was roughly along the planned missile flight path. Moreover, that flight path was over the university astronomical site only because planners did not know the site was there when the flight path was laid out. Thus, this incident is fully consistent with the PFS factual statement that crashes, when they do occur, are within close range of flight paths that are planned to avoid inhabited areas. As for the three additional incidents the State asserts establish off-UTTR crash hazards, from the description of those incidents provided in the information included by the State, it is not apparent that the latter two, which occurred several hundred miles from the PFS facility, were off the UTTR, while the former, although off the UTTR, was within a military operations area (MOA) like that which encompasses the PFS facility, that legally can be overflown so long as planners abide by stringent flight path restrictions intended to avoid inhabited areas. Again, these incidents are in no way inconsistent with the PFS showing that test planners are fully aware of inhabited areas around the proposed PFS facility and will not plan missile test flight paths that would take them within 10 nautical miles of the facility.

Relative to Dr. Resnikoff's probability calculations, they clearly are based on extremely general assumptions that do not reflect any recognition of the PFS showing regarding planning for, and the operation of, cruise missile tests over the past decade.³ Indeed, while Dr. Resnikoff is able to do the math, it is apparent that, much like the alleged support that the recent crash incidents provide for the State assertion that there are material factual disputes, the assumptions that underlie his math are speculative to the degree they are asserted to show anything about the danger posed to the PFS facility by those crashes.

Accordingly, after examining the materials provided by the parties on the cruise missile crash matter, although we decline to strike any portions of Dr. Resnikoff's submission, which have little value relative to the matter before us, we nonetheless find that there is no genuine dispute of material fact and,

³ For example, seemingly ignoring the otherwise uncontested PFS factual showings in B1 through B9 regarding missile flight paths and associate issues, Dr. Resnikoff uses the area ratio between the PFS facility (0.131 square mile) and the UTTR restricted air space (18,862 square miles), *see* Resnikoff Declaration, Exh. I, to calculate the probability of cruise missile crashes impacting the PFS facility. This approach, however, is only valid if cruise missile flights are randomly distributed over the UTTR and, as such, overestimates the impact probability.

therefore, grant the PFS summary disposition motion with regard to this portion of the contention.

3. Hazards Posed to the PFS ISFSI by Aircraft Crashes

PFS has submitted sixty-seven undisputed material facts, C1 through C67, in support of its summary disposition request regarding the State's allegations that PFS has not complied with the requirements of 10 C.F.R. §§ 72.90, 72.94, and 72.100 in evaluating the impacts upon its ISFSI arising from credible aircraft accident scenarios or the requirement in 10 C.F.R. § 72.122 that PFS demonstrate the proposed facility structures will be constructed to withstand postulated aircraft accidents. *See* PFS Undisputed Facts at 4-12; *see also* State Response at 6. And once again, the parties address various aspects of this matter, including (1) regulatory standards for aircraft crashes; (2) F-16 transits of Skull Valley; (3) potential ordnance impacts; (4) aircraft conducting various types of training on the UTTR; (5) aircraft on the Moser recovery route (MRR); (6) aircraft flying to and from the MAAF, (7) civilian aircraft flying on Airways J-56 and V-257, including aircraft flying to and from SLCIA; (8) other general aviation issues; and (9) the cumulative probability of aircraft crashes and associated ordnance impacting the PFS facility. We now address each of these issues in turn.

a. Regulatory Standards Relating to Aircraft Crash Hazards

As an initial matter, the Board must confront the parties' differing views on what constitutes a credible aircraft accident so as to determine whether PFS has complied with the regulatory requirement to design its facility to withstand the effects of such a crash. According to PFS, a credible design basis event for Part 72 should be one that has a probability of 1E-06 per year (i.e., 1×10^{-6} or 1 in 1 million). *See* PFS Dispositive Motion at 9-10. As support for this position, PFS cites discussion in the statement of considerations accompanying the Commission's 1996 rulemaking amending 10 C.F.R. Part 60, which provides generic rules governing waste storage and handling at a geologic repository. *See* 61 Fed. Reg. 64,257 (Dec. 4, 1996). According to PFS, the Commission indicated in that rulemaking that Category 2 design basis events for a geologic repository's operations area "with probabilities of occurrence lower than 1×10^{-6} could be screened from further consideration due to their negligible contribution to individual risk." *Id.* at 64,261. Further, PFS asserts the Commission intended that this design basis guidance be comparable to ISFSIs licensed under 10 C.F.R. Part 72, such as the proposed PFS facility. In this regard, PFS observes that, in addition to adopting the definition of "design basis" from Part 72 without change in Part 60, *id.* at 64,262-63, and equating the Part 60 definition of "Category 2 design

basis event” with the Part 72 term “design basis accident,” *id.* at 64,265, the Commission declared that “[b]ecause operations at the repository are expected to be similar to operations at other facilities licensed by the Commission (e.g., 10 C.F.R. part 72 facilities), the Commission believes that it is appropriate that their design bases be comparable,” *id.* at 64,262. Moreover, PFS declares, in establishing this standard, the Commission distinguished the Part 60 repository from reactor facilities, for which the Commission-cited Staff standard review plan, Office of Nuclear Reactor Regulation, United States Nuclear Regulatory Commission, NUREG-0800, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants (June 1987) [hereinafter NUREG-0800], *see* 61 Fed. Reg. at 64,265 n.3, uses a design basis event probability measure of 1E-7 per year, *see* NUREG-0800, at 2.2.3-2, on the basis that “conditions are not present at a repository to generate a radioactive source term of a magnitude that, however unlikely, is potentially capable at a nuclear power plant (e.g., from a postulated loss of coolant event),” 61 Fed. Reg. at 64,266. In sum, according to PFS, a 1E-06 per year standard is appropriate as a screening standard for the PFS facility, a conclusion with which the Staff agrees, *see* PFS Dispositive Motion at 10 (citing Staff SER at 15-77); *see also* Staff Response at 7.

In contrast, citing the Staff standard review plan for reactor facilities, the State maintains that, putting aside the fact PFS cannot meet the 1E-06 standard, the probability bound for a credible design basis accident for a Part 72 facility actually should be 1E-07 per year, or 1 in 10 million. According to the State, the PFS attempt to have the Board implement a 1E-06 per year standard by analogizing to the Part 60 rulemaking is misplaced. Quoting language in the 1996 Part 60 statement of considerations in which the Commission declared that “the criterion of ‘sufficiently credible to warrant consideration’ is inexact, leaving its application to a consideration of the particular [license application] site and design” and “such design basis events would include as broad a range of external phenomena as would be taken into account in defining the design basis for other regulated facilities, including nuclear reactors,” 61 Fed. Reg. at 64,263, the State asserts that PFS has failed to show through a site-specific probability analysis that the 1E-06 benchmark it champions is appropriate. Specifically, according to the State, PFS has not dealt with the extreme consequences of an aircraft or related cask breach accident at the PFS ISFSI that, State supporting expert Dr. Resnikoff declares, could result in individual doses of 70 rem to over 10,000 rem that are much higher than the 2.1-rem dose cited in the 1996 rulemaking relative to the Yucca Mountain site as justifying the 1E-06 figure. *See* State Response at 7-8; *see also* State Motion to Strike Response at 4.

As the above recitation makes apparent, the parties seek to draw support for their position on a probability benchmark figure from the 1996 Part 60 rulemaking. After reviewing their arguments and the Part 60 statement of considerations, it

seems to us that PFS and the Staff have the better of the argument. Although the State seeks to rely on the lack of a site-specific analysis for the PFS facility, in fact the Commission's discussion in the Part 60 rulemaking regarding the Part 72 facility design basis accidents leads us to believe that it found both were covered by the 1E-06 bounding analysis. To be sure, the Commission's most pointed reference was to "surface facilities" at a Part 72 monitored retrievable storage (MRS) installation that, unlike the proposed PFS interim storage facility, could include spent fuel handling and packaging operations. 61 Fed. Reg. at 64,265. Yet, nothing in that rulemaking discussion suggests that the central basis for the State's claimed 1E-07 boundary figure — the consequences of an aircraft crash into a storage cask — was outside the scope of the matters considered by the Commission in reaching its bounding conclusion. Whatever may be the differences relative to fuel handling and packaging, as is the case with the PFS ISFSI facility, an MRS will utilize above-ground storage casks. Thus, in accordance with the Commission's guidance in the 1996 Part 60 rulemaking, we will apply the 1E-06 standard outlined therein.

Having made this ruling, we recognize that this benchmark probability is an important factor relative to this contention because if, as the State asserts, the figure were found to be 1E-07, based on its current submissions PFS cannot meet this standard relative to the cumulative hazard from aircraft accidents and jettisoned ordnance. *See* PFS Undisputed Facts at 12 (cumulative hazard is 6.25E-07). Moreover, if, as the State asserts, this figure remains subject to consideration on a case-by-case basis, what the State has provided at this juncture suggests that additional litigation would be warranted on this point.⁴ Accordingly, given the significant policy and resource implications of this particular ruling, we have concluded that certification of this portion of our decision is appropriate.⁵ Of course, in reviewing whether to accept this certification, in the exercise of its supervisory authority the Commission is free to undertake review of any other portions of this ruling it deems appropriate. *See* LBP-00-6, 51 NRC 101, 136

⁴PFS has asked that the portion of the State's response to its summary disposition motion discussing dose consequences, as well as the accompanying materials supporting that discussion, be stricken as irrelevant. *See* PFS Motion to Strike at 6-9; *see also* Staff Motion to Strike Response at 1. We see no reason to strike this material, which is irrelevant to our ruling, and thus deny this aspect of the PFS motion.

⁵Our ruling on the appropriate probability threshold might be considered as lacking ripeness to the degree that if the State is able to sustain its assertion that PFS is unable to comply with the 1E-06 standard, then the State's assertion that a higher standard is appropriate is irrelevant. On the other hand, if the State is correct that a case-by-case analysis still is appropriate relative to Part 72 facilities, then considering the State's evidentiary material on this point at the currently planned November-December 2001 hearing likely would be a much more efficient utilization of Board and party resources.

In this regard, we do not accept the Staff's assertion that the State's argument regarding consequences is outside the scope of this contention. *See* Staff Motion to Strike Response at 1 n.1. As the discussion of the applicable benchmark standard in the PFS summary disposition motion suggests, in this context the State's challenge to the adequacy of the PFS discussion of credible accidents necessarily encompasses the bases upon which those accidents are asserted to be credible.

n.12, *aff'd in part and rev'd in part on other grounds*, CLI-00-13, 52 NRC 23 (2000).

b. *Types of Aviation Activity in the Vicinity of the PFS ISFSI in Skull Valley*

i. **PFS POSITION**

An important aspect of this contention is the question of the types of aircraft activity that occur within the confines of Skull Valley. Relying on the declarations of three of its experts, PFS has proffered four asserted undisputed material facts, labeled C1 through C4, regarding the presence of aircraft in Utah that could possibly affect the PFS ISFSI. *See* PFS Undisputed Facts at 4-5 (citing Cole/Jefferson/Fly Declaration at 5-7). With these proposed undisputed material facts, PFS seeks to establish that in connection with the PFS ISFSI, which is located about 50 miles southwest of Salt Lake City, Utah, aviation activity consists of military operations associated with the UTTR, along with civilian commercial and general aviation. The airspace over the UTTR extends somewhat beyond the range's boundaries and is divided into restricted areas, over which the airspace is limited to military operations, and military operating areas (MOAs), which are located on the edges of the range, adjacent to the restricted areas. The PFS site lies within the Sevier B MOA, 2 statute miles to the east of the edge of the restricted airspace, and 18 statute miles east of the eastern land boundary of the UTTR South Area. The area covered by airspace of the Sevier B MOA is approximately 145 miles long and is 12 miles wide in the vicinity of the PFS site. *See* PFS Dispositive Motion at 11.

According to PFS, military air operations in the vicinity of Skull Valley include (1) Air Force F-16 fighter aircraft transiting Skull Valley from HAFB to the UTTR South Area; (2) F-16s from HAFB and various other military aircraft conducting training exercises on the UTTR; (3) F-16s from HAFB returning from the UTTR South Area to HAFB via the MRR, which runs to the northeast, 2 to 3 miles north of the PFS site; and (4) military aircraft, comprised mainly of large transport aircraft, flying on military airway IR-420 to and from MAAF, which is located on the DPG about 17 miles southwest of the PFS site. Civilian aircraft also will be flying in the vicinity of the PFS site, including (1) aircraft flying on federal Airway J-56, which runs east-northeast to west-southwest about 12 miles north of the PFS site; (2) aircraft flying on Airway V-257, which runs north to south approximately 20 miles east of the site; and (3) other minimal general aviation activity, which has not been reported but nonetheless could occur in the air and thus is considered in the PFS analysis. *See id.* at 12.

ii. STAFF POSITION

The Staff again has expressly taken no position with regard to the material facts C1 through C4 submitted by PFS, asserting that PFS has changed several of its assumptions as considered by the Staff in its analysis in its SER. *See* Staff Response at 8 n.8. Specifically, in its summary disposition motion, PFS included recent sortie and aircraft data from HAFB regarding the number of F-16s transiting Skull Valley for fiscal years 1999 and 2000 that PFS asserts increase the effect of the calculated hazard to the PFS facility for crashes involving F-16s transiting Skull Valley; falling ordnance jettisoned from those aircraft; crashes involving aircraft operating on the UTTR; and crashes involving the MRR. *See* Staff Response at 5; *see also* PFS Dispositive Motion at 13 n.20. Furthermore, PFS included in its motion a new assessment of the impact posed by general aviation aircraft that revised the likelihood of a crash from 2.36E-06, as was previously reported to the Staff and reflected in the SER, to a probability of zero. Given this new information, the Staff takes no position on issues involving F-16 flights in Skull Valley, including ordnance jettisoned from those aircraft, crashes involving aircraft on the UTTR, crashes on the MRR, and general aviation aircraft, simply because it has not yet evaluated the possible effects to the data. *See* Staff Response at 5-6.

iii. STATE POSITION

The only statement submitted by PFS that is disputed by the State regarding the scope of general aviation activity in the Skull Valley area is item C3. In this regard, the State contests a portion of the statement regarding military operations that declares “F-16s from [HAFB] occasionally [return] from the UTTR South Area to [HAFB] via the Moser Recovery Route.” PFS Undisputed Facts at 4. Relying on the declaration of Lieutenant Colonel Hugh Horstman, the State disputes the use of the term “occasionally” as it refers to the number of F-16s that return from the UTTR to HAFB via the MRR. According to Lieutenant Colonel Horstman, “PFS’s estimate that fewer than 5% of the sorties use the [MRR] underestimates its use” and he “suspect[s] that the estimate was not obtained from [HAFB] because PFS referred to the air traffic controllers as ‘local.’” Horstman Declaration at 25. Lieutenant Colonel Horstman also describes other unknown factors he asserts could affect the purported conservatism of the PFS flight frequency analysis, including whether that flight estimate was documented before night vision goggle training was implemented for all pilots and the term of the PFS estimate (e.g., whether it was for a summer month when there are fewer flights due to weather or was done on a fiscal or calendar year basis). *See id.* at 25.

iv. BOARD RULING

The only dispute raised by the State regarding the types of general aircraft activity in the Skull Valley area near the PFS facility was the item C3 reference to the number of flights taken by F-16s through the MRR as “occasionally.” For the reasons set forth in section II.B.3.c below, we conclude there is a material factual dispute relative to the frequency of those flights so as to permit that issue to be litigated further. However, as to whether those flights, as well as the other types of air activity outlined by PFS, constitute the types of air activity that should be considered in arriving at analysis of flight crash impacts, we conclude that there is no material factual dispute and so grant summary disposition in favor of PFS relative to this scoping aspect of the State’s issue.

c. F-16 Aircraft Transiting Skull Valley

i. PFS POSITION

PFS has posited ten undisputed material facts, C5 through C14, that are intended to address issues regarding the flight patterns of F-16 aircraft that could have an effect on the PFS site. *See* PFS Undisputed Facts at 5-6. In making these statements, PFS generally asserts that F-16 crashes do not pose any threat to the PFS facility. Relying on statements made by supporting affiants General Cole, General Jefferson, and Lieutenant Colonel Fly, PFS asserts that F-16 aircraft normally fly north to south down Skull Valley, en route from HAFB to the UTTR within the Sevier B MOA, usually at an altitude between 3000 and 4000 feet above ground level, and at a minimum 1000 feet above ground level. The predominant route for travel is down the eastern side of Skull Valley, away from the proposed PFS facility, thereby eliminating almost all danger of crashing on the site. On the basis of past data available from HAFB, PFS estimates that 5870 F-16 sorties would occur per year. This number is derived from the number of flights per year that occurred in Fiscal Years (FY) 1998, 1999, and 2000 and a recent increase in activity at HAFB because of a new Air Force program called the Air Expeditionary Force (AEF) that is designed to reduce away-from-home-base time. PFS arrived at this figure by averaging the sortie numbers for the 3 fiscal years and estimating an increase in activity to account for the recent increase in sorties. PFS argues it is not appropriate to use the FY 2000 figure alone because the possible deployment of troops away from the area, combined with the 15-month rotational status of the AEF, could alter that figure. *See* PFS Dispositive Motion at 13 (citing Cole/Jefferson/Fly Declaration at 9-12).

Based on this information, PFS asserts that the likelihood of an aircraft crashing into the PFS site is minimal. The nature of most flights is routine and administrative, and the most likely cause of an accident would be engine failure, which would still leave the pilot in control of the plane. According to PFS, it is

Air Force protocol that, when a mishap occurs, if the pilot remains in control of an aircraft and its direction, the pilot tries to avoid ground facilities. Furthermore, PFS declares, the Sevier B MOA may be modeled as an airway with a width of 10 statute miles, thereby negating any argument that a pilot going through Skull Valley will navigate using (and thus fly toward) large objects such as the PFS site. *See id.* at 13-14.

Relying on these assumptions and utilizing a modified version of the Staff's NUREG-0800 methodology to assess aircraft crash hazards, PFS has calculated the probability that an F-16 transiting Skull Valley would impact the proposed Skull Valley site. PFS has used this guidance, normally restricted to an operating power reactor, to calculate the probability of an F-16 crash at its proposed ISFSI, assuming that the F-16 flights are uniformly distributed across the Sevier B MOA in the vicinity of the site. The probability was calculated using the following factors: (1) the number of F-16s that transit Skull Valley annually; (2) the effective area of the PFS site from the perspective of a crashing F-16; (3) the width of Skull Valley in the vicinity of the PFS facility (where the F-16s are assumed to fly); and (4) the crash rate per mile for the F-16s under the conditions in which they transit Skull Valley.⁶ *See* PFS Dispositive Motion at 14 (citing Cole/Jefferson/Fly Declaration at 8-9). The number of F-16 flights used in the calculation was assumed to be 5870 per year, which was determined as described above. According to PFS, the Sevier B MOA airspace in the vicinity of the site was taken as 10 statute miles, and the effective area of the site was determined to be 0.1337 square mile. Further, the crash rate per mile for F-16 flights was determined to be 2.736E-08, based on Air Force F-16 data. PFS also incorporated into its probability calculation the assumption, based upon a review of accident reports over a 10-year period, that over 90% of the F-16 crashes that result from accident initiating events occurring over Skull Valley would leave the pilot in control of the aircraft, thus allowing the pilot to divert the aircraft before impact. Thus, considering all these factors, PFS calculates the probability of a crashing F-16 impacting Skull Valley to be 3.11E-07 annually. PFS also notes that in its SER the NRC Staff used a similar method to calculate the probability of an F-16 crashing on the PFS site, but without the benefit of sortie and basing data only recently available from HAFB. *See id.* at 14-15 (citing SER at 15-49 to -57).

ii. STAFF POSITION

The Staff has specifically expressed no position on the PFS motion for summary disposition regarding undisputed material facts C7 and C8, which respectively concern the nature of the risks to F-16s in Skull Valley and the assumption that

⁶The formula used for this calculation is $P = N \times C \times A/W$, where P is the probability, N is the number of flights per year, C is the crash rate per mile, A is the effective area of the site, and W is the width of the airway. *See* Cole/Jefferson/Fly Declaration at 8.

the Sevier B airspace over Skull Valley has a width of 10 statute miles. *See* Staff Response at 8 n.6. With respect to the remaining eight items, the Staff takes no position regarding all aspects of F-16 flights in Skull Valley because PFS has provided a revised assessment of the impact hazard posed by general aviation aircraft that adjusted the likelihood of a crash from the 2.36E-07 figure that previously was reported to the Staff and is reflected in its SER. *See id.* at 5. Therefore, the Staff concludes it will not take a position on the issue of F-16 aircraft transiting Skull Valley, including ordnance jettisoned from those aircraft, until it has an opportunity to evaluate the new PFS-supplied information. *See id.*

iii. STATE POSITION

Of the ten statements of material fact proffered by PFS regarding F-16 aircraft crash hazards at its facility, the State disputes eight: C5 through C8, C10, C11, C12, and C14. *See* State Disputed Facts at 2-7. To support its position, the State relies on the declarations of Dr. Resnikoff and Lieutenant Colonel Horstman, as well as statements made by certain PFS affiants.

Initially, the State disputes the PFS estimate that only 5870 F-16s would be transiting Skull Valley en route to the UTTR. The State argues that the estimate is not conservative and that it does not reasonably anticipate the number of flights that could occur over the next 40 years, the life of the proposed facility. The State notes that in FY 2000, 5757 aircraft flew through Skull Valley. This number appears larger than those of FY 1998 and FY 1999. Because the FY 1998 and FY 1999 figures do not reflect AEF implementation, which occurred in FY 2000, the State argues that to include these 2 years in the calculation of an average is erroneous. The State argues that the estimated number of F-16 flights occurring in Skull Valley thus should reflect the data available from the FY 2000 data, but include an additional twelve F-16 aircraft to be assigned to HAFB. *See* State Response at 9-10 (citing Resnikoff Declaration at 7; Horstman Declaration at 7). Given these criteria, the State estimates that the number of sorties transiting Skull Valley annually would be at least 6759. *See* State Disputed Facts at 3.

The State also challenges PFS material fact C10 regarding the crash rate of airplanes transiting Skull Valley. The State argues that the PFS figure is not “conservative or bounding” because the figure incorporated the 2.736E-08 crash rate developed by the United States Department of Energy (DOE) for “normal flight,”⁷ which was based on FY 1989 through FY 1998 crash data. State Response at 11. The State argues that this number is too low because it fails to account for higher crash rates due to the “bathtub” effect, as that phenomenon is described by State witness Lieutenant Colonel Horstman. According to Lieutenant

⁷ According to PFS, “normal flight” is flight that does not involve high-stress training maneuvers or other special operations. *See* Cole/Jefferson/Fly Declaration, Exh. 4, at 11 (Aircraft Crash Impact Hazard at the Private Fuel Storage Facility (rev. 4 Aug. 10, 2000)).

Colonel Horstman, the data put forth by PFS fail to take into account his own personal observation that crash rates are higher at the beginning and at the end of an aircraft model's service life. *See id.* at 10-12 (citing Horstman Declaration at 8-9).

In fact, the State argues, the applicability of the "bathtub" effect in the case of the F-16 fighters is shown in PFS's own exhibit and should be considered in determining crash rates. *See id.* at 11 (citing Cole/Jefferson/Fly Declaration, Exh. 4, Fig. 1 (Aircraft Crash Impact Hazard at the Private Fuel Storage Facility (rev. 4 Aug. 10, 2000))). The State declares that because the F-16 fleet has been in service since 1975, and can be expected to be replaced within the next 10 years, or at least within the life of the proposed ISFSI, using a 10-year average of craft-life ignores the rise in crash rates at the end of service-life. Similarly, the State maintains that utilizing a crash rate based on the middle of the F-16's service life is also likely to be inaccurate by failing to account for the increase in crash rate in the beginning of service for the aircraft model that is likely to replace the F-16 during the proposed period of PFS facility operation. Further with respect to the "bathtub" effect, although the State agrees with the PFS assertion that the end of an aircraft's service life is not representative of the actual crash rate because of the low flight hour sums, it also notes that, as demonstrated by the FY 1991 to FY 1993 data, prior to the decrease in flight time the crash rate for the F-16A dramatically increased. The State argues that a better approach would be to use FY 1999 data to account for the increase in accident rate, as well as to compensate for the fewer flight hours as seen in the end of service life. *See id.* at 11-12.

The State disagrees as well with the PFS claim that an aircraft crash into the PFS facility is not a credible event, and thus disagrees with PFS material facts C7, C8, C11, C12, and C14. *See State Disputed Facts* at 3-7. In challenging the PFS probability calculation, in addition to the above-described disagreement with the number of flights that will be taken over Skull Valley per year, the State questions the assumption that a random distribution of flights will occur. In this regard, the State asserts that pilots currently fly throughout Skull Valley, based on the path selected by the flight leader and the training mission, and not randomly as PFS asserts. Furthermore, the usable airspace in Skull Valley is limited to a 7- to 8-mile wide swath, not 10 miles as PFS asserts. Moreover, the State maintains that F-16s usually fly in a south to southeastern direction in Skull Valley in two- or four-ship formations that vary in width between 1.5 and 4 miles, thus spanning one-third to one-half of the available Skull Valley airspace. *See State Response* at 12-13. Finally, because of the PFS facility's size and location, the State believes that pilots will use the site as a navigation point, resulting in a narrowed, more concentrated navigation path around the PFS site with a concomitant increase in the potential for an F-16 crash on the site. *See id.* at 13-14.

The State also argues that PFS "inappropriately eradicated the majority of the risk from F-16s flying en route through Skull Valley" by asserting that the pilots

will be able to avoid the facility in the event of an accident occurring over Skull Valley. *Id.* at 14. According to the State, in making this assertion PFS failed to consider various factors such as weather conditions, altitude, the magnitude of the emergency, and human factors, each of which potentially could affect a pilot's ability to perform emergency procedures necessary to avoid the PFS site. Furthermore, according to the State, it is difficult to extrapolate adequately from the circumstances of an accident generally to an accident occurring in Skull Valley. The State thus maintains that the PFS use of the Air Force's Class A mishap reports for the F-16 from FY 1989 through FY 1998 is inadequate to assess all of the accident events that could occur. *See id.* at 15. Specifically, the State disputes the "applicability of [some of the] accident data to PFS's risk, the parameters considered in many of the categories, and the assessment and categorization of past accidents." *Id.* at 16. For example, although PFS figures included engine failures that were a result of high-stress maneuvers, the State observes that PFS admitted these types of maneuvers will not occur in Skull Valley, so that including them in the category of events that are avoidable with pilot assistance artificially raises the percentage of collisions seen as avoidable. *See id.* at 16-17.

The State also maintains that the PFS use of what its declarants describe as the "Sevier B MOA Conditions" does not identify all relevant past accidents that could occur in Skull Valley. Examples of relevant accidents cited by the State include those occurring outside an altitude of 1000 to 5000 feet above ground level, while under instrument flight rules, or those involving lightning, gravity (G)-induced loss of consciousness, or collisions in mid-air. *See id.* at 17; *see also id.* at 23. Relying on the personal knowledge and experience of its affiant Lieutenant Colonel Horstman, the State also concluded that, excluding weather effects, pilots in only 62.5% of the past Class A mishaps that could occur in Skull Valley would have been able to avoid the site. *See id.* at 18 (citing Horstman Declaration at 16-17).

The State also relies upon the information provided by its declarant Lieutenant Colonel Horstman as support for its assertion that PFS has failed to account for Skull Valley weather conditions that may affect the probability of an F-16 crashing into the proposed Skull Valley ISFSI. Utilizing data generally applicable to Skull Valley, the State asserts that the area exhibits a cloud cover of 50% or higher, 46% of the time, at or below 12,000 feet above ground level, leading him to conclude that 46% of the time a pilot may not be able to avoid the facility because it is concealed. Regarding this 46% figure, the State also notes that the PFS assertion to the effect that a PFS-supplied UTTR advertising brochure indicates that 96% of the time the cloud ceiling is at or above 3000 feet with a visibility of 3 miles does not counter the State's claim that there is a possibility of a crash into the site. This is so, the State maintains, because if there is cloud cover, the pilot either must fly above or below the cloud cover, creating the possibility

that he or she will be unable to see the facility in the event of a mishap and, particularly in the latter instance, be unable to react in time to avoid the facility. *See id.* at 18-19 (citing Horstman Declaration at 21).

The State also disagrees with the PFS assertion that if the pilots flew over the proposed facility while using it to update the F-16 navigation system, they would be able to avoid crashing onto the site because they would be aware of the exact location. The State argues that even if a pilot knows the basic location of such a facility, he or she will not be able to avoid it if it is not visible, as would be the case in extensive cloud cover or other inclement weather. Furthermore, according to the State, it will be difficult for a pilot to determine the aircraft's position relative to the site when trying to perform emergency procedures at a speed of 400 to 500 knots. Finally, the State disagrees with the PFS assertion that the pilot would also be able to rely on instrumentation for the orientation of the aircraft. The State claims that a mechanical failure or other damage to the aircraft would prevent the pilot from relying on the instrument panel. *See id.* at 19-20.

The State also argues that the PFS assumption that 5% of pilots who have the time and opportunity to avoid the PFS facility will fail to do so is not conservative because it fails to account for the lack of experience of some pilots. Finally, asserting that the PFS selective attempt to modify the F-16 crash rate by eliminating a significant portion of the potential accidents is not consistent with NUREG-0800, the State declares that its affiant Dr. Resnikoff has postulated the probability of an F-16 crashing into the proposed PFS facility while flying from HAFB en route to the UTTR South Area as 4.65E-06 per year. *See id.* at 20 (citing Resnikoff Declaration at 10-13).

iv. PFS MOTION TO STRIKE

With regard to the accident reports that were used in the parties' assessments, PFS has requested that Lieutenant Colonel Horstman's testimony and the State's response regarding his assessment of the F-16 accident reports and the PFS claim, based on those reports, that F-16 pilots would remain in control of their aircraft in the event of an emergency be stricken because PFS has not had the opportunity to review or challenge his conclusions. This sanction is appropriate, PFS argues, because during his December 2000 deposition Lieutenant Colonel Horstman claimed he had reviewed PFS's assessment of the accident reports and stated there was nothing in the reports with which he disagreed. *See* PFS Motion to Strike at 2 (citing Horstman Deposition at 203-04).

In response, however, the State argues that even though PFS did not have the opportunity specifically to depose Lieutenant Colonel Horstman on his concerns regarding the PFS analysis of the accident reports, PFS should have been aware of his general concerns, which were addressed in the State's December 5, 2000 supplemental discovery response and in his December 11, 2000 deposition. In

support of this argument, the State notes specific statements made by Lieutenant Colonel Horstman during his deposition, and of which PFS thus “was fully aware,” in which he disagreed with a number of PFS aircraft crash assumptions including (1) the fact that accidents could occur above 5000 feet in the Sevier B MOA, incidents that PFS allegedly “completely disregarded”; (2) the effects of cloud cover upon visibility; (3) the fact that accidents could occur under instrument flight rules, which PFS also did not address in its analysis; (4) the occurrence of various types of accidents based on different flight activities such as gravity awareness warmups and night vision goggle training that the PFS analysis did not address; and (5) the occurrence of accidents involving bird strikes, which PFS also excluded from its analysis. State Motion to Strike Response at 6-7. Nonetheless, according to the State, PFS chose not to address these general concerns in its summary disposition motion.

Furthermore, according to the State, Lieutenant Colonel Horstman did not specifically review the accident reports prior to his deposition, and did not feel the need to do so until he reviewed the December 12, 2000 deposition of PFS declarant Colonel Fly and read the PFS summary disposition motion. Due to various personal and professional obligations, and given the volume of materials, Lieutenant Colonel Horstman did not complete his review of all the materials relating to PFS characterization of the accident reports until January 21, 2000. Hence, it is not unreasonable for the State to have submitted his concerns in its summary disposition response. *See id.* at 8-9 & nn.8-9.

v. BOARD RULING

Of the ten PFS statements of material fact relating to the issue of F-16s transiting Skull Valley, the State has not challenged C9 and C13. The first statement pertains to the effective area of the PFS site while the second statement sets forth the formula for calculating the probability that an aircraft flying over the PFS site would crash and impact the site. With respect to the other eight statements, C5 through C8, C10 through C12, and C14, there clearly are material factual disputes based on the declaration of Lieutenant Colonel Horstman regarding his analysis of the submitted accident reports. Assuming his statements are not subject to being struck pursuant to the PFS motion, the State has presented credible evidence that is in direct conflict with the position of the PFS declarants on matters that are material to an evaluation of whether the PFS facility meets the appropriate design basis criteria in terms of aircraft mishaps and/or crashes.

Relative to that motion, the State’s explanation regarding Lieutenant Colonel Horstman’s position on the aircraft crash analysis reports is troubling, given his clear declaration during the December 11, 2000 deposition that he had reviewed the PFS report discussing F-16 crash analyses and had no particular disagreement with it. On the other hand, we do not believe that the State

or Lieutenant Colonel Horstman intentionally withheld information from PFS during his deposition; rather, it seems apparent that Lieutenant Colonel Horstman overstated his familiarity with those analyses. Although any future misstatements of this type by this witness could call into serious question the thoroughness, and thus the viability, of his analysis, the circumstances here do not warrant the action requested by PFS. At the same time, the circumstances do justify providing PFS with an additional opportunity to depose Lieutenant Colonel Horstman on his assessment of the accident analyses. We thus deny the PFS motion to strike with respect to this matter, but allow PFS the option of taking another deposition of Lieutenant Colonel Horstman regarding his analysis of the accident reports.

In light of this ruling, we deny the PFS motion for summary disposition relative to this portion of the accident analysis at issue in contention Utah K/Confederated Tribes B.

d. Potential F-16 Ordnance Impacts

i. PFS POSITION

PFS has put forth nine undisputed material facts, C15 through C23, relating to potential ordnance impacts at the PFS site. *See* PFS Undisputed Facts at 6-7. Relying on the testimony of its declarants, Cole, Jefferson, and Fly, PFS calculated the probability of ordnance carried by F-16s impacting the PFS site based on various scenarios.

Placing the probability of an inadvertent ordnance release at zero based on Air Force information that there had never been an unanticipated munitions release outside of a designated UTTR launch/drop/shoot box, PFS first analyzed a scenario involving ordnance (live or inert) jettisoned from an aircraft crashing into Skull Valley on the PFS site. PFS postulated that in the event of an accident in which the pilot would have time to respond before ejecting from the aircraft (e.g., engine failure), the pilot would jettison any ordnance from the aircraft. PFS used an approach similar to that for calculating the probability of F-16 impact to the site to calculate the probability of jettisoned ordnance directly impacting the site. Other factors that were included in the calculation were the fraction of F-16s flying in the area per year that would be carrying ordnance that could be jettisoned, the fraction of events that would leave the pilot in control such that the pilot could jettison the ordnance before ejection, and the area of the site from the perspective of a piece of ordnance flying north to south over the site, which PFS has stated is equal to 0.08763 square mile. Assuming these additional factors, PFS calculated the probability of a piece of jettisoned ordnance directly impacting the site as 1.49E-07 per year. *See* PFS Dispositive Motion at 15-16 (citing Cole/Jefferson/Fly Declaration at 12-14).

PFS also calculated the probability of facility impact from jettisoned live ordnance landing near the site after being ejected, as well as the hazard posed by

live ordnance carried aboard an aircraft crashing into the ground near the facility. Noting that it has been advised by the Air Force that (1) Air Force pilots do not arm live ordnance carried while transiting over Skull Valley; (2) there has never been an unanticipated munitions release outside UTTR designated explosion areas, *see* PFS Undisputed Facts at 6; and (3) the likelihood of an unarmed live jettisoned ordnance exploding upon impact with the ground is “remote,” PFS asserts it is “highly unlikely” there would be facility damage from jettisoned live ordnance or live ordnance carried aboard an aircraft that crashed, but did not directly hit the facility. PFS Dispositive Motion at 16. In making its probability calculation, however, PFS assumed that this type of live ordnance would have a 1% chance of exploding and, further assuming the bomb was the largest carried by F-16s over Skull Valley, sought to assess the damage that would result if an explosion occurred close enough so that the blast overpressure would damage a storage cask or the Canister Transfer Building (CTR), albeit without hitting either one. *See id.* Using the same method that was used for calculating the probability of an F-16 crashing into the facility, PFS calculated the probability of crashing F-16 jettisoned live ordnance landing near the facility, or an F-16 crash near the site without jettisoning live ordnance at 2.43E-10 per year.⁸ *See id.* at 16-17 (citing Cole/Jefferson/Fly Declaration at 14-15).

ii. STAFF POSITION

As was the case with F-16 flights in Skull Valley, the Staff takes no position regarding the portion of the PFS dispositive motion concerning potential ordnance impacts to the PFS site. *See* Staff Response at 5.

iii. STATE POSITION

Based on the testimony of its declarant Dr. Resnikoff, the State asserts it disputes PFS material facts C17 and C19 addressing potential ordnance impacts from F-16 flights over Skull Valley. While the State does not contest the PFS methodology used for calculating the probabilities for the previously described scenarios, the State disputes the effective area of the facility with respect to jettisoned ordnance, claiming that the correct area is 0.12519 square mile. Moreover, based on its analysis incorporating this effective area calculation as well as a different figure for aircraft flights per year, engine failures as a crash initiation factor, and Skull Valley airspace width, the State argues that the probability that jettisoned ordnance would impact the PFS facility is 4.97E-07 per year. *See* State Disputed Facts at 7 (citing Resnikoff Declaration at 13 & Exh. E

⁸ The formula for this calculation is $P = N \times C \times e \times A/W$, where P , C , A , W are defined as in note 6 *supra*, N is the number of F-16s carrying jettisonable ordnance, and e is the fraction of aircraft crashes that leave the pilot in control of the aircraft.

(Jettisoned Military Ordnance — Impact)). Furthermore, the State declares that certain live and inert ordnance carried by the Air Force could strike and penetrate the PFS storage casks that will be utilized by PFS at the facility. *See id.* at 7 (citing Resnikoff Declaration at 20-21; Horstman Declaration at 24).

iv. BOARD RULING

Although the State specifically disputes only two of the nine ordnance-related statements proposed by PFS — C17 and C19 — it is apparent from the analysis of its supporting witness Dr. Resnikoff, in particular his analysis of the factors that contribute to a probability estimate for ordnance impacts, that there are material factual disputes between the parties relative to this cumulative probability estimate element. Therefore, we deny the PFS summary disposition request with regard to this item.⁹

e. Aircraft Training on the Utah Test and Training Range

According to PFS, sorties flown over the UTTR reflected a variety of training activities, including air-to-air combat training, air-to-ground attack training, and air-refueling training.¹⁰ Further, in analyzing the potential for these training activities to impact its proposed Skull Valley ISFSI, PFS put forth twelve material factual statements, C24 through C35, in two categories: aircraft impacts and air-delivered weapons impacts. Below we address the summary disposition arguments put forth by the parties with respect to these various activities.

i. PFS POSITION

Because of the distance of UTTR air-to-ground attack and air refueling training activities from the PFS facility — 20 and 50 miles respectively — PFS considers only fighter aircraft air-to-air combat training activities, which are conducted some 10 miles from the proposed ISFSI, as representing even a potential hazard. In this regard, PFS calculated the annual probability that the aircraft would crash and impact the PFS facility on the basis of the total crash rate per square mile per year calculated for the UTTR; the area of the UTTR from which aircraft could credibly impact the site; the effective area from the perspective of a crashing aircraft; the footprint area in which an aircraft possibly could hit the ground in

⁹In doing so, however, we note that, given the PFS assumption that an aircraft or associated ordnance strike will cause a radioactive release, *see* PFS Dispositive Motion at 29, as currently presented Dr. Resnikoff's assertions about ordnance penetration, *see* State Disputed Facts at 7, appear to have little relevance to this particular probability calculation. Further, given the relatively small probabilities involved with this item, namely 2.43E-10 per year, the materiality of his assertions regarding the significance of the possibility of live ordnance exploding at high temperatures, *see* State Response at 25, is questionable.

¹⁰According to PFS, another aspect of UTTR training is transportation to and from the MAAF, located beneath UTTR airspace, which is addressed in section II.B.3.g below. *See* PFS Dispositive Motion at 17.

the event of a crash; and the probability that a pilot will be able to take action to avoid the site.¹¹ See PFS Dispositive Motion at 17-18.

Relying on the information provided by its declarants Brigadier General Cole, Major General Jefferson, and Colonel Fly, and the data contained in the August 10, 2000 report to the NRC on PFS facility aircraft crash impact hazards prepared by those declarants, PFS provides a maximum annual aircraft impact probability for aircraft engaging in air-to-air combat training. In doing so, PFS assumes that the total number of hours flown per year by fighter aircraft in air-to-air training is 3741 — the number of hours flown accounted for in FY 1998 multiplied by a factor of 1.156 to account for recent basing and sortie data. PFS also determined that the total crash rate for UTTR restricted areas R6402 and R6406 that are nearest the PFS facility are 2.52E-06 and 2.05E-05 crashes per square mile, respectively, and that the F-16 air-to-air combat training crash rate is 3.96E-05 per hour, based on data in the August 2000 aircraft report. Regarding the area that could credibly be impacted by an aircraft in the event of a crash and the footprint area (i.e., the area in which aircraft could possibly hit the ground in the event of a crash), both were assumed to be 10 miles. Finally, PFS calculated the fraction of accidents that would leave the pilot in control of the aircraft to be 0.573, which was based on Air Force data indicating that 95% of all F-16 crashes on the UTTR are due to engine failure or some other accident that leaves the pilot in control of the aircraft, and data that suggest that 45% of F-16 crashes that occur during air-to-air combat training are related to engine failure. See PFS Undisputed Facts at 7-8 (citing Cole/Jefferson/Fly Declaration at 15-18). With these figures, PFS calculated the probability that an aircraft conducting air-to-air combat training would affect the PFS site in the event of a mishap as 7.7E-08 per year. See PFS Dispositive Motion at 18-19.

With respect to air-delivered weapons use on the UTTR, PFS also asserted that the air-to-ground attack training and weapons testing using air-delivered ordnance do not pose a significant hazard to the PFS facility. PFS argues that because the site is located 18 statute miles to the east of the easternmost boundary of the range and, in addition, over 20 miles from the nearest target for air-delivered ordnance on the UTTR, there is no danger to the PFS site. Furthermore, according to PFS, weapons use is strictly regulated by the Air Force and there has never been a release beyond the designated areas. See PFS Dispositive Motion at 19 (citing Cole/Jefferson/Fly Declaration at 18-19).

¹¹ The calculation can be stated as: $P = C_a \times A_c \times A/A_p \times R$, where P = annual crash impact probability, C_a = total air-to-air training crash rate per square mile on the UTTR, A_c = the area of the UTTR in which aircraft could credibly impact the PFS site in the event of a crash, A = effective area of the PFS site, A_p = the area in which a disabled aircraft could possibly hit the ground in the event of a crash, and R = the probability that a pilot would be able to take action to avoid the site in the event of a crash.

ii. STAFF POSITION

The Staff supports the PFS position regarding the issue of air-delivered weapons at the UTTR (other than cruise missiles, upon which it takes no position), but takes no position as the issue relates to crashes involving aircraft on the UTTR. *See* Staff Response at 5, 7, 8 & n.8; *see also* section II.B.3.c.ii above.

iii. STATE POSITION

Relying on the sworn declarations provided by Dr. Resnikoff and Lieutenant Colonel Horstman, the State challenges PFS undisputed material facts C26, C28, C29, C33, and C34, each addressing an aspect of the PFS probability calculation regarding the impact of an aircraft crash involved in air-to-air combat training. The State argues that, contrary to PFS's assertion, air-to-air combat training over the UTTR does pose a potential hazard to the PFS facility. Further, although it does not disagree with the method utilized by PFS in its calculation of the probability of an aircraft engaged in air-to-air combat training affecting the site, the State does disagree with the PFS probability figure arrived at by using that calculation.

First, the State disputes the total number of hours flown per year by aircraft in air-to-air combat training, stating that the number utilized in the probability calculation should be based on the number of FY 2000 sorties rather than modified FY 1998 figures. Furthermore, the State argues that FY 1999 data should be used for the F-16 crash rate, 5.27E-05 crashes per hour, in lieu of the PFS crash rate figure. The State also disputes the fraction of F-16 accidents on the UTTR that would leave the pilot in control of the plane, claiming it should be a factor of 0.765, rather than the lower figure reported by PFS. Ultimately, based on these disputed figures, the State calculates the probability that air-to-air combat training crashes will affect the PFS facility as 2.29E-07 per year. *See* State Disputed Facts at 8 (citing Resnikoff Declaration at 14 & Exh. G (Probability of Aircraft Conducting Air-to-Air Combat at UTTR-South Impacting Facility); Horstman Declaration at 24).

On the other hand, with regard to the issues of the applicability of air-to-ground attack and air-refueling testing and air-to-ground weapons testing on the UTTR, the State does not challenge the PFS assertion that these activities do not pose a significant threat to the site. *See* State Disputed Facts at 7-8.

iv. BOARD RULING

The State does not dispute PFS material factual statements indicating that any probability estimate for UTTR aircraft training need involve only impacts relating to aircraft crashes from air-to-air combat training. We therefore grant the PFS motion for summary disposition as it relates to UTTR air-to-ground attack and

air-refueling training activities and air-delivered weapons. We decline, however, to grant the PFS motion with regard to potential air-to-air combat testing activities. It is apparent from the analyses of State supporting declarants Dr. Resnikoff and Lieutenant Colonel Horstman, particularly the former's analysis of the factors that contribute to a probability estimate for UTTR air-to-air combat testing impacts, that there are material factual disputes between the parties relative to this cumulative probability estimate element.

f. Aircraft Flying on the Moser Recovery Route

i. PFS POSITION

PFS has proposed five undisputed material facts, C36 through C40, concerning the issue of the likelihood that aircraft traversing the MRR, which may be used by some aircraft returning to HAFB from the UTTR South Area during limited periods of marginal weather conditions or at night under specific wind conditions, will crash into the PFS facility. In this regard, PFS declares that the MRR runs southwest to the northeast approximately 2 miles from the site. PFS estimates that, based on information from local air traffic controllers, approximately 5% of aircraft returning to HAFB use the MRR. Utilizing Air Force data confirming that there were 5726 F-16 sorties in FY 1998, PFS calculated that only 286 aircraft used that route. *See* PFS Undisputed Facts at 9 (citing Cole/Jefferson/Fly Declaration at 19).

PFS utilized this information to calculate the probability that traversing aircraft on this route would pose a hazard to the proposed PFS facility. The average annual crash impact probability was calculated using the same method as for F-16s traversing Skull Valley. Utilizing data provided in the August 2000 aircraft report, as analyzed by PFS declarants Cole, Jefferson, and Fly, PFS assumed that the MRR has a width of 10 nautical miles; the number of aircraft flying the route per year is 286; the crash probability for F-16s is 2.736E-8 per year; the PFS facility has an effective area of 0.1337 square mile; and 85.5% of all crashes involving planes traversing the MRR would leave the pilot in control of the aircraft to direct it away from the PFS site. PFS thus calculated the annual impact probability of F-16s traversing the MRR to be 1.38E-8 per year. Nonetheless, accounting for the increase in flight activity in fiscal year 2000, PFS adjusted this calculation by a factor of 1.516, making the probability 2.0E-08 per year. *See* PFS Dispositive Motion at 19-20 (citing Cole/Jefferson/Fly Declaration at 19-20).

ii. STAFF POSITION

The Staff takes no position on the issue of aircraft impact hazard to the PFS facility from aircraft traversing the MRR because of recent sortie and other aircraft

data provided by PFS and the PFS modified assessment of the hazard posed by general aviation aircraft, as noted *supra*. See Staff Response at 5.

iii. STATE POSITION

Of the five PFS material factual statements regarding the MRR, the State disputes two: C37 and C40. The State disagrees with statement C37, asserting that the PFS estimate of 5% as the maximum number of aircraft that traverse the MRR is too small. According to the State, this estimate is too low because it does not reflect the increased use of the MRR due to implementation of night vision goggle training missions or higher usage of the MRR during winter months. See State Response at 21; Horstman Declaration at 25. And, as a result of its disagreement with the PFS estimate of total traversing aircraft, the State also disagrees with the PFS calculation of the overall crash impact probability from the MRR, which Dr. Resnikoff calculated as having an impact risk of 1.49E-07 per year. See State Disputed Facts at 8 (citing Resnikoff Declaration at 14). Furthermore, the State urges that because the Staff has not taken a position regarding this matter, the Board should deny the PFS summary disposition motion until the Staff has completed its evaluation and taken a position. See State Reply at 3.

iv. BOARD RULING

We discern no dispute among the parties regarding the location of the MRR and the direction in which aircraft fly with respect to it; the assumption that the MRR can be modeled as an airway with a 10 nautical mile width; and the sufficiency of the PFS methodology for determining the impact probability of F-16s using that route. Once again, however, a genuine dispute exists between PFS and the State regarding an appropriate probability estimate that aircraft transiting the MRR will impact the PFS ISFSI, specifically with regard to State declarant Dr. Resnikoff's analysis of the factors that contribute to a probability estimate for MRR transit impacts. Therefore, we deny the PFS motion with respect to this item as well.

g. Aircraft Flying to and from Michael Army Airfield on IR-420

i. PFS POSITION

PFS has provided seven statements, C41 through C47, regarding aircraft flying to and from MAAF on military airway IR-420. *See* PFS Undisputed Facts at 9-10. With these statements, PFS seeks to establish that MAAF, which is located on the DPG, is some 17 statute miles south-southwest of the PFS facility. Utilizing 1997 DPG data, PFS asserts there are approximately 414 flights annually in the direction of the PFS facility, the majority of which are large cargo aircraft. PFS argues that the impact probability regarding the aircraft on IR-420 can be calculated using the same approach as that for the F-16s transiting Skull Valley. In its calculation of the impact probability of planes from MAAF, the crash rate for aircraft flying to and from MAAF was estimated to be 4.0E-10 per mile (based on the assumption for large commercial aircraft in NUREG-0800); the effective area of the PFS site relative to large cargo aircraft is 0.2116 square mile; and the area flown from MAAF toward IR-420 was assumed to be 10 nautical miles. PFS thus concluded that the crash impact probability for flights traversing to and from MAAF was equal to 3.0E-09 per year. PFS further asserts that takeoffs and landings at the MAAF would pose a negligible hazard to the PFS facility because the airfield is located over 17 miles away from the site. *See* PFS Dispositive Motion at 20 (citing Cole/Jefferson/Fly Declaration at 20).

ii. STAFF POSITION

The Staff supports the position provided by PFS with regard to aircraft traversing to and from MAAF, agreeing that there is no genuine issue of material fact with regard to this issue and that these activities do not pose a credible threat to the PFS facility. *See* Staff Response at 7 (citing SER at 15-46 to -47).

iii. STATE POSITION

Of the seven statements of material fact proposed by PFS relative to MAAF flight impacts, the State disputes only statements C42 and C44. In connection with statement C42, relying on the testimony of Dr. Resnikoff, the State argues that the estimated number of flights in and out of MAAF is too low. Although PFS has asserted that there are 414 flights into and out of MAAF per year, the State estimates that the number of flights flying to and from MAAF should be 1359 annually. According to the State, more recent, FY 1999 data from DPG indicate that there has been a dramatic rise in flights to or from the airfield. Furthermore, the State declares, since 89% of the flight activity originates from HAFB, this number can be expected to rise based on the increased number of planes to be stationed at HAFB and the increased number of sorties due to the AEF program discussed in section II.B.3.c *supra*. *See* State Response at 21-22; State Disputed

Facts at 8-9 (citing Resnikoff Declaration at 25); Resnikoff Declaration, Exh. N (Data From DPG).

Further, although the State does not indicate in its statement of disputed material facts that it challenges PFS statement C44, in its response it states that it does in fact dispute the crash rate assumed by PFS from NUREG-0800. According to the State, that figure — $4.0E-10$ per mile — reflects only the crash rate for large commercial aircraft, but most of the flights to and from MAAF are made by F-16s. *See* Resnikoff Declaration at 25. As a result of this discrepancy, the State also disputes statement C47, the PFS crash impact hazard probability for flights to and from MAAF asserted by PFS, which the State argues should be $1.53E-08$ per year. *See* State Disputed Facts at 9 (citing Resnikoff Declaration at 25).

iv. BOARD RULING

Although the State does not dispute four of the seven PFS material factual statements, C41, C43, C45, and C46, it raised concerns regarding the two of these statements, C42, concerning the number flights to and from the MAAF, and C44, concerning aircraft crash rates — that are instrumental in determining the crash impact hazard to the PFS from planes traversing the MAAF. As a result, we also find that there is a genuine dispute of material fact regarding C47, the crash impact hazard for planes traversing MAAF, and thus deny this portion of the PFS summary disposition request.

h. *Civilian Aircraft Flying on Airways J-56 and V-257 Including Aircraft Flying to and from Salt Lake City International Airport*

i. PFS POSITION

PFS has provided fourteen undisputed material facts — C48 through C61 — in calculating the hazard to the PFS site posed by civilian aircraft using Airways J-56 and V-257. PFS asserts that Airway J-56 runs from west-southwest to east-northeast 11.5 miles north of the site, while Airway V-257 runs north and south 19.5 statute miles east of the site. PFS assumed that Airway J-56 occupies a width of 8 nautical miles while Airway V-257 was assumed to be 12 nautical miles wide. Air traffic found on these airways consists of commercial airliners and private business jets, including air traffic to and from the SLCIA. *See* PFS Dispositive Motion at 20-21 (citing Cole/Jefferson/Fly Declaration at 21).

In determining the hazard posed to the site from aircraft on these airways, PFS utilized the same methodology it adopted to calculate the hazard of F-16s flying over Skull Valley. In this instance, however, PFS assumed that the crash rate for aircraft on J-56 and V-257 is $4.0E-10$ per mile, which was also taken from the guidance found in NUREG-0800 for commercial aircraft. PFS also utilized the F-16 methodology to compute the effective area of the facility with respect

to large commercial airliners, which it determined was 0.2116 square mile. In addition, PFS assumed that only twelve aircraft per day transit each airway, which was data derived from observations of local air traffic controllers. Using this information, PFS calculated the total probability that an aircraft flying on J-56 or V-257 would impact the PFS facility is 3.1E-08 per year. *See id.* at 20-21 (citing Cole/Jefferson/Fly Declaration at 21-22).

PFS also asserts that takeoff and landing operations occurring at the SLCIA will not pose a hazard to the facility because SLCIA is over 50 miles away from the PFS facility. According to PFS, takeoff and landing hazards at a commercial airport generally do not extend more than 10 miles away from the end of the runway. Moreover, PFS claims that the method provided in NUREG-0800 for determining the magnitude of takeoff and landing hazards on the basis of distance from the airport and annual number of operations also establishes that the hazard to the facility is negligible. *See PFS Dispositive Motion* at 21 (citing Cole/Jefferson/Fly Declaration at 21-22).

ii. STAFF POSITION

The Staff declares its agreement with PFS that there is no genuine dispute of material fact regarding the hazard posed to the PFS facility by civilian aircraft flying on Airways J-56 and V-257. *See Staff Response* at 1. With regard to factual statement C54, however, the Staff notes that the correct target area for the PFS facility is 0.2615 square mile, which was reported in Exhibit 4 to the Cole/Jefferson/Fly declaration, but mistakenly stated as 0.2116 square mile in the PFS motion. The Staff also notes, however, that this error has no effect on the overall analysis because the PFS original analysis relied on the correct figure. *See id.* at 8 n.7. Therefore, the Staff supports the PFS dispositive motion and its conclusion that aircraft from SLCIA do not pose a threat to the facility. *See id.* at 9.

iii. STATE POSITION

The State does not indicate any disagreement with the PFS assertions regarding the issues of civilian aircraft on Airways J-56 and V-257 in either its response to the PFS motion or in its disputed statement of facts. With regard to the issue of aircraft taking off and landing at the SLCIA, the State's only challenge to the PFS claims is its statement in its response that although PFS has assumed a 20% increase in flight traffic by the time the facility is in operation, the PFS use of national statistics to reach this conclusion failed to account for the large increase in air traffic that is expected for the SLCIA. *See State Response* at 25 (citing Resnikoff Declaration at 25).

iv. BOARD RULING

The State has failed to provide any analysis to counter the PFS demonstration that there is no dispute of material fact extant regarding this matter such that this civilian aircraft issue needs to be pursued further. Dr. Resnikoff has not provided any separate calculation of the hazard probability regarding aircraft using Airways J-56 and V-257, instead utilizing the PFS-calculated probability on this issue as part of the State's version of the cumulative probability calculation analyzed in section II.B.3.j *infra*. Furthermore, although Dr. Resnikoff asserts that air traffic may increase significantly more than PFS has assumed based upon national statistics, he has not provided any support to show why his surmise is correct, other than the bald statement that it is "expected," Resnikoff Declaration at 25, which is insufficient to create a material factual issue.¹² Accordingly, with regard to the issue of hazards to the facility from civilian aircraft activity on Airways J-56 and V-257 we grant the PFS motion for summary disposition.

i. General Aviation Activity

i. PFS POSITION

PFS outlines three undisputed material factual statements regarding general aviation activity in Skull Valley, C62 through C64. *See* PFS Undisputed Facts at 11. In this regard, PFS argues that the level of aviation activity in Skull Valley is negligible because there are no civilian airports within 25 miles of the facility; the facility is located in a very sparsely populated area; and the ISFSI will be located inside a MOA that, because it is off-limits to civilian aviation during times of Air Force activity, most pilots avoid due to the difficulty in receiving clearance for transit. *See* PFS Dispositive Motion at 21 (citing Cole/Jefferson/Fly Declaration at 22). In addition, PFS argues that even though there is little likelihood that an aircraft would crash in Skull Valley, based on PFS calculations it is equally unlikely that a general aviation aircraft would penetrate a spent fuel cask, given the relatively low weight and slow speed of such aircraft. Because there is no likelihood of radiation release, PFS has assigned the hazard from general aviation activity as zero. *See id.* at 21-22; Johns Declaration at 1-3.

ii. STAFF POSITION

The Staff takes no position on the issue of the hazard posed by general aviation activity in Skull Valley. As is noted in section II.B.3.c.ii *supra*, PFS provided a revised number for the likelihood of a crash. Indeed, PFS formerly reported an impact probability of 2.36E-07 per year, which the Staff utilized in its SER,

¹² Additionally, we note that the State made no attempt to address our earlier stated concern about Dr. Resnikoff's remarks regarding SLCIA expansion. *See* LBP-99-35, 50 NRC at 189 n.3.

but then provided a new standard of zero probability in its summary disposition motion. Because the Staff had not had the opportunity to review this change at the time it filed its response, it takes no position regarding this issue. *See* Staff Response at 5-6.

iii. STATE POSITION

Once again, the State fails to provide any objection to the PFS material factual statements relating to this issue in either its response to the PFS motion or in its statement of disputed facts. In his declaration, however, Dr. Resnikoff points out that he has not yet evaluated the PFS probability calculation, and thus assumes for purposes of the cumulative impact calculation that the range of hazard to the facility is from zero to 2.36E-7 per year. *See* Resnikoff Declaration at 15.

iv. BOARD RULING

As with the issue of civilian aircraft flying on Airways J-56 and V-257, including aircraft flying to and from the SLCIA, the State has provided no evidence to indicate that there is a dispute regarding any of the PFS material factual statements relating to this issue. Certainly, Dr. Resnikoff's failure to analyze this item per the revised PFS submission does not create such a dispute.¹³ We thus grant the PFS motion for summary disposition with regard to general aviation.

j. Cumulative Hazard

i. PFS POSITION

PFS provides three undisputed material factual statements, C65, C66, and C67, alleging that the cumulative hazard to the PFS facility from aircraft accidents provides no genuine dispute of material fact relative to safety of the PFS facility. *See* PFS Undisputed Facts at 12. Asserting it has acted in accord with NUREG-0800, PFS has summed the probability for all types of incidents described in this decision, including F-16 aircraft transiting Skull Valley; jettisoned ordnance from crashing F-16s; ordnance carried aboard a crashing F-16; aircraft conducting training on the UTTR, including weapons training; aircraft flying within the MRR; civilian aircraft flying on Airways J-56 and V-257 and aircraft taking off and landing at SLCIA; and general aviation activity occurring in Skull Valley and concludes that the total facility aircraft hazard probability is 6.27E-07 per year.

¹³In contrast to the issue of military flights through airspace IR-420, in which the substance of the State's disagreement with PFS material facts can be discerned from the information provided by its declarant notwithstanding an initial reliance on the PFS-supplied probability estimate, the State has provided no independent probability analysis of this factor, other than to note there has been a change in the PFS position.

This figure, PFS asserts, demonstrates that potential aircraft accidents do not pose an unacceptable hazard to the facility because this figure is below the Category 2 design basis regulatory standard of 1.0E-06 events per year that we have accepted as the applicable standard in section II.B.3.a *supra*.

ii. STAFF POSITION

The Staff did not indicate in its response whether it supports the PFS conclusion that the cumulative hazard for potential aircraft crashes, including potential ordnance and cruise missile impacts, does not pose an unacceptable threat to the facility. The Staff notes, however, that the only issues it views as appropriate for summary disposition do not include the cumulative impact value proposed by PFS. *See* Staff Response at 9.

iii. STATE POSITION

The State disputes PFS statements C65, C66, and C67, alleging that PFS has underestimated the total probability because PFS does not rely on conservative assumptions in calculating its various hazard values for potential aircraft crashes, ordnance impacts, and cruise missiles. *See* State Disputed Facts at 9. Based on the testimony of Dr. Resnikoff, in which he posits a cumulative probability of aircraft hazards to the facility in the range of from 6.11E-06 to 6.35E-06 per year, the State asserts that there is a material factual dispute that makes summary disposition inappropriate. *See* State Response at 22. Moreover, according to the State, in making its cumulative calculation PFS did not consider properly factors that would make such incidents significantly more likely, including the percentage of and circumstances surrounding incidents that would leave a pilot in control of the plane so as to avoid the PFS facility; the number of F-16s involved in activities in and near Skull Valley and F-16 crash rates; the uncertainty associated with using past frequency distributions relative to pilot crash avoidance and F-16 accident rates; actual weather conditions as affecting a pilot's ability to avoid the PFS facility; flight path width and aircraft formation that would reduce the effective flying area assumed by PFS; the use of bombs that could penetrate the storage casks and cause a radiation leakage; the possibility of midair collisions in Skull Valley; ordnance explosions due to exposure to high temperatures; the increasing numbers of flights through military airspace IR-420; possible expansion of the SLCIA; the fact that crash statistics involving engine failures in high stress maneuvering flights have no relevance to the Skull Valley situation; and the PFS failure to consider accident rates based on data other than those compiled from past aircraft statistics. *See* State Response at 22-25; Resnikoff Declaration at 23-26.

iv. BOARD RULING

Notwithstanding the fact that we have granted the PFS motion relative to several issues, including cruise missiles, aircraft flying Airways J-56 and V-257, and general aviation aircraft, as was noted above, we find that there is a genuine dispute of material fact with respect to other aspects of the PFS motion that could affect the PFS estimates on various probability factors. These potential effects, in turn, could put the cumulative probability over the regulatory threshold we acknowledged in section II.B.3.a above, thus establishing there are disputed issues of material fact regarding the issue of cumulative probabilistic impact. We thus deny the PFS motion for summary disposition with regard to the cumulative impact of aircraft hazards at the PFS site.¹⁴

k. PFS Motion to Strike State Testimony Relating to the Value of the UTTR to the Training of Military Forces

i. PFS/STAFF POSITIONS

In its motion to strike, along with various other items (which have already been addressed in this decision), PFS has requested that the Board strike evidence presented by the State regarding the value of the UTTR to the military for its training procedures. Specifically, PFS requests that we strike statements made by Lieutenant Colonel Horstman stating that “[t]he UTTR is a unique and valuable asset to the U.S. military, and its continued use as a military training and testing area is vital to military training and the national security of the United States.” Horstman Declaration at 3 (citing *id.* Exh. C (Statement by Utah First District Congressman, Representative James V. Hansen to Licensing Board (June 23, 2000))). According to PFS, this statement should be stricken because it is irrelevant to the contention at issue, which concerns credible accidents caused by external events affecting the ISFSI. PFS also argues that this assertion regarding the value of the UTTR to Utah and the United States as a whole has already been considered in late-filed contention Utah KK, which was rejected by this Board.

¹⁴Relative to the question of the conservatism utilized by PFS in establishing many of its probability calculations, in its dispositive motion, PFS has outlined various aspects of conservatism that it argues it used in considering the impact to the PFS from aircraft crashes and ordnance, including: (1) its assessments of F-16 crash rates being based on Class A and Class B mishap rates rather than destroyed aircraft rates; (2) its assumption that any F-16 impacting the site would cause a release of radioactive material; (3) its assumption that the aircraft operating on the UTTR could potentially impact the PFS site even though, realistically they are too far away to cause an effect; (4) its calculation of the hazard from jettisoned ordnance does not account for open space where there are no casks or the fact that inert ordnance carried by an F-16 would not penetrate the top of a storage cask; (5) its assumption the ISFSI will be at full capacity at all times, whereas the average area of the site over its lifetime will be equal to only 55% of the area at full capacity. *See* PFS Dispositive Motion at 28-29. The State counters this with its own list of items, described in section II.B.3.j.iii above that it asserts demonstrate a lack of conservatism on the part of PFS. For those portions of this contention that remain for litigation, so long as they are relevant to our assessment of whether the PFS has adequately considered the effects upon its proposed facility of credible accidents caused by external events, the impact of such “conservatisms,” or the lack thereof, are items that the parties may continue to pursue.

See LBP-00-27, 52 NRC 216 (2000). The Staff concurs with the PFS motion to strike this testimony. *See* Staff Motion to Strike Response at 1.

ii. STATE POSITION

The State argues that the statement made in Lieutenant Colonel Horstman's declaration is relevant to contention Utah K/Confederated Tribes B because the testimony is directly related to the actual probability of an aircraft, ordnance, or cruise missile striking the facility to the degree that need is proportional to use. The State further notes that whether or not evidence is relevant goes to the weight given to it in evaluating the merits, and is not a justification for striking the material. *See* State Motion to Strike Response at 4.

iii. BOARD RULING

Because we find this statement irrelevant in the context of our rulings on this motion, and thus give it no consideration in the context of our determinations, we deny the PFS motion to strike with regard to this testimony given by Lieutenant Colonel Horstman and the accompanying exhibit.

III. CONCLUSION

The PFS December 30, 2000 motion for summary disposition of contention Utah K/Confederated Tribes B is denied in part and granted in part as follows:

1. The use of military ordnance on DPG — granted.
2. Cruise missile testing hazards relative to the PFS facility — granted.
3. Aircraft accident hazards relative to the PFS facility — (a) regulatory standard, granted; (b) scope of aviation activity in Skull Valley, granted; (c) F-16s transiting Skull Valley, including jettisoned ordnance, denied; (d) aircraft conducting training on the UTTR, granted as to the issues of air-to-ground attack and air-refueling training and air-delivered weapons and denied as to air-to-air combat training; (5) aircraft flying on the MRR, denied; (6) aircraft flying to and from MAAF on IR-420, denied; (7) civilian aircraft on Airways J-56 and V-257, including aircraft landing and taking off from SLCIA, granted; (8) general aviation in Skull Valley, granted; (9) cumulative hazard to the PFS facility from aircraft accidents and ordnance, denied.

In addition, the Board (1) denies the February 9, 2001 PFS motion to strike portions of the State's January 30, 2001 response and supporting material; (2) provides PFS with an additional opportunity to depose State declarant Horstman; and (3) refers the Board's ruling in section II.B.3.a above regarding the regulatory

standard that governs the assessment of credible ISFSI aircraft crash hazards to the Commission for its further consideration.

For the foregoing reasons, it is, this thirty-first day of May 2001, ORDERED that:

1. The December 30, 2000 motion for summary disposition of Applicant PFS is *granted in part* and *denied in part* as outlined above; and (2) as to those portions of this contention for which summary disposition is granted, PFS having established that there is no genuine issue as to any material fact, a decision regarding these matters is rendered in favor of PFS.

2. The February 9, 2001 PFS motion to strike portions of the State's January 30, 2001 response to the December 30, 2000 PFS dispositive motion is *denied*.

3. In accordance with our ruling in section II.B.3.c.v above, absent some agreement by the parties setting another date, PFS shall have up to and including *Friday, June 15, 2001*, within which to conduct an additional deposition of State declarant Horstman regarding his assessment of the F-16 accident reports and the PFS claim, based on those reports, that F-16 pilots would remain in control of their aircraft in the event of an emergency.

4. In accordance with 10 C.F.R. § 2.730(f), the Licensing Board's ruling in section II.B.3.a above regarding the regulatory standard to be applied to aircraft

crash hazards for ISFSIs is *referred* to the Commission for its consideration and further action, as appropriate.

THE ATOMIC SAFETY AND
LICENSING BOARD¹⁵

G. Paul Bollwerk, III, Chairman
ADMINISTRATIVE JUDGE

Dr. Jerry R. Kline
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 31, 2001

¹⁵ Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Applicant PFS; (2) Intervenor Skull Valley Band of Goshute Indians, Ohngo Gaudadeh Devia, Confederated Tribes, Southern Utah Wilderness Alliance, and the State; and (3) the Staff.

Although Judge Lam participated in final deliberations regarding this issuance and agrees with the reasoning and result, he was unavailable to sign it.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
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)

June 14, 2001

ADJUDICATORY HEARINGS: SCOPE; EXEMPTIONS

Where an applicant seeks an exemption from a regulatory requirement that ordinarily must be met before the NRC can find the facility safe and license it, resolution of the exemption request directly affects the licensability of the proposed facility. Where an exemption request thus raises material questions directly connected to an agency licensing action, it comes within the hearing rights of interested parties.

ADJUDICATORY HEARINGS: SCOPE; EXEMPTIONS

A request for an exemption from NRC regulations cannot remove a matter germane to a licensing proceeding from consideration in a hearing, assuming an interested party raises an admissible contention thereon. To hold otherwise would exclude critical safety questions from licensing hearings merely on the basis of an "exemption" label.

ADJUDICATORY HEARINGS: SCOPE; EXEMPTIONS

It is not true that the Commission only grants a hearing on exemption requests that are directly related to an already-admitted contention. The proper focus is on whether the exemption is necessary for the applicant to obtain an initial license or amend its license.

REGULATIONS: EXEMPTIONS

In requesting an exemption from a generic rule, an applicant is not bound to conform to a rulemaking plan that would alter the existing generic rule.

REGULATIONS: EXEMPTIONS

Because an applicant must show that its request for an exemption from our regulations would not endanger public safety and property, an interested party may use the rulemaking plan to support its claim that the standard anticipated by the rulemaking plan is appropriately conservative.

RULES OF PRACTICE: ADMISSIBILITY OF CONTENTIONS

NRC case law holds that contentions must challenge the adequacy of the application, not the adequacy of the Staff's review. *See, e.g., Curators of the University of Missouri*, CLI-95-1, 41 NRC 71 (1995).

RULES OF PRACTICE: ADMISSIBILITY OF CONTENTIONS

The Board may look beyond an inartfully stated contention to determine the substance of the intervenor's complaint. Where the applicant failed to provide appropriate justification for its request for an exemption from NRC regulations, the Board could properly admit a contention questioning the basis for granting the exemption.

NUCLEAR REGULATORY COMMISSION: CHOICE OF RULEMAKING OR ADJUDICATION

As a general matter, agencies are free either to determine issues on a case-by-case basis through adjudications, or, when appropriate, to resolve matters generically through the rulemaking process. *See Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3)*, CLI-99-11, 49 NRC 328, 343 (1999), citing *Heckler v. Campbell*, 461 U.S. 458, 467 (1983). Thus, the NRC is free to resolve the issues associated with the design earthquake in an individual adjudication.

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

RULEMAKING: EFFECT ON ADJUDICATION

**RULES OF PRACTICE: ADMISSIBILITY OF CONTENTIONS
(GENERIC ISSUE)**

NRC policy is not to consider for individual licensing proceedings contentions that are (or are about to become) the subject of general rulemaking by the Commission. *See Oconee*, CLI-99-11, 49 NRC at 345. Nevertheless, an exemption request that is “generic” in nature may be the subject of a litigable contention.

MEMORANDUM AND ORDER

In a January 31, 2001, order, the Atomic Safety and Licensing Board certified for the Commission’s review the issue of whether the Board should adjudicate a request by Applicant Private Fuel Storage, L.L.C., for an exemption from NRC’s seismic hazards analysis regulations. *See* LBP-01-3, 53 NRC 84, 100-01 (2001); 10 C.F.R. § 2.718(i). The Board also referred to the Commission its ruling that Utah’s challenge to the exemption would be admissible under our contention rule (10 C.F.R. § 2.714(b)) were we to allow the Board to entertain it. *See* LBP-01-3, 53 NRC at 131; 10 C.F.R. § 2.730(f). Consistent with our policy to accept Board certifications and referrals where “early resolution” of issues is desirable, we granted review. *See* CLI-00-3, 52 NRC 23, 28-29 (2000). We hold that Utah’s exemption-related claims meet our admissibility requirements and may be litigated in this adjudication.

I. BACKGROUND

A. Seismic Design Standards and the Rulemaking Plan

Under our rules, an independent spent fuel storage installation (ISFSI) located west of the Rocky Mountain Front must meet the same seismic evaluation and design standards applicable to nuclear power facilities, which are found in 10 C.F.R. Part 100, Appendix A. *See* 10 C.F.R. § 72.102(b), (f). Appendix A calls for the use of a deterministic seismic hazard analysis, which calculates the maximum credible earthquake for the site. In 1997, Part 100 (but not Appendix A) was amended to allow nuclear power reactor licensees to use a probabilistic analysis, which accounts not only for the intensity of a potential seismic event, but also for the probability that a seismic event of a particular intensity will occur within

a given time. *See* 10 C.F.R. § 100.23. Part 60, which applies to the disposal of high-level waste in geologic repositories, was also amended to allow the use of a probabilistic analysis.

The NRC Staff is currently revising Part 72 to conform to this change and allow new ISFSI licensees the option to use a probabilistic analysis. *See* “Rulemaking Plan: Geological and Seismological Characteristics for Siting and Design of Dry Cask Independent Spent Fuel Storage Installations, 10 C.F.R. Part 72,” SECY-98-126. According to the rulemaking plan:

The specific approach proposed for dry cask ISFSI systems, structures, and components would be comparable to the 10 CFR Part 60 graded approach to design ground motion for SSCs of pre-closure facilities. This graded approach would allow the structures, systems, and components of dry cask ISFSIs to be designed to either Frequency Category 1 design basis events or Frequency Category 2 design basis events, depending upon their importance to safety. For seismic events, the Staff has accepted the approach described in DOE Topical Report YMP/TR-003-NP, Rev. 2, Preclosure Seismic Design Methodology for a Geologic Repository at Yucca Mountain, pertaining to 10 CFR Part 60. In this approach, Frequency Category 1 design basis ground motion refers to a mean annual probability of exceedance of 1.0E-03, which corresponds to a 1000-year return period. Frequency Category 2 design basis ground motion refers to a mean annual probability of exceedance of 1.0E-04, which corresponds to a 10,000-year return period.

....

An individual SSC may be designed to withstand only Frequency Category 1 events (the less stringent criteria) if the licensee’s analysis provides reasonable assurance that the failure of the SSC will not cause the facility to exceed the radiological requirements of 10 CFR 72.104(a).^[1] If the licensee’s analysis cannot support this conclusion, then the designated SSC must have a higher importance to safety, and the SSC must be designed such that the facility can withstand Frequency Category 2 events without impairing the ISFSI’s capability to perform safety functions

Under the approach suggested in the rulemaking plan, the Applicant would use a seismic hazard analysis to determine the maximum intensity of a potential earthquake likely to occur within 1000 years (the 1000-year “return period”) and within 10,000 years (the 10,000-year return period). The Applicant would also have to calculate the potential consequences of an earthquake, in terms of how much radiation a person outside the facility’s boundary would receive if various structures were to leak or fail. Any structure that would cause radiation doses immediately offsite to exceed the maximum prescribed by our regulations must be designed to the higher standard: the 10,000-year return period. Other structures, the failure of which would not cause excessive offsite radiation doses, would be designed to withstand the 1000-year seismic event.

¹ “During normal operations and anticipated occurrences, the annual dose equivalent to any real individual who is located beyond the controlled area must not exceed 0.25 mSv (25 mrem) to the whole body, 0.75 mSv (75 mrem) to the thyroid and 0.25 mSv (25 mrem) to any other critical organ” 10 C.F.R. § 72.104.

B. The PFS Exemption Request

In April 1999, PFS submitted a request pursuant to 10 C.F.R. § 72.7 for an exemption from the regulation requiring it to use a deterministic seismic hazard analysis. It urged the Staff to grant the exemption on the following grounds:

The exemption would permit the [design earthquake (DE)] at the PFSF to be calculated using the more recent PSHA methodology, in accordance with the guidance in Regulatory Guide 1.165, and applying the risk-informed approach of 10 CFR Part 60.

PFS has determined that there is an adequate safety basis for an exemption to the requirements of 10 CFR 72.102(f)(1), supported by a site-specific radiological risk analysis, as discussed below. The exemption would be consistent with Commission policy and regulations applicable to other facilities (i.e. nuclear power plants and high level waste geologic repositories) that carry greater risk than a Part 72 facility. Considering the minor radiological consequences of accidents analyzed at the PFSF, PFS considers that the present Part 72 requirement for calculating the design earthquake is an unnecessary regulatory burden. PFS considers that the use of probabilistic techniques and a risk-informed approach are compatible with the direction provided by the Commission on Direction Setting Issue 12, “Risk-Informed, Performance-Based Regulation” (Reference 2).

The probabilistic, risk-informed approach for establishing the PFSF DE described below is based on calculating the magnitude of a seismic event with a recurrence interval of 1,000 years. Use of a 1,000 year recurrence interval is justified in the PSHA based on dose consequences of accidents at the PFSF and consideration of relative risk, discussed below.

PFS Exemption Request at 1-2. In August 1999, in response to the Staff’s suggestion, PFS amended its request to use a 2000-year return period for all structures.

Utah immediately moved to amend its already-pending Contention Utah L (geotechnical) to challenge the adequacy of the exemption request. The state argued that PFS should either use the current deterministic method, the probabilistic method with the 10,000-year return period contemplated by the rulemaking plan, or a more conservative standard than the 2000-year return period in its request.

The Board determined that the issue would not be ripe until the Staff determined whether to grant the exemption. *See* LBP-99-20, 49 NRC 429, 434 (1999). In its September 2000 SER, the Staff approved the exemption using the 2000-year return period. *See* SER at 2-42 (Sept. 29, 2000).

C. Utah’s Contention on the Exemption Request

The Board restated Utah’s existing Contention L, which related to geotechnical matters, as follows:

Relative to the PFS seismic analysis supporting its application and the PFS April 9, 1999 request for an exemption from the requirements of 10 C.F.R. § 72.102(f) to allow PFS to employ a probabilistic rather than a deterministic seismic hazards analysis, PFS should be required either to use a probabilistic methodology with a 10,000-year return period or comply with the existing deterministic analysis requirement of section 72.102(f), or, alternatively, use a return period significantly greater than 2000 years, in that:

1. The requested exemption fails to conform to the SECY-98-126 rulemaking plan scheme, i.e., only 1000-year and 10,000-year return periods are specified for design earthquakes for safety-important SSCs — SSC Category 1 and SSC Category 2, respectively — and any failure of an SSC that exceeds the radiological requirements of 10 C.F.R. § 72.104(a) must be designed for SSC Category 2, without any explanation regarding PFS SSC compliance with section 72.104(a).
2. PFS has failed to show that (a) its facility design will provide adequate protection against exceeding the section 72.104(a) dose limits; and (b) its facility and equipment, specifically the components within the [cannister transfer building] involved in the transfer of the spent fuel canister from a transportation cask to a storage cask, including the proposed single-failure transfer crane, are designed to withstand a 2000-year return period earthquake.
3. The PFS accident evaluation is inadequate because (a) it does not bound the design basis accident DE IV under American National Standards Institute (ANSI)/ANS-57.9-1999; (b) its leakage rate and breach hole assumptions are based on information in NUREG/CR-6487, “Containment Analysis for Type B Packages Used to Transport Various Contents” and NUREG-1617, “Standard Review Plan for Transportation Packages for Nuclear Spent Fuel,” which in turn is derived from ANSI standard N14.5 for transportation casks, despite the fact that PFS cannot meet the leak-testing, repair, and maintenance assumptions upon which standard N14.5 is based; and (c) it does not account for beyond design basis accidents involving sabotage using anti-tank devices.
4. The staff’s reliance on the reduced radiological hazard of stand-alone ISFSIs as compared to commercial power reactors as justification for granting the PFS exemption is based on incorrect factual and technical assumptions about the PFS facility’s mean annual probability of exceeding a safe shutdown earthquake (SSE), and the relationship between the median and mean probabilities for exceeding an SSE for central and eastern United States commercial power reactors and the median and mean probabilities for exceeding an SSE for the PFS facility.
5. In supporting the grant of the exemption based on 2000-year return period, the staff relies upon the DOE standard, DOE-STD-1020-94, and specifically the category-3 facility SSC performance standard that has such a return period, notwithstanding the fact the staff categorically did not adopt the four-tiered DOE category scheme as part of the Part 72 rulemaking plan.
6. In supporting the grant of the exemption based on the 2000-year return period, the staff relies upon the 1998 exemption granted to DOE for the INEEL ISFSI for the TMI-2 facility fuel, which was discussed in SECY-98-071 (Apr. 8, 1998), even though that grant was based on circumstances not present with the PFS ISFSI, including (a) existing INEEL design standards for a higher risk facility at the ISFSI host site; (b) a settlement agreement with the State of Idaho that required ISFSI

construction by the end of 1998; and (c) the use of a peak design basis horizontal acceleration of 0.36 g that was higher than the 2000-year return period value of 0.30 g.

7. Because (a) design levels for new Utah building construction and highway bridges are more stringent; and (b) the PFS return period is based on the twenty-year initial licensing period rather than the proposed thirty to forty year operating period, the 2000-year return period for the PFS facility does not ensure an adequate level of conservatism.

LBP-01-3, 53 NRC at 92-93.

The Board found that item 3 did not meet the late-filing criteria, and that items 2(b) and 6(b) failed to raise a material factual issue. *See id.* at 94, 96, 100. The Board concluded that the remaining items did establish a “genuine material dispute adequate to warrant further inquiry,” and would be admissible if the Commission determines that the exemption request should be the subject of a hearing. *See id.* at 95-100.

II. RIGHT TO HEARING ON EXEMPTION REQUEST

PFS and the NRC Staff both oppose the grant of a hearing on issues pertaining to the exemption. First, they argue that the exemption request is not a proceeding in which an interested party is entitled to a hearing under section 189a of the Atomic Energy Act, 42 U.S.C. § 2239. Second, they contend that Commission practice would allow a hearing on a contested exemption request only where the exemption is related to an existing contention already raised in the licensing proceeding. In connection with this argument, the NRC Staff and PFS argue that Utah’s proffered exemption-related bases for Contention L cannot be the subject of a hearing because they do not relate to existing Contention L (geotechnical). Finally, they maintain that Utah has not raised any admissible contention relating to the exemption request. We disagree with PFS and the NRC Staff on all three points.

A. Exemption Request Related to Initial Licensing

The Board’s certified question and the parties’ briefs consider whether PFS’s request for an exemption — i.e., a determination that PFS need not meet the “design earthquake” standard set out in 10 C.F.R. § 72.102(f)(1) — is an appropriate subject for an NRC hearing. *See* LBP-01-3, 53 NRC at 100. To speak in terms of a hearing on PFS’s exemption is a convenient shorthand, which we ourselves use in today’s Order. It is important to recognize at the outset, though, that the certified question does not focus directly on the exemption itself, but, as the Board said, on “exemption-related matters.” *Id.* At bottom, what

Utah proposes to litigate is whether PFS's ISFSI design, which is dependent on an exemption from otherwise controlling seismic regulations, is adequate to withstand plausible earthquake risks. Viewed this way, Utah's proposed revised Contention L (geotechnical) plainly puts into play safety issues that are material to licensing and suitable for consideration at an NRC hearing. With that perspective in mind, we turn now to our jurisprudence on exemptions, and to how it applies to the current case.

Section 189a of the AEA provides that:

In any proceeding under this Act for the granting, suspending, revoking, or amending of any license . . . and in any proceeding for the issuance or modification of rules and regulations dealing with the activities of licensees . . . the Commission shall grant a hearing upon the request of any person whose interest may be affected by the proceeding

Agency actions that are not among those listed do not give rise to a hearing right for interested persons. See *Commonwealth of Massachusetts v. NRC*, 878 F.2d 1516 (1st Cir. 1989). The Commission recently restated this proposition in *Commonwealth Edison Co. (Zion Nuclear Power Station)*, CLI-00-5, 51 NRC 90 (2000). Both *Massachusetts* and *Zion* rejected requests for an NRC hearing on exemption applications.

The Commission, however, has never excluded exemption-related issues from its hearing process as a categorical matter. We held in *Zion* that there is no right to a hearing under the AEA unless the exemption in question can properly be characterized as one of the "circumstances" specifically identified in section 189a as giving rise to a hearing right. See 51 NRC at 96. *Zion* went on to state that an interested party is not entitled to a hearing on an exemption that "does not change or amend the license." *Id.* at 99. In a much earlier case, *United States Department of Energy (Clinch River Breeder Reactor Plant)*, CLI-82-23, 16 NRC 412, 421 (1982), we had indicated that there was "a statutory right to a hearing on the granting of an exemption," where the grant was "part of a proceeding for the granting, suspending, revoking, or amending . . . any license."

PFS and the Staff argue that *Zion* and *Massachusetts* defeat Utah's request to litigate its concerns about PFS's seismic exemption. But these two cases are quite different from the present case. In *Zion*, the Commission held that a stand-alone exemption request — unrelated to initial licensing or a license amendment — did not fall under the AEA § 189a hearing requirement. The licensee, Commonwealth Edison, had asked for an exemption from certain physical security regulations at an out-of-service, soon-to-be-decommissioned facility, where all fuel had been removed from the reactor. The Commission expressly rejected the petitioners' argument that an exemption request of this kind was actually a license "amendment." Similarly, in *Massachusetts*, the court of appeals found that an exemption from a regulation requiring a full-

participation emergency preparedness exercise was not a “license amendment” and did not trigger a hearing right. The court reasoned that the same regulation that imposed the emergency drill requirement also allowed for exemptions to it. “The exemption did not change Edison’s duty to follow NRC rules; it only changed which rule applied for a brief period of time,” the court explained; “Edison was thus operating in accordance with its unaltered license.” 878 F.2d at 1521.

In contrast to *Zion* and *Massachusetts*, here we face a case where seismic analysis of the site for the proposed facility and establishing the facility’s design earthquake are required elements of the *license application* process. Pursuant to 10 C.F.R. § 72.40, PFS must show that it meets our regulatory requirements, or that an exemption from a particular requirement is in order, before the NRC can find the facility safe and license it. Because resolution of the exemption request directly affects the licensability of the proposed ISFSI, the exemption raises material questions directly connected to an agency licensing action, and thus comes within the hearing rights of interested parties.²

In sum, PFS is not an already-licensed facility asking for relief from performing a duty imposed by NRC regulations. Under *Zion* and *Massachusetts*, exemptions of that kind ordinarily do not trigger hearing rights. PFS is in the midst of a licensing proceeding; it is asking to be excused from otherwise applicable seismic analysis and design value regulations and to rely on other analyses and design values that will affect the facility throughout its life and form part of the basis for issuance of a license for the facility. The safe design of the facility is a matter that PFS must establish to obtain a license. In this context, PFS’s “exemption” cannot remove a matter germane to a licensing proceeding from consideration in a hearing, assuming an interested party raises an admissible contention thereon.³ To hold otherwise would exclude critical safety questions from licensing hearings merely on the basis of an “exemption” label.

²The NRC Staff also cites *Kelley v. Selin*, 42 F.3d 1501 (6th Cir. 1994), *cert. denied*, 515 U.S. 1159 (1995), for the proposition that “the grant of an exemption from a generic requirement does not constitute an amendment to the reactor’s license that would trigger hearing rights.” 42 F.3d at 1517. *Kelley v. Selin* is unhelpful here because that case, like *Zion* and *Massachusetts*, did not consider the question whether an exemption relating to a licensing action triggers a hearing right. Rather, the court rejected petitioners’ claimed right to a hearing in a generic rulemaking that added a type of dry storage cask to a list of NRC-approved casks. The exemption to which the appeals court was referring in the quoted passage was granted to the storage cask manufacturer allowing it to initiate cask construction before it received a certificate of compliance. The petitioners did not ask for a hearing in connection with matters directly related to that exemption. In addition, the court held that the exemption was not an amendment to an operating license that would trigger hearing rights.

³Although there are licensing cases where the Commission denied a request for a hearing on an exemption related to licensing, these rulings rested on the intervenor’s failure to raise an admissible contention, not on a general principle that the propriety of an exemption cannot be adjudicated in a licensing proceeding. *See, e.g., Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-86-24, 24 NRC 769 (1986), *aff’d*, *Eddleman v. NRC*, 825 F.2d 46 (4th Cir. 1987) (exemption granted from regulation that required full Emergency Preparedness Test to be conducted within 1 year prior to plant’s going online, when plant had performed test without incident 1 year, 7 months prior to operations). We are aware of no licensing case where we have declared exemption-related safety issues outside the hearing process altogether. *See United States Department of Energy* (Clinch River Breeder Reactor Plant), CLI-81-35, 14 NRC 1100, 1104 n.2 (1981).

B. Exemption's Relation to Existing Contention

PFS and the Staff next argue that even if licensing-related exemption issues are litigable, Utah's exemption issues are not, because they cannot be shown to relate to an existing contention. Unamended, Utah Contention L deals with the general issue of whether PFS has fully investigated potential ground motion from a seismic event. The original Contention Utah L does not, however, address the 2000-year return period design earthquake or the probabilistic hazard analysis. The Board found that the existing contention did not relate to the exemption request or Utah's objections to it. *See* LBP-99-21, 49 NRC 431, 436 (1999). Neither our case law nor logic, however, supports the proposition that an exemption need only be addressed in a hearing if the intervenor had already raised a related contention prior to the applicant's exemption request.

The NRC Staff offers *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-84-8, 19 NRC 1154 (1984), for the proposition that exemption-related issues trigger a hearing right only if related to an existing contention. In *Shoreham*, the Commission overturned a Board's determination that a certain general design criterion did not apply to the applicant. Noting that the applicant had indicated during oral argument that it would file a request for an exemption from that design criterion, the Commission directed the applicant to modify its license application to include the exemption request and stated that the hearing on the license would include this issue. The *Shoreham* decision does not discuss what contentions were pending prior to the exemption request, and nowhere in that decision does the Commission hold that exemption requests may only be litigated where existing contentions raised similar issues.⁴

In another exemption case, *Shearon Harris*, the NRC Staff referred petitioner Eddleman's request for a hearing on an exemption directly to the Commission, which in turn determined that the petitioner had raised no litigable contentions on the exemption request. *See* CLI-86-24, 24 NRC at 774-80. On appeal, the U.S. Court of Appeals for the Fourth Circuit rejected the petitioner's argument that granting the exemption "amended" the license and therefore required a hearing:

We find this contention premature, because the Commission's determination that the complaint did not set forth a contention that could be litigated has the effect of rendering the procedural prerequisites for a § 189(a) formal hearing unmet. We likewise do not find error in the Commission's decision not to refer this matter to the licensing board. The licensing board did not have this issue, or any related issue, before it, and thus no advantage could have been gained by such a referral.

⁴ A later Licensing Board, refusing to reopen the record in a licensing proceeding to admit a contention on an applicant's exemption request, distinguished *Shoreham* by saying that the exemption request there dealt with a contention already under litigation in that proceeding. *See Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), LBP-85-33, 22 NRC 442 (1985). As a Board decision, rather than a Commission decision, *Perry* is not controlling here.

Eddleman v. NRC, 825 F.2d at 50. The appeals court therefore affirmed the Commission decision not to grant a hearing based on Eddleman's failure to set forth an admissible contention. The statement that "the licensing board did not have this issue . . . before it" suggests that, were there a matter related to the exemption already pending before the board, an "advantage could have been gained by such a referral"; that is, a hearing might have been appropriate. But the statement does not support the argument that there can be no hearing, even where the petitioner has offered an admissible contention, unless there is already a hearing pending on a related issue.

Finally, in two other decisions, the Commission determined that the exemption requests were so closely related to the subject matter of ongoing hearings that the exemption requests should be rejected outright. In *Louisiana Power and Light Co.* (Waterford Steam Electric Station, Unit 3), CLI-73-25, 6 AEC 619 (1973), the Commission found that because there were seriously contested environmental issues under litigation, granting an exemption request to permit commencement of construction prior to issuance of a permit would inappropriately "circumvent normal adjudicatory procedures." 6 AEC at 622 n.3. *Washington Public Power Supply System* (WPPSS Nuclear Project Nos. 3 and 5), CLI-77-11, 5 NRC 719 (1977), also involved a request to commence site preparation activities prior to the issuance of the construction permit. In WPPSS, the Board granted in part and denied in part the applicant's request for a limited work authorization allowing it to do early site preparation work. When WPPSS then applied to the Commission for an exemption from the regulations that prevented it from doing the early site preparation activities, the Commission found that the applicant was asking it to "displace the Board's function" prior to the Board's final order. *Id.* at 722. The Commission denied the exemption request without a hearing, on the ground that doing so would usurp the function of an existing Licensing Board.

Rather than suggesting that an exemption must deal with an existing contention to trigger a hearing right, these cases imply that existing proceedings before the Board on the same issue could, in some circumstances, displace the separate work on the exemption. We need not go that far here, but *Waterford* and *WPPSS* at a minimum indicate that exemption grants do not supersede hearing rights in licensing proceedings.

Not only our cases but also sound logic show that requiring a specific link between already-pending contentions and exemption-related contentions would set an impossibly high standard for admissibility of exemption-related safety questions. An intervenor must base its challenges on the information provided in the application. If the application fails to comply with the regulations, the intervenor may challenge the claimed shortcoming. But an intervenor cannot raise a contention, prior to an exemption request, arguing that the applicant should be required to comply with all applicable regulations. Until the applicant asks to be

excused from complying with a particular regulation, the intervenor would not necessarily have any way to know that the applicant cannot or will not comply.

The case before us illustrates the dilemma. Utah's geotechnical contention, Contention Utah L, challenged the site assessment used to determine the design earthquake by arguing that the Applicant had not included site-specific information in its calculation. However, once the necessary, site-specific information is considered, the design earthquake is determined by methods set out in our regulations. See 10 C.F.R. § 72.102(f). Our rules prohibit the intervenor in an individual licensing proceeding from challenging generic decisions made by the Commission in rulemakings absent special circumstances. See 10 C.F.R. § 2.758. See also, e.g., *Massachusetts v. NRC*, 924 F.2d 311, 330 (D.C. Cir. 1991), cert. denied, 502 U.S. 899 (1991); accord, *North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 217 n.8 (1999). Utah thus could not have argued that the design earthquake should be set more conservatively than our regulations require, because that would have constituted an impermissible collateral attack on our regulations. By filing its exemption request, however, PFS itself raised the issue of what constitutes an appropriately conservative design earthquake. It is the exemption request that put the design earthquake in question. Because the design earthquake must be established for PFS to get its license, the design earthquake is now a legitimate subject of litigation.

In conclusion, it is not true that the Commission only grants a hearing on exemption requests that are directly related to an already-admitted contention. The proper focus is on whether the exemption is necessary for the applicant to obtain an initial license or amend its license. Where the exemption thus is a direct part of an initial licensing or licensing amendment action, there is a potential that an interested party could raise an admissible contention on the exemption, triggering a right to a hearing under the AEA.

C. Admissibility of Exemption-Related Contentions

PFS and the NRC Staff argue that Utah failed to raise an admissible contention. Both PFS and the Staff argue that Utah cannot base contentions on the Applicant's failure to meet the standards contemplated by the rulemaking plan, because PFS is not bound by that plan. PFS and the Staff also argue that items 4 through 7 of Utah's proffered amended bases cannot be admitted because they challenge the adequacy of the Staff's review rather than the exemption request itself. PFS also contends that Utah's complaints all center on the generic issue whether a 2000-year return period is acceptable, which as a generic issue should not be adjudicated in an individual proceeding.

1. *Effect of the Rulemaking Plan*

Several of the new issues Utah seeks to interject into this proceeding deal with PFS's failure to conform to the proposed rulemaking plan. PFS points out that the rulemaking plan has no binding effect and that PFS is in no way obligated to conform to the regulation envisioned by this plan.

With respect to the plan's effect, the Board reasoned:

[T]he rulemaking plan and the regulatory scheme it outlines do[] not preclude the Staff from allowing PFS to use another return period, such as 2000 years, in connection with the proposed PFS facility. We do not agree, however, that this rulemaking plan has no role to play as the basis for an admissible contention relative to the PFS exemption request. Certainly, its existence creates the reasonable expectation that, as a part of the rationale provided in support of the exemption, an explanation will be provided about why the scheme, as set forth in the plan, is not appropriate relative to the exemption. That explanation is, in turn, subject to scrutiny in a properly pled contention.

LBP-01-3, 53 NRC at 96.

PFS is correct that it is not required to comply with this plan. In seeking an exemption from our existing regulations, it needs only to justify the seismic hazard analysis and design standards it proposes to use. *See* 10 C.F.R. § 72.7. But PFS itself uses the rulemaking plan to support its exemption request. For example, its exemption request states: "In the proposed rulemaking for Part 72 (Reference 5) however, the staff has proposed to modify the Part 72 seismic requirement to a level commensurate with the risks of cask and canister ISFSIs by providing for the use of PSHA methodology." PFS uses the existence of this plan as a justification for allowing it to use a probabilistic seismic hazard analysis.

PFS also uses the plan's scheme as partial justification for a 1000-year return period. PFS, arguing that all structures should be designed for a 1000-year design earthquake, claimed that a hypothetical beyond-design-basis accident "involving failure of an SSC important to safety in which a canister is postulated to leak continuously for 30 days under hypothetical accident condition with 100% of the fuel rod cladding assumed to have failed," would result in a total effective dose equivalent (TEDE) to an offsite individual of 74.9 mrem. PFS argued that this dose is "well below the .05 Sv (5 rem) requirement of § 72.106(b), but also well below the 100 mrem public dose level of 10 C.F.R. 20.1301(a)." The Applicant went on to say that

Based on the NRC's risk-informed policy for establishing the DE stated in [SECY 98-126 and SECY 98-071], the 1,000-year seismic recurrence interval is appropriate and conservative for use at the PFSF since worst-case accident consequences are below the 10 C.F.R. 20.1301(a)(1) public dose limit of 100 mrem.

See PFS Exemption Request at 5-6.⁵ In addition, PFS argues on appeal that its exemption request justified using the 1000-year return, so that an even more protective, 2000-year return period should not be subject to question. See PFS Brief at 15. PFS's repeated references to the rulemaking plan convince us that PFS cannot both use the plan to justify the exemption and then claim the plan has no relationship to the exemption request.

PFS is not bound by the rulemaking plan, but it does have the burden to show that the 2000-year design standard is sufficiently protective of public safety and property. While Utah may not rely solely on the rulemaking plan to prove its contention, the state may use the plan to support its claim that a 10,000-year return period is the appropriately conservative standard. Therefore, the Board correctly found that references to the rulemaking plan in Utah's proffered contention amendment are no reason to reject the contention.

2. Challenges to Adequacy of Staff's Review

Utah's proposed amended contention repeatedly challenges the NRC Staff's rationale for granting the exemption, rather than attacking the adequacy of the exemption request itself. The Staff gave four reasons for granting the exemption: (1) the risk associated with dry cask storage is lower than the risk of operating a nuclear power reactor; (2) the mean annual probability of exceeding the ground motion limits at the PFS site "may be" less than 10^{-4} (which is no more than the median annual probability for a power reactor safe shutdown earthquake); (3) a dry spent fuel storage facility has failure consequences similar to Department of Energy Category 3 facilities, which use a 2000-year recurrence period design earthquake; and (4) the NRC allowed an exemption for the DOE to use a 2000-year design earthquake at an ISFSI to store Three Mile Island Unit 2 waste. SER at 2-41-2-42.

NRC case law holds that contentions must challenge the adequacy of the application, not the adequacy of the Staff's review. See, e.g., *Curators of the University of Missouri*, CLI-95-1, 41 NRC 71 (1995). In *University of Missouri*, we stated that:

⁵ While the information in PFS's exemption request cited above bolsters PFS's claim that the exemption will not harm public safety, it does not show that PFS meets the standard under the rulemaking plan for a 1000-year return period, as PFS has claimed. See PFS Brief at 16 n.22; PFS Reply Brief at 5. Under the plan, an individual SSC could only be designed to the Frequency Category 1 events (the less stringent criteria) if its failure would not cause the facility to exceed the radiological requirements of 10 C.F.R. 72.104(a) (no more than 25 mrem), not the requirements of 72.106(b) (less than 5 rem). The SER concluded that PFS did not provide a technical basis for classifying all SSCs for a Frequency Category 1 design basis. See SER 2-41.

[T]he [applicant] rather than the Staff bears the burden of proof in this proceeding. Consequently, the adequacy of the Staff's safety review is, in the final analysis, not determinative of whether the application should be approved.

41 NRC at 121.

Considering the decision in *University of Missouri*, the Board reasoned that as long as the applicant provides appropriate justification for its request, its sufficiency should not be questioned "notwithstanding any Staff actions." LBP-01-3, 53 NRC at 97. This would be true, however, only where the applicant submits materials that fully support the request. Reviewing the relevant materials, the Board concluded that the Staff, not the licensee, actually provided most of the justification for the use of the 2000-year return period to which Utah objects. See LBP-01-3, 53 NRC at 97-98. Therefore, the Board found that although the contentions attacking the Staff's reasons for granting the exemption were not artfully pleaded, the substance of Utah's complaints was that the 2000-year return period has not been shown to be adequately protective. The Board concluded that the contentions should not be dismissed simply because they referred to the Staff's reasoning.

We agree with the Board. PFS has the burden to show that the exemption is "authorized by law, will not endanger life or property or the common defense and security and [is] otherwise in the public interest." 10 C.F.R. § 72.7. PFS essentially adopted the Staff's reasoning when it agreed to use the 2000-year return period the Staff recommended. It is, therefore, appropriate under these circumstances to consider the Staff's bases for granting the exemption.

3. *Litigation of Generic Issue*

PFS argues that the acceptability of using a probabilistic seismic hazard analysis and a 2000-year return period design earthquake is a generic issue that should be resolved through a rulemaking, rather than in an individual adjudicatory proceeding. PFS relies on *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328 (1999), in support of this argument.

Oconee involved a license renewal application that the petitioners contended was incomplete for failing to discuss the ramifications of the growing problem of disposing of spent nuclear fuel. Petitioners argued that the application should address the storage of spent fuel and the other radioactive substances on the site of the Oconee Nuclear Station, the status and capacity of the current spent fuel storage facility, and the "real and potential availability and viability of other High Level Waste storage sites." 49 NRC at 343. We held that where the NRC "can determine that particular analyses or findings are applicable to all nuclear power plants with common plant characteristics," it may choose to codify the findings in its regulations. *Id.* The Commission found that, with one exception,

the concerns raised by petitioners had already been addressed generically. The regulations, for instance, specifically provided that applicants did not need to discuss the impacts of spent fuel storage and waste disposal. *See* 10 C.F.R. § 51.53(c)(2). Further, the one issue that had not already been addressed by a rule, the impacts of transporting high-level waste to a permanent repository, was about to be the subject of a similar rule allowing applicants to avoid this discussion. We concluded that there was nothing to be gained by having an adjudicatory hearing on the impacts of high-level waste storage when the issue was being comprehensively explored in a current rulemaking. *See* 49 NRC at 345.

PFS argues that, similarly, the acceptability of a probabilistic seismic hazard analysis (PSHA) and a 2000-year return period design earthquake is appropriately resolved as a generic issue through a rulemaking. PFS's request does not rely on site-specific factors but on its rationale that the PSHA is an acceptable seismic analysis, and the 2000-year return period an appropriate design earthquake, for any site. Because the Staff is currently drafting a proposed regulation to allow a PSHA, PFS argues, it is not appropriate for the Board to consider these general issues in an individual adjudication.

As a general matter, agencies are free either to determine issues on a case-by-case basis through adjudications or, when appropriate, to resolve matters generically through the rulemaking process. *See Oconee*, CLI-99-11, 49 NRC at 343, citing *Heckler v. Campbell*, 461 U.S. 458, 467 (1983). Thus, the NRC is free to resolve the issues associated with the design earthquake in an individual adjudication. It is true, as we held in *Oconee*, that our policy is not to consider for individual licensing proceedings contentions that are (or are about to become) the subject of general rulemaking by the Commission. *See* 49 NRC at 345. But in this case, there is already a generic rule in place, which PFS has asked to be waived. Moreover, PFS's exemption would not comply with the new generic standard envisioned by the rulemaking plan.⁶ PFS in effect argues that upcoming regulations with which it proposes not to comply preclude the state from litigating its seismic issue. This is hardly persuasive. We conclude that just as the Commission's power to make rules on the acceptability of one type of analysis does not preclude an applicant from asking for an exemption from that generic rule, the Commission's rulemaking powers should not place the exemption itself beyond questioning in an otherwise litigable contention.

PFS's position might have more force were our rulemaking closer to completion. In *Oconee*, a final rule on the issue of the impact of transporting high-level waste to a permanent repository was expected within 6 months of the decision, more than a year prior to the scheduled completion date of the licensing action. Further, the Commission had stated in a Staff requirements memorandum

⁶ *See* note 5 and accompanying text.

that applicants should not address this issue, unless waiting for the rule would delay the licensing proceeding. 49 NRC at 345. In contrast, here a final regulation allowing a PSHA for ISFSI sites does not appear to be imminent, and it is unlikely prior to the scheduled final NRC decision on PFS's license application next year.

With our new generic seismic rule still under development, and in view of PFS's claim to an exemption from current or contemplated generic standards, we hold that Utah is free to challenge PFS's proposed use of a PSHA and a 2000-year return period.

III. FORM OF HEARING

PFS and the NRC Staff have proposed that, should we determine a hearing to be necessary, the proceedings be held informally by the Commission in a manner similar to that ordered in *Clinch River*, CLI-81-35, 14 NRC at 1103-05. There, the co-applicant, the Department of Energy, requested a limited work authorization to begin site preparation activities prior to obtaining a construction permit for a liquid metal fast breeder reactor. DOE maintained that the limited work authorization could avoid a 1-2 year delay and \$120-240 million in increased costs. The Commission concluded that neither the AEA nor the National Environmental Policy Act dictated the form of proceedings on DOE's exemption request. The Commission decided to hear the case itself, and ordered that the proceedings include oral presentations and written comments, but no discovery, live testimony, or cross-examination. *Id.*

Clinch River involved special circumstances that made an informal proceeding before the Commission particularly appropriate. At the time the Commission considered the DOE exemption request, the Clinch River Project had been suspended by order of the Carter Administration, and the related NRC licensing proceedings had been suspended by the Commission.⁷ Therefore, unlike the case before us now, there was no licensing board hearing scheduled on any matter relating to the proposed facility. In addition, as Clinch River would have been the first demonstration scale fast-breeder reactor in the United States, the Commission decided to hear the request itself because it found "major and novel policy and legal issues that are best resolved by the Commission itself as the highest policy-making entity within the agency." *Clinch River*, CLI-81-35, 14 NRC at 1103. Although the scale of PFS's proposed ISFSI is unprecedented,

⁷The proposed Clinch River Breeder Reactor was a joint project between government and industry to develop a demonstration fast-breeder reactor. The Carter Administration canceled the project in 1977, after which the Board suspended its proceedings and the Staff suspended its review of the application. Despite this, Congress continued to appropriate funds, and research and development of the project continued for the next several years until Congress finally terminated funding in fiscal 1984. See *United States Department of Energy* (Clinch River Breeder Reactor Plant), LBP-84-4, 19 NRC 288, 296 (1984).

there are other operating ISFSIs in the United States that use the same or similar technology for storage. Therefore, the scale alone does not give rise to any major and novel policy issues. Further, the decision to proceed informally in *Clinch River* was based on the relatively high ratio of costs to benefits from allowing live testimony, formal evidence, and cross-examination in a proceeding before the Commission.⁸ But the burden of using these procedures here is diminished if the exemption request is combined with formal proceedings before the Board. *See id.* at 1103-05. Finally, unlike the case before us, the *Clinch River* intervenors agreed that the Commission should itself decide at least threshold legal and policy issues, using informal proceedings.⁹

Here, the Licensing Board already is considering a number of fact-intensive issues, including seismic issues. The question of the appropriate threshold for seismic safety may call for expert witnesses. In these circumstances, there seems to us no reason of fairness or efficiency to slice off exemption-related questions and decide them ourselves without an initial Board review. As with all other issues in this case, we retain ultimate authority, of course, to resolve contested exemption issues under our appellate and supervisory powers. But we find it appropriate for the Board to address the exemption-related issues first.

IV. CONCLUSION

In conclusion, we find that PFS's seismic exemption request is directly related to its initial license application, and, therefore, Utah's contentions on the propriety of the exemption should be the subject of a hearing. Further, we affirm the Board's findings concerning the admissibility of Utah's proffered contentions. Finally, we hold that the Board, not the Commission, is the proper forum to hear Utah's exemption-related contention in the first instance. The Commission expects the new exemption-related contentions, if they go to hearing, to be included in the hearing contemplated for other admitted issues.

We therefore remand this proceeding to the Board for further proceedings on those portions of proposed Amended Contention Utah L that the Board found would be admissible.

⁸After the informal proceeding and two public meetings on the request, the Commission denied the limited work authorization. *See United States Department of Energy (Clinch River Breeder Reactor Plant)*, CLI-82-4, 15 NRC 362, 363 (1982).

⁹The *Clinch River* intervenors requested formal Board proceedings if the Commission did not decline the limited work authorization based on the threshold issues. The intervenors argued that a unique project should not be excused from the rule against pre-permit construction activities and that a project intended to demonstrate the licensability of a breeder reactor should not receive exemptions from our regulations.

IT IS SO ORDERED.

For the Commission

ANNETTE VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 14th day of June 2001.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
Edward McGaffigan, Jr.
Jeffrey S. Merrifield

In the Matter of

Docket No. 070-03098

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

June 14, 2001

RULES OF PRACTICE: SPECIAL HEARING PROCEDURES

LICENSE FOR MIXED OXIDE FUEL FABRICATION FACILITY

Licenses for fuel fabrication facilities are issued under 10 C.F.R. Part 70. Thus, issuance of a license for a fuel fabrication facility is governed by the procedures in 10 C.F.R. Part 2, Subpart L. However, the Commission may approve the use of special or alternative procedures to supplement or replace those procedures normally followed in a Subpart L proceeding. In this case, the Commission chooses to supplement the procedures of Subpart L with some procedures from Subpart G. *See* 10 C.F.R. § 2.1209(k)

RULES OF PRACTICE: SCOPE OF PROCEEDING

LICENSE FOR MIXED OXIDE FUEL FABRICATION FACILITY

The Staff must find that the proposed design bases of the fuel fabrication facility's "principal structures, systems, and components," together with the Applicant's quality assurance program, "provide reasonable assurance

of protection against natural phenomena and the consequences of potential accidents.” See 10 C.F.R. § 70.23(b). In addition, the Staff’s environmental review must conclude “that the action called for is the issuance of the license.” See 10 C.F.R. § 70.23(a)(7).

RULES OF PRACTICE: CONTENTIONS

LICENSE FOR MIXED OXIDE FUEL FABRICATION FACILITY

Petitioners must demonstrate that a genuine dispute exists between it and the Applicant and that the dispute lies within the scope of the proceeding.

ORDER

(Referring Petitions for Intervention and Requests for Hearing to Atomic Safety and Licensing Board Panel)

I. INTRODUCTION

On February 28, 2001, the consortium of Duke Cogema Stone & Webster (“the Applicant”) submitted an application for authorization to build a mixed oxide (“MOX”) fuel fabrication facility, which would be located at the United States Department of Energy’s Savannah River site in South Carolina. The NRC Staff published a notice in the *Federal Register* announcing receipt of this construction authorization request (“CAR”) and the related environmental report and providing the public with information necessary to obtain a copy of each document. See 66 Fed. Reg. 13,794 (Mar. 7, 2001). Subsequently, the Commission published a Notice of Opportunity for a Hearing, 66 Fed. Reg. 19,994 (Apr. 18, 2001), which also announced receipt of a related quality assurance plan. The Notice indicated that the hearing process would consist of an enhanced version of our Subpart L procedures. See 10 C.F.R. §§ 2.1201-2.1263.

Four petitions to intervene and/or requests for hearing were timely filed. The four Petitioners are: (1) Georgians Against Nuclear Energy; (2) Environmentalists, Inc.; (3) Blue Ridge Environmental Defense League; and (4) Charles and Edna Foster. This Order refers the intervention petitions and hearing requests to the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel. The Commission has determined that in this proceeding, the Chief Administrative Judge has the option of either appointing a three-member panel under 10 C.F.R. § 2.721 to serve as the presiding officer for the proceeding or designating a single administrative judge under 10 C.F.R. § 2.1207. Under 10 C.F.R. § 2.1209(j), a single presiding officer may appoint special assistants. In that case, the presiding officer should promptly notify both the Commission and the parties. Thus, for

the purposes of this Order, the term “presiding officer” means a single presiding officer with duly appointed assistants, a single presiding officer alone, or a three-member panel. The presiding officer, in turn, will rule on the pending petitions to intervene and requests for hearing and preside in the event one or more requests is granted. If one or more hearing requests are granted, the presiding officer will consider the admitted contentions, evaluate the written presentations and testimony, and may conduct oral questioning of witnesses, pursuant to 10 C.F.R. § 2.1235, assisted by written questions submitted by the parties.

As we discuss below in Section II, and as described in the Notice of Opportunity for a Hearing, the Commission has decided to enhance the effectiveness of the ordinary Subpart L adjudicatory process by adding additional procedures, including the option for oral questioning of witnesses by the presiding officer as necessary, to supplement the record in this proceeding. In Section III, we provide guidance for conducting a proceeding if a hearing is granted, and a suggested schedule for the proceeding.

II. USE OF SUBPART L AND CERTAIN SUBPART G HEARING PROCEDURES

This adjudicatory proceeding relates to the proposed issuance of a materials license; thus, the proceeding is governed by the informal hearing procedures contained in 10 C.F.R. Part 2, Subpart L. *See* 10 C.F.R. § 2.1201(a)(1). Accordingly, Subpart L procedures will govern, except as specified below. To enhance the effectiveness of this proceeding, the Commission is ordering the use of certain additional procedures in this proceeding in the exercise of its inherent supervisory authority.¹ These additional procedures essentially track the proposed changes to Subpart L as reflected in the proposed rulemaking recently published by the Commission. *See* Changes to Adjudicatory Process — Proposed Rule, 66 Fed. Reg. 19,610-71 (Apr. 16, 2001). Had we not taken this step, the exclusive use of Subpart L procedures would most likely have led to an entirely paper proceeding in this case.

A. Contentions

As discussed in the Notice of Opportunity for a Hearing, any petitioner found to have standing will be required to submit contentions, which the presiding

¹Pursuant to 10 C.F.R. § 2.1209(k), the Commission may approve the use of procedures other than those specified in Subpart L in a particular Subpart L proceeding. *See Safety Light Corp.* (Bloomsburg Site Decontamination and License Renewal Denials), CLI-92-13, 36 NRC 79, 87 (1992). *See generally Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 NRC 39 (1998), *aff’d sub nom. National Whistleblower Center v. NRC*, 208 F.3d 256 (D.C. Cir. 2000), *cert. denied*, 121 S. Ct. 758 (2001).

officer will evaluate using the “contention” standards in 10 C.F.R. § 2.714(b)(2) in lieu of the provisions relating to “areas of concern” found in Subpart L (*See, e.g.*, 10 C.F.R. §§ 2.1205(e)(3) and 2.1205(h)). Furthermore, if the parties submit late-filed contentions, the presiding officer should evaluate them using the factors specified in 10 C.F.R. § 2.714(a)(1). Access to the proprietary version of the CAR, for purposes of submitting any contentions based upon withheld information, will be subject to later determination by the presiding officer, after rulings on standing are made.

B. Discovery

Following the admission of any contentions and the submission of the hearing file under 10 C.F.R. § 2.1231, the presiding officer will allow limited discovery by either deposition or interrogatory (or both) pertaining to admitted contentions from non-NRC sources and will permit the use of information gained thereby as evidence if admissible under 10 C.F.R. § 2.743(c). Discovery will be governed by 10 C.F.R. §§ 2.740a(a)-(i) and 2.740b. Document discovery should not be necessary, given the inclusiveness of the hearing file requirements of 10 C.F.R. § 2.1231(b)-(c). To avoid burdening the record with extraneous and unsupported documents, any documents not part of the hearing file will be admissible as evidence only if sponsored by an appropriate witness. In ruling on any discovery matters, the presiding officer will use the standards of 10 C.F.R. § 2.740. Thus, the provisions of 10 C.F.R. § 2.1231(d) will not be applicable in this case.

Similar to the practice under current Rule 26 of the Federal Rules of Civil Procedure, the presiding officer should order the parties to exchange certain information without waiting for the initiation of formal discovery, such as the names, addresses, and opinions of any expert witnesses, any documents not already part of the Hearing File that those experts rely on for their opinions, and any other information relevant to the admitted contentions which the presiding officer may require in its discretion. Consistent with 10 C.F.R. § 2.1209, we expect the presiding officer to place reasonable limits on the amount of discovery in order to avoid delay. For example, the presiding officer may designate “lead parties” for any admitted contentions and limit the number of depositions and interrogatories addressing each contention. *See, e.g., Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 242-45 (1998).

Formal discovery against the Staff, pursuant to 10 C.F.R. §§ 2.720(h) and 2.740, will be suspended until after issuance of the required final Safety Evaluation Report (“SER”) and the Final Environmental Impact Statement (“EIS”). This approach will allow the Staff to complete its safety and environmental reviews without undue delay, while at the same time making the Staff available to participate in discovery and in the hearing at the appropriate time. Any discovery

against the Staff shall be by the same methods and subject to the same limits as discussed above, absent good cause shown or unforeseen circumstances.

C. Written and Oral Presentations

Following discovery on any admitted contentions, and after the final SER and EIS are issued, the parties will submit simultaneous written presentations pursuant to 10 C.F.R. § 2.1233. These written presentations must include any testimony on which that party relies. Written presentations for each party will be subject to a 50-page limitation (excluding testimony), absent good cause shown by a party for exceeding this page limitation. The parties will then submit simultaneous responses to the written presentations, which will be subject to a 30-page limitation (excluding testimony), absent good cause shown. In submitting written presentations, or responses to written presentations, any party wishing to present testimony must do so by affidavit or declaration, using a question and answer format in the form of a direct examination. Any party presenting such testimony must agree to make the witness available, in person, for questioning by the presiding officer, in the event the presiding officer decides such questioning is necessary to create an adequate record for decision. After submitting responses to written presentations, the parties will have the opportunity to submit (to the presiding officer only) lists of proposed questions for the presiding officer's potential use in questioning the witnesses.

Following the receipt of written presentations and any responses, Subpart L allows the presiding officer to submit written questions to the parties. *See* 10 C.F.R. § 2.1233(a). But in this proceeding, if the presiding officer finds that additional questioning is necessary to ensure an adequate record for decision, the presiding officer shall conduct an oral presentation session pursuant to 10 C.F.R. § 2.1235 to supplement the written record, rather than submitting written questions to the parties. Thus, the parties will have the opportunity to propose to the presiding officer a list of questions they wish to have propounded to the witnesses, *see* 10 C.F.R. § 2.1235(a), and the presiding officer will have the discretion to question some or all of the witnesses to obtain any further information needed to create an adequate record for decision. Absent some unforeseen complexity in this case, the oral presentation session should not exceed ten (10) days. Finally, the presiding officer should request the parties to submit simultaneous Findings of Fact and Conclusions of Law after the close of the oral presentation session.

III. COMMISSION GUIDANCE

A. Scope of Proceeding

To grant the construction authorization request, the Staff must find that the proposed design bases of the MOX fuel fabrication facility's "principal structures, systems, and components," together with the quality assurance program submitted by the Applicant, "provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents." 10 C.F.R. § 70.23(b). Additionally, to meet the NRC's responsibilities under the National Environmental Policy Act (NEPA), the Staff's environmental review must conclude "that the action called for is the issuance of the proposed license." 10 C.F.R. § 70.23(a)(7). The presiding officer shall be guided by these safety and environmental regulations in determining whether proffered contentions are admissible under the 10 C.F.R. § 2.714(b)(2) standards. The Petitioners must demonstrate that a genuine dispute exists between them and the Applicant and that the dispute lies within the scope of the proceeding. It is the responsibility of all Petitioners to provide the necessary information to show that their contentions satisfy the requirements for admission.² If rulings on the admission of contentions, or the admitted contentions themselves, raise novel legal or policy questions, the presiding officer should readily refer or certify such rulings or questions to the Commission on an interlocutory basis. The Commission is amenable to such early involvement and will evaluate any matter put before it to ensure that substantive interlocutory review is warranted.

The Commission expects that matters within the scope of the proceeding but not put into controversy by the parties will be considered by the presiding officer only where the presiding officer finds that those matters raise serious safety, environmental, or common defense and security issues. Such consideration should be exercised only in extraordinary circumstances. If the presiding officer decides to raise a matter on its own initiative, a copy of the ruling, setting forth the reasons in general terms, must be transmitted to the Commission. The presiding officer should not proceed to consider such *sua sponte* issues unless the Commission approves the presiding officer's proposal to do so.

²Contentions must be based on information (or the alleged lack thereof) contained in either the Applicant's CAR or its environmental report. *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-93-12, 37 NRC 355, 363 (1993) (intervention petitioners must reference specific parts of application or accompanying environmental report believed to be inadequate). In filing contentions, petitioners must evaluate the applicant's submittals, and not simply wait for the Staff to issue its SER or EIS before formulating contentions. *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1045-49 (1983) (even if a Staff SER or EIS contains information not found in an applicant's submittals, contentions based on such differences are not automatically admissible, but are evaluated using the criteria of 10 C.F.R. § 2.714(a)(1)). See also *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 255 (1996); *Rancho Seco*, 37 NRC at 362-63. Contentions must be specific and accompanied by appropriate factual, documentary, or expert support. *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 333-35 (1999).

B. Proposed Schedule

The Commission believes that this proceeding should be completed in a timely and efficient manner because the Applicant is seeking authorization to build a facility that would implement a significant objective of national security and policy: reducing the inventory of plutonium in the nation's nuclear weapons' inventory in accordance with the U.S.–Russian Federal Plutonium Disposition Agreement. Accordingly, the Commission directs the presiding officer to set a schedule for any hearing granted in this proceeding that establishes as a goal the issuance of an initial decision on the CAR within approximately 2 years from the date that the NRC received the request. The Commission believes that this goal may be reasonably achieved under the current rules of practice — as modified by this Order — and by our understanding of the Staff's current schedule for completing its safety and environmental reviews. In issuing and implementing a schedule, we do not expect the presiding officer to sacrifice fairness and sound decisionmaking. Furthermore, we recognize that any schedule will be subject to revision depending upon the number and complexity of the contentions admitted. However, we do expect the presiding officer to use the techniques specified in this Order and in the Commission's 1998 policy statement on the conduct of adjudicatory proceedings to ensure the efficient resolution of contested issues.³

We have provided a series of milestones as guidance for the presiding officer in developing a schedule. The presiding officer should use these milestones as guidelines for conclusion of significant steps in the adjudicatory proceeding. We have listed the milestones in two phases that assume that the Final EIS and SER will not be available until some time after the presiding officer has ruled on the Petitioners' standing and the admissibility of any proposed contentions. Obviously, if the SER and EIS are issued on a different schedule, the presiding officer will have to modify the schedule accordingly. As in all matters of scheduling, the presiding officer will necessarily be guided by events as they arise.

The schedule of milestones the presiding officer should apply is as follows:

Phase I

- 10 days from date presiding officer appointed: Simultaneous answers to hearing requests filed by the Applicant and NRC Staff.
- 45 days from date presiding officer appointed: Petitioners submit proposed contentions and any additional filings on standing.

³ See *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18 (1998). See also *Statement of Policy on Conduct of Licensing Proceedings*, CLI-81-8, 13 NRC 452 (1981).

- 75 days from date presiding officer appointed: Simultaneous responses to contentions filed by the Applicant and NRC Staff.
- 85 days from date a presiding officer appointed: Prehearing conference on standing and contentions.
- 130 days from date presiding officer appointed: Decision on standing and admissibility of proposed original contentions; start of discovery against non-NRC Staff parties.
- 140 days from date presiding officer appointed: Distribution of hearing file.

Phase 2

- 30 days from issuance of EIS and SER: Deadline for Intervenor(s) to submit late-filed contentions or amended contentions on environmental issues in accordance with 10 C.F.R. § 2.714(b)(2)(iii)
- 40 days from issuance of EIS and SER: Responses to late-filed contentions by Applicant and the Staff.
- 45 days from issuance of EIS and SER: Completion of discovery against the NRC Staff on admitted contentions from Phase 1.
- 50 days from issuance of EIS and SER: Decision on admissibility of late-filed contentions by presiding officer. If any late-filed contentions are admitted, start discovery period against all parties on these contentions alone.
- 80 days from issuance of EIS and SER: Completion of discovery on any admitted late-filed contentions
- 90 days from issuance of EIS and SER: Simultaneous written presentations regarding any admitted contentions from Phases 1 and 2.
- 105 days from issuance of EIS and SER: Simultaneous responses to written presentations.
- 120 days from issuance of EIS and SER: Submission of proposed questions for presiding officer's potential use under 10 C.F.R. § 2.1235.

- 125 days from issuance of EIS and SER: Decision on whether to hold oral presentation under 10 C.F.R. § 2.1235.
- 135 days from issuance of EIS and SER: Start of oral presentation session.
- 20 days from conclusion of oral session: Simultaneous filing of proposed findings of fact and conclusions of law by all parties.
- 80 days from conclusion of oral session: Presiding officer to render initial decision on all admitted contentions.

To meet the above milestones, the presiding officer shall direct the participants to serve all filings by electronic mail (to be considered timely, such filings must be received by the presiding officer and the parties no later than midnight Eastern Time (either Daylight or Standard) on the date due, unless otherwise designated by the presiding officer), followed by conforming hard copies that may be sent by regular mail. If participants do not have access to electronic mail, the presiding officer should adopt other expedited methods of service, such as express mail, which would ensure prompt receipt. If pleadings are filed by electronic mail, or other expedited methods of service that ensure receipt on the due date, the additional period provided in 10 C.F.R. § 2.710 for responding to filings served by first-class mail or express delivery shall not be applicable. To avoid unnecessary delays, the presiding officer should not grant requests for extensions of time absent unavoidable and extreme circumstances. Moreover, unless otherwise justified, the presiding officer shall require the parties to file all submittals simultaneously where appropriate. *See* 10 C.F.R. § 2.1233(a).

Furthermore, parties are obligated in all of their filings to ensure that their arguments and assertions are supported by appropriate and accurate references to legal authority and factual basis, including, as appropriate, citation to the record. Failure to do so may result in material being stricken from the record or, in extreme circumstances, in a party being dismissed.

Finally, if a hearing is granted, the Commission directs the presiding officer to inform the Commission promptly, in writing, if any single milestone appears likely to be missed by more than 30 days. The presiding officer should include an explanation of why that milestone cannot be met and the measures that will be taken to mitigate the failure to achieve the milestone and restore the proceeding to the overall schedule.

IV. CONCLUSION

The Commission directs the presiding officer to conduct this proceeding in accordance with the guidance specified in this Order. As in any proceeding, the Commission retains its inherent supervisory authority over the proceeding to provide additional guidance to the presiding officer and participants, and to resolve any matter in controversy itself.

It is so ORDERED.

For the Commission

ANNETTE VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 14th day of June 2001.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
Edward McGaffigan, Jr.
Jeffrey S. Merrifield

In the Matter of

**Docket Nos. 50-333-LT
50-286-LT
(consolidated)**

**POWER AUTHORITY OF THE
STATE OF NEW YORK and
ENERGY NUCLEAR FITZPATRICK LLC,
ENERGY NUCLEAR INDIAN
POINT 3 LLC, and
ENERGY NUCLEAR OPERATIONS, INC.
(James A. FitzPatrick Nuclear Power Plant;
Indian Point, Unit 3)**

June 21, 2001*

This proceeding concerns applications for approval of license transfers for the FitzPatrick and Indian Point 3 nuclear power plants. The Commission rejects Intervenor CAN's challenges to the license transfer applications and does not disturb the NRC Staff's approval of those applications.

*At the request of the Transferee, certain financial data have been redacted in order to protect proprietary information. See CLI-01-16 (issued July 19, 2001), releasing this version to the public.

LICENSE TRANSFER

RULES OF PRACTICE: SUBPART M PROCEEDINGS (ADMISSIBILITY OF ISSUES)

The Commission's procedural rules governing license transfer adjudications (Subpart M) do not expressly provide a procedural vehicle by which to challenge a Presiding Officer's admissibility rulings, and in that respect they differ from our other adjudicatory procedural rules (*e.g.*, Subparts G and L) where some admissibility rulings may be contested through an interlocutory appeal or a petition for review. *See generally* 10 C.F.R. §§ 2.714a (Subpart G interlocutory appeals), 2.786(b) (Subpart G petitions for review), 2.1205(o) (Subpart L interlocutory appeals), 2.1253 (Subpart L petitions for review). An unusual confluence of circumstances in this particular proceeding, however, renders appropriate our consideration of the admissibility rulings as to all five subissues.

FINANCIAL QUALIFICATIONS

10 C.F.R. § 50.33(f)

A concern for safety constitutes the foundation of our financial qualifications rule. *See Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 48 (1994). *See also* 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) ('The Atomic Energy Commission, in drafting the [original financial qualifications] rule, must have intuitively concluded that a licensee in financially straitened circumstances would be under more pressure to commit safety violations or to take safety 'shortcuts' that one in good financial shape'). If the Applicants are found to have met our rule, no further inquiry is necessary.

RULES OF PRACTICE: MOTION TO STRIKE

A concern for safety constitutes the foundation of our financial qualifications rule. If the Applicants are found to have met our rule, no further inquiry is necessary. Statements raising specific safety questions arising out of a shortage of funds should therefore have been struck from the record as irrelevant.

RULES OF PRACTICE: SUBPART M (ADMISSIBILITY OF LATE-FILED ISSUES)

Intervenor argues that it raised a late-filed issue "with adequate specificity" and that the NRC Standard Review Plan recommends a Staff investigation of

the same issue. Such assertions do not come close to satisfying the late-filing requirements of Subpart M. *See* CLI-00-22, 52 NRC 266, 319 (2001) (“The Commission will not consider new issues or new arguments or assertions related to the admitted issues at the hearing, unless they satisfy our rules for late-filed issues (10 C.F.R. § 2.1308(b))”); *Consolidated Edison Co. of New York* (Indian Point, Units 1 and 2), CLI-01-8, 53 NRC 225, 229-30 (2001) (applying to late-filed issues the Commission’s rule, 10 C.F.R. § 2.1308(b), regarding late-filed petitions to intervene). *Cf. North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 222-23 (1999) (regarding late-filed petition to intervene).

RULES OF PRACTICE: SUBPART M (ADMISSIBILITY OF ISSUES)

The “safety of any plant anywhere in the country” is irrelevant in a license transfer proceeding.

FINANCIAL QUALIFICATIONS

10 C.F.R. § 50.33(f)

Ordinarily, a rate-deregulated plant’s revenue comes from the sales of electricity — either on the open market or via power purchase agreements. The plant’s sales revenue for a particular period is calculated by multiplying the unit price for a megawatt hour (MWh) of electricity by the number of MWh of power sold. The number of MWh of power sold is in turn computed by multiplying the size of the unit (measured in megawatts) by both its capacity factor (the percentage of total plant capacity actually used during the period to produce electricity) and the number of hours in that period. The plant’s revenue pays for the plant’s O&M expenses, decommissioning costs, and any underproduction penalties imposed under power purchase agreements. If the revenue exceeds these costs, the remainder is profit to the plant’s owners. If the costs exceed the revenue, then the owners must make up the difference through such approaches as drawing down their lines of credit or their retained earnings.

CREDIBILITY OF WITNESSES

WITNESSES’ CREDIBILITY

HEARINGS: WITNESSES’ CREDIBILITY

We are aware of the longstanding legal axiom, in both this Commission and the courts, that a decisionmaking body may accord less relative weight to a witness who is an employee of a party than to a witness with no such financial ties. *See generally Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1),

LBP-85-12, 21 NRC 644, 655 (1985) (emphasis added), *aff'd*, ALAB-818, 22 NRC 651 (1985), *rev'd on other grounds*, CLI-86-13, 24 NRC 22 (1986); *Houston Lighting and Power Co.* (South Texas Project, Units 1 and 2), LBP-79-30, 10 NRC 594, 595 (1979); *Tavoulaareas v. Piro*, 759 F.2d 90, 115 n.30 (D.C. Cir. 1985), *vacated in part on other grounds on reh'g*, 763 F.2d 1472 (D.C. Cir.), *modified en banc on other grounds*, 817 F.2d 762 (D.C. Cir.), *cert. denied*, 484 U.S. 870 (1987). But this axiom does not mean that we should discount such testimony altogether. As always, the key to evaluating expert testimony is its logic and persuasiveness. In this proceeding, as in others involving expert witnesses, we have taken into account the financial interests of the witnesses.

RULES OF PRACTICE: SUBPART M (ADMISSIBILITY OF ISSUES)

SAFETY EVALUATION REPORT

NRC STAFF PERFORMANCE

We disregard Intervenor's criticism of the NRC Staff's Safety Evaluation Report because the caliber of the SERs is not at issue in a license transfer adjudication. *See generally Curators of the University of Missouri*, CLI-95-8, 41 NRC 386, 396 (1995) ("in adjudications, the issue for decision is not whether the Staff performed well, but whether the license application raises health and safety concerns"); *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 213 (1998) ("Adjudications are not the appropriate forum for resolving complaints about NRC Staff conduct").

BURDEN OF PROOF (FINANCIAL ISSUES)

RULES OF PRACTICE: BURDEN OF PROOF (FINANCIAL ISSUES)

FINANCIAL QUALIFICATIONS: BURDEN OF PROOF

10 C.F.R. § 50.33(f)

Where (as here) an adjudication goes to hearing, it is Applicants' burden to show, by a preponderance of the evidence, that they meet our safety standards — in this case, our financial qualifications rule. *See Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 47, 63 (2001); *Commonwealth Edison Co.* (Zion Station, Units 1 and 2), ALAB-616, 12 NRC 419, 421 (1980). As we have cautioned in the past, however, we do not expect "absolute certainty" in the financial arena; it is enough for Applicants to rely on "plausible assumptions and forecasts." *See Seabrook*, CLI-99-6, 49 NRC at 222. We reiterated that same caution at the outset of this adjudication. *See CLI-00-22*, 52 NRC at 300.

RULES OF PRACTICE: SUBPART M (ADMISSIBILITY OF ISSUES)

The Commission affirms and adopts as its own the following two rulings of the Presiding Officer: Section 50.33(f)(2) itself “appears to support the view” that Intervenor’s challenge to the use of 5-year economic projections is neither impermissible, untimely, nor a collateral attack on NRC regulations, “particularly since [Entergy FitzPatrick and Entergy Indian Point] appear to be newly formed entities organized primarily for operating the reactors in question.” *See* LBP-01-14, 53 NRC 121, 129 (2001). Moreover, Intervenor’s claim was a challenge not to section 50.33(f)(2) itself, but only to Applicants’ interpretation of that rule.

LICENSE TRANSFER: CAPACITY FACTOR

TECHNICAL ISSUES: CAPACITY FACTOR

In determining the appropriate capacity factor for the plants at issue, we accord great weight to the recent capacity factors of the two plants. This is because these numbers reflect not only the recent condition of the plants but also the recent caliber of work expended by the same employees who will, in the future, be performing the plants’ day-to-day operation and maintenance. We find this information considerably more relevant than the capacity factors at other Entergy (or non-Entergy) nuclear plants that may be in quite different physical condition and operated by a quite different caliber of labor force. Entergy has made no meaningful attempt to equate FitzPatrick and Indian Point 3 with other plants in these two respects. And although we find some assurance in the past successes of the three Entergy Applicants’ parent and affiliates (as reflected in Entergy’s second and third arguments) and also in the Entergy companies’ ability to benefit from each other’s experiences, our assurance is lessened by the fact that Entergy Operations Inc. (operator of Entergy’s fleet in the South) is not the designated operator of either FitzPatrick or Indian Point 3. Regardless, any such assurance would hardly be enough to offset a history of low capacity factors for the two plants at issue here.

Applicants point out that the capacity factors for Indian Point 3 and FitzPatrick were 95.1% and 97.2%, respectively, for the 41 days in 2000 that Entergy actually owned the plants. We decline to rely on capacity factors for so short a period.

Entergy’s witnesses argue that their estimate of an 85% capacity factor falls almost exactly in the middle of the capacity factors of plants nationwide. We do not find this reference to the experience at all other United States plants instructive on the issue of the appropriate capacity factor for an individual plant.

Turning then to the proffered capacity factors themselves, we are faced with a choice between two sets of “recent” capacity-factor averages as proxy for future capacity factors: intervenor’s figures reflecting a 6-year period and Applicants’

reflecting 2- and 3-year periods. We believe that Applicants make by far the stronger case for their proxies.

We accept Applicants' position that the more recent 2- and 3-year periods are better indicators of the two plants' future performance than a 6-year period containing weaker management and much longer outages.

LICENSE TRANSFER: CAPACITY FACTOR

TECHNICAL ISSUES: CAPACITY FACTOR

Even if Intervenor's capacity-factor predictions were to prove accurate, such a development would make no difference to Entergy's financial qualifications unless one or both of two further events transpired: (1) the financial penalties resulting from the reduced capacity factor would lower the available retained earnings and credit lines to the point that the plants could not be safely operated and maintained or (2) the loss of revenue resulting from the reduced capacity factor would have the same effect.

NUREG-1577

FINANCIAL QUALIFICATIONS

10 C.F.R. § 50.33(f)

NUREG-1577 does not establish a standard that a plant have sufficient cash to pay O&M costs during a 6-month outage. Rather, it provides merely that a transferee can satisfy our financial qualifications requirements by *either* filing adequate cost-and-revenue projections for a 5-year period, *or* holding a sufficiently high bond rating, *or* "if an applicant cannot meet these criteria, . . . [submitting] information on cash or cash equivalents . . . sufficient to pay fixed operating costs during an outage of at least 6 months." See "Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance," NUREG-1577 (Rev. 1, March 1999), at 5. In other words, under the guidance set out in NUREG-1577, the NRC Staff does not consider an applicant's financial wherewithal to handle a 6-month outage unless the Staff first concludes that the applicant's cost-and-revenue projections (or its bond rating) are inadequate. No such inadequacy is present here. We find that Entergy has submitted plausible 5-year projections upon which we can rely. Neither our financial qualifications rule nor the guidance document to which Intervenor referred suggests a further requirement to set aside funds to cover a 6-month outage.

LICENSE TRANSFER: CAPACITY FACTOR

TECHNICAL ISSUES: CAPACITY FACTOR

Intervenor's references to the capacity-factor and outage experiences at other plants are not helpful in informing our consideration of what to expect at Indian Point 3. Intervenor offers other, similar industrywide numbers to support its position that a 6-month outage is reasonable to anticipate at Indian Point 3. These supporting data fail for the same reason. Intervenor's historical data show merely that outages of 6 months (or more) are possible, not that such outages are particularly likely at Indian Point 3. To the extent Intervenor's claims that the difference between an 85% capacity factor and a 75% capacity factor over a 5-year period equates to 6 months of plant downtime, we find his assertion flawed in that it rests on data for other plants and is thus not sufficiently tied to Indian Point 3 to help us in our deliberations.

RULES OF PRACTICE: PLEADING REQUIREMENTS

It is intervenor's responsibility to ensure that its arguments and statements are clearly and cogently presented. *See Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-94-6, 39 NRC 285, 297-98 (1994) (and authority cited therein).

FINANCIAL QUALIFICATIONS: FIVE-YEAR PROJECTED COSTS AND REVENUES

10 C.F.R. § 50.33(f)

Given the Commission's holding in *Seabrook*, CLI-99-6, 49 NRC 201, there can likewise be no doubt that the Commission has the authority to seek further financial qualifications information from applicants in those unusual instances in which we believe the 5-year projections are inaccurate or insufficient. Were we to conclude that the 5-year projections are either inaccurate or insufficient to provide this assurance, then we could require further information and, if appropriate, impose conditions on the license transfer.

Projected data for the outlying years 2006-2008 would, at least in the current factual situation, be so speculative as to be unworthy of our reliance.

Determinations of "how speculative is too speculative" need to be made on a case-by-case basis.

When we set the time period at 5 years for our projected cost-and-revenue data requirement, we recognized that such projected data become less and less credible the further one predicts into the future. We also recognized that, if the projections proved inaccurate or did not reflect the situation at a plant after the 5-year period,

then our reactor safety oversight program likely would reveal safety-related effects from a financial shortfall and we could respond accordingly. *See generally GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000), citing *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 306-07 (1997); *Oyster Creek*, 51 NRC at 209, 210, 212, 214; Summary of and Response to Comments, preceding ‘Final Policy Statement on the Restructuring and Economic Deregulation of the Electric Utility Industry,’ 62 Fed. Reg. 44,071, 44,073 (Aug. 19, 1997).

“Challenges to Entergy’s financial qualifications ‘ultimately will prevail only if [they] can demonstrate relevant *uncertainties significantly greater* than those that usually cloud business outlooks.’” *See* CLI-00-22, 52 NRC at 300, quoting *Seabrook*, CLI-99-6, 49 NRC at 222 (emphasis added). The market volatility and potential power plant competition on which Intervenor relies do not rise above the level of the usual business uncertainties to which we alluded in CLI-00-22 and CLI-99-6.

Intervenor’s argument about market volatility necessarily applies in one fashion or another to *all* license transfers to nonutilities in the current deregulated market and so would *ipso facto* render any such prospective transferee’s 5-year data insufficient to demonstrate financial qualifications. The exception would therefore swallow the rule, at least insofar as it applies to the increasingly common nonutility owners and operators of nuclear power plants.

Political and regulatory uncertainty, new interconnections, and new generating facilities are always risks for sellers of electricity. As we stated in *Seabrook*, the Commission “will accept financial assurances based on *plausible assumptions and forecasts*, even though the possibility is not insignificant that things will turn out less favorably than expected. Thus, the mere casting of doubt on some aspects of proposed funding plans is not by itself sufficient to defeat a finding of reasonable assurance.” *See* CLI-99-6, 49 NRC at 222 (emphasis added).

FINANCIAL QUALIFICATIONS: FIVE-YEAR PROJECTED COSTS AND REVENUES

10 C.F.R. § 50.33(f)

We are unpersuaded by Intervenor’s comparisons to the industry average for O&M costs. The industry average for O&M costs is not particularly germane to these same two plants. Such costs can vary greatly from plant to plant, or from region to region. Intervenor has given us no sound reason why we should consider as relevant the O&M costs at the Salem plants which have never been operated by either PASNY or an Entergy company, or why those plants’ O&M costs from 1992 to 1996 are indicative of similar kinds of expenses that FitzPatrick and

Indian Point 3 will incur under Entergy's ownership and management subsequent to the year 2000.

Both parties repeatedly attempt to bolster their respective arguments on both O&M costs and capacity factor by alluding to situations at other power plants. We find these references unhelpful to our analysis of the instant license transfer applications. Neither party established an adequate foundation for drawing comparisons to these other plants (e.g., a party discussing major anticipated expenses at Indian Point 3 might point out that another nuclear plant's steam generators are the same make and age as those at Indian Point 3, have about the same number of hours of use, and need replacement). As Applicants themselves pointed out at the hearing, "[w]e should not expect the Commission to have to wade through safety issues that relate to other plants in other places of the country that do not relate directly to the matters that you have admitted in this case."

FINANCIAL QUALIFICATIONS: SUPPLEMENTAL FUNDING

10 C.F.R. § 50.33(f)

Our rules do not contemplate hearings on supplemental funding questions. As we stated earlier in this proceeding, "the sufficiency *vel non* of the \$90 million supplemental funding does not constitute grounds for a hearing" (see CLI-00-22, 52 NRC at 299) because the funds are "not [, strictly speaking,] required by our rules [and the issue] therefore lies outside the bounds of our license transfer hearing process — which focuses on whether [the transferee] meets the required financial and technical qualifications." See *id.* at 300 n.22, quoting *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 178 (2000). Given that our regulations do not require supplemental funding as part of a showing of financial qualifications, we do not see why the creditworthiness of the guarantor would be any more germane than the amount of the supplemental funding guarantee itself (an issue we rejected earlier in this proceeding). As we have already concluded that Applicants' cost-and-revenue projections provide us the requisite assurance of the Entergy Applicants' financial qualifications, we need not consider Entergy's promise of supplemental funds as part of our financial qualifications inquiry.

As a legal matter, the amount and liquidity of Entergy's supplemental funds are irrelevant to this litigation because our rules do not require such funds to be set aside. See CLI-00-22, 52 NRC at 300 (concluding that "NRC rules do not mandate supplemental funding" and that "[t]he parent company guarantee is supplemental information and not material to the financial qualifications determination under 10 C.F.R. § 50.33(f)(2)"). As a practical matter, Entergy has in fact committed supplemental funds, a voluntary commitment that appears meaningful and, if necessary, enforceable by virtue of the Staff's license condition.

LICENSE TRANSFER

REGULATORY COMPLIANCE

COMPLIANCE

We presume that the Transferees will comply with the requirements of their licenses. *See, e.g., Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-9, 53 NRC 232, 235 (2001); *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000); *Curators of the University of Missouri*, CLI-95-8, 41 NRC 386, 400 (1995); *Northern Indiana Public Service Co.* (Bailly Generating Station, Nuclear-1), ALAB-207, 7 AEC 957, 958 (1974); *Virginia Electric and Power Co.* (North Anna Power Station, Units 3 and 4), LBP-74-56, 8 AEC 126, 148 (1974).

LICENSE TRANSFERS

REGULATORY COMPLIANCE

COMPLIANCE

FINANCIAL QUALIFICATIONS

10 C.F.R. § 50.33(f)

Although we have confidence in the NRC Staff's ability to evaluate license transfer applications and to assess the financial qualifications of the Transferees, we would also note that such review is not the agency's only line of defense in matters of financial qualifications. We continue to view our inspection and enforcement programs as the major vehicles by which to ensure plant safety. *See generally Oyster Creek*, CLI-00-6, 51 NRC at 207, citing *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 306-07 (1997) ("in the end, NRC inspections and enforcement actions go a long way toward ensuring compliance with our requirements"); *Oyster Creek*, 51 NRC at 209, 210, 212, 214; Summary of and Response to Comments, preceding "Final Policy Statement on the Restructuring and Economic Deregulation of the Electric Utility Industry," 62 Fed. Reg. 44,071, 44,073 (Aug. 19, 1997) ("the NRC continues to believe that its primary tool for evaluating and ensuring safe operations at its licensed facilities is through its inspection and enforcement programs"). Moreover, the team that prepared the financial qualifications portions of the FitzPatrick and Indian Point 3 SERs likewise is keeping abreast of Licensees' financial condition by both reading their annual reports and financial statements and also following the trade press, and this team will notify the Commission if problems arise. (As Mr. Robert Wood of the NRC Staff correctly stated at the hearing, "severe financial distress from any of the licensees is

something that's not going to be hidden from view very long.'') Finally, if the Commission notes that financial problems are compromising the safety of the plant and the public, we will require the plant to take corrective action and, if it does not or cannot comply, we can shut down the plant.

DECOMMISSIONING FUNDING

10 C.F.R. § 50.75(e)(1)(i) and (iii)

We disagree with Intervenor's apparent assumption that a funding arrangement must be identical to, or at least a very close approximation of, one or more of the preapproved arrangements in order to merit approval under section 50.75(e)(1)(vi). Rather, as our rules state, a funding arrangement qualifies for approval under subsection (vi) if it provides a level of decommissioning funding assurance "equivalent" to the level provided by the arrangements set forth in subsections (i) through (v). Applicants may *combine* different mechanisms to achieve this required equivalence. Subsection (vi) itself plainly establishes an "equivalence" test:

(vi) Any other mechanism *or combination of mechanisms*, that provides, as determined by the NRC upon its evaluation of the specific circumstances of each licensee submittal, assurance of decommissioning funding *equivalent* to that provided by the mechanisms specified in paragraphs (e)(1)(i) through (v) of this section. [Emphasis added.]

See also CLI-00-22, 52 NRC at 302. Regarding combination of mechanisms, *see* "Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance," NUREG-1577 (Rev. 1, March 1999), at 13.

DECOMMISSIONING FUNDING

10 C.F.R. § 50.75(e)(1)

We find that a multitude of provisions in the applications, as conditioned by the NRC Staff, collectively give us the requisite assurance, "equivalent" to the assurance given by the particular funding devices authorized by our rules, that the decommissioning funds will be available to PASNY. The extensive protective measures set forth in the applications satisfy us regarding the integrity and sufficiency of the PASNY-Entergy decommissioning funding arrangements.

DECOMMISSIONING FUNDING

10 C.F.R. § 50.75(e)(1)(i)

We find in 10 C.F.R. § 50.75(e)(1)(i) no support for Intervenor’s assumption that either an actual transfer or a full-value fund amount is essential to “prepayment.” Indeed, that rule plainly does not call for full-valued fund amounts.

Nothing in our prepayment rules (10 C.F.R. § 50.75(e)(1)(i)) requires an actual transfer of funds to Entergy (the Transferee).

Intervenor asserts that the possibility of PASNY holding the trust for 75 years (even without considering license renewal) undermines any argument that the proposed methodology is the “equivalent” of the prepayment methodology referenced in subsection (i). But the 75-year period is irrelevant to this license transfer proceeding because the holding period is the same whether PASNY or Entergy holds the licenses. Either way, the funds remain in a decommissioning trust and are dedicated solely to the decommissioning of the two plants.

DECOMMISSIONING FUNDING

10 C.F.R. § 50.75(e)(1)(iii)

Applicants’ failure to meet the precise terms of an NRC-approved decommissioning funding method (here, the “surety” method) is not decisive. This is because Applicants are not seeking approval of the arrangement under 10 C.F.R. § 50.75(e)(1)(iii) and therefore do not need to satisfy all the requirements of that section.

Although the Transferor is not a regulated or licensed surety or parent company, the financial assurance at issue here is actually *greater* than that provided by a surety or parent — Applicants’ assurance takes the form of money that has already been deposited in the two funds, as opposed to a mere promise of a surety, guarantee, or insurance policy to pay the money at some future time.

Intervenor’s question about PASNY’s failure to offer a “guarantee” is irrelevant because the Bank of New York, not PASNY, holds the decommissioning funds, and is obliged to preserve and disburse them under specified conditions.

DECOMMISSIONING FUNDING

10 C.F.R. § 50.75(e)(1)(i), (iii), and (vi)

If Intervenor means to assert that an applicant’s plan must fully satisfy at least one of the standards enumerated in subsections (i) through (v) of 10 C.F.R. § 50.75(e)(1) to qualify as “equivalent” assurance under subsection (vi), then

such an interpretation would render subsection (vi) superfluous. It would also unduly constrain the flexibility that subsection (vi) accords to applicants in structuring their decommissioning funding methods, and would thus run counter to the Commission's intention to at least consider, on a case-by-case basis, funding assurance mechanisms not expressly permitted under subsections (i) through (v). In promulgating subsection (vi), we intended to give applicants the flexibility necessary to structure methods outside the parameters of any one of the five methods set forth in subsections (i) through (v), or to combine portions of those subsections in such a way as to provide the same end-result of funding assurance. This idea was implied in the NRC Staff's statement in NUREG-1577 regarding subsection (vi): "Third-party guarantee mechanisms such as surety bonds or letters of credit, should guarantee the total amount of currently estimated decommissioning costs. If these mechanisms are used in combination with other assurance mechanisms, *the combined amount should at least equal current estimated decommissioning costs.*" See "Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance," NUREG-1577 (Rev. 1, March 1999), at 13 (emphasis added). See also Final Rule, "Financial Assurance Requirements for Decommissioning Nuclear Power Reactors," 63 Fed. Reg. 50,465, 50,469, 50,473 (Sept. 22, 1998).

DECOMMISSIONING FUNDING

10 C.F.R. § 50.75(e)(1)(vi)

Intervenor argues that the NRC Staff's regulatory analysis of 10 C.F.R. § 50.75(e)(1)(vi) nowhere "contemplates the possibility" of Applicants' kind of arrangement. But the Staff's failure to refer, in advance, to the precise arrangement later developed by PASNY and Entergy merely suggests to us that the Staff could not anticipate every kind of arrangement that license transfer applicants or decommissioning planners might submit under subsection (vi). That provision was deliberately left open-ended, and allows for innovative funding arrangements as long as they provide protections equivalent to preapproved funding methods.

DECOMMISSIONING FUNDING

10 C.F.R. § 50.75(e)(1)

Intervenor asserts that the issue it raised concerning PASNY's access to the decommissioning funds focuses not upon whether those funds are available for "decommissioning" but rather upon the unavailability of the funds for the offsite "remediation" activities for which Entergy disclaims responsibility.

In CLI-00-22, we held that the decommissioning “trust cannot be used for offsite remediation.” *See* 52 NRC at 308. *See generally* Final Rule, “General Requirements for Decommissioning Nuclear Facilities,” 53 Fed. Reg. 24,018, 24,021 (June 27, 1988). Given that the issue we admitted for hearing deals with onsite decommissioning funding rather than offsite remediation funding, the latter issue is beyond the scope of this proceeding. *See* 52 NRC at 319. It is likewise beyond the proceeding’s scope because the transfers themselves will not affect the extent to which any remediation money is available for withdrawal from the two decommissioning funds.

These rulings rejecting Intervenor’s remediation argument should not be construed to mean either that we view Intervenor’s concerns as insignificant or that Intervenor lacks remedies for its offsite remediation concerns. If Intervenor believes that PASNY has illegally spilled nonradioactive waste, then it may be able to approach the Environmental Protection Agency for remedial action under the “Superfund” statute. *See* Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601-9675. Alternatively, if Intervenor believes that PASNY has spilled radioactive material offsite in violation of the NRC regulations in effect at the time of the spills, then Intervenor may file a petition under 10 C.F.R. § 2.206 seeking enforcement action.

We must acknowledge that CLI-00-22 was internally inconsistent regarding Intervenor’s remediation issues. In that order, we excluded one offsite remediation issue, yet we admitted another one as a decommissioning subissue. In admitting the latter as an issue, we inadvertently failed to focus sufficiently on the *offsite* context in which the issue was being presented to us. We mistakenly assumed that Intervenor was using the term “remediation” as a loose synonym for “decommissioning.” Although the particular language we cited in CLI-00-22 did not expressly state that the remediation at issue was offsite (CLI-00-22, 52 NRC at 302 n.25), Intervenor’s language preceding the cited passage did indicate that the context was offsite remediation. Had we recognized the offsite context, we would not have admitted the issue — for the reasons set forth in the section of CLI-00-22 dealing with “Lack of Provision for Offsite Remediation.” *See* 52 NRC at 306-08.

**LICENSE TRANSFER: COMMISSION’S POST-TRANSFER
AUTHORITY
COMMISSION JURISDICTION
NRC JURISDICTION
JURISDICTION**

As we explained in the Statement of Considerations on the “deliberate misconduct” rule, “Section 161i of the AEA provides the Commission with

broad authority to issue such regulations and orders as the Commission deems necessary to govern any activity authorized pursuant to the AEA in order to protect public health and safety.” See Final Rule, “Deliberate Misconduct by Unlicensed Persons,” 63 Fed. Reg. 1890, 1891 (Jan. 13, 1998), referring to 42 U.S.C. § 2201(i). See generally Final Rule, “Revisions to Procedures to Issue Orders; Deliberate Misconduct by Unlicensed Persons,” 56 Fed. Reg. 40,664, 40,666-69 (Aug. 15, 1991).

We believe that the Staff-imposed conditions provide the Commission with adequate control over PASNY’s expenditure of the decommissioning funds and thereby provide the degree of assurance we deem necessary. These conditions require that the relevant decommissioning trust agreements between PASNY and the trustee (the Bank of New York) include mechanisms for the NRC to bar disbursements, to require disbursements to satisfy NRC decommissioning requirements, and to prevent PASNY from terminating the decommissioning trust funds without the NRC’s consent.

We recognize, however, that imposition of such conditions may be insufficient, in and of itself, to ensure compliance if the agency lacks the post-transfer regulatory authority to enforce those conditions. We addressed the subject inferentially 9 years ago in a license transfer proceeding involving the Shoreham Nuclear Power Station. There, we imposed a condition requiring the former licensee to take back the license if the approved transferee were dissolved by a state court. See *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-92-4, 35 NRC 69, 80 n.7 (1992). The imposition of this condition in *Shoreham* implies a continuing authority over former licensees even after they transfer their licenses to other entities.

We have also discussed such post-transfer jurisdiction in the context of our “deliberate misconduct” rule. See 10 C.F.R. §§ 30.10, 40.10, 50.5, 60.11, 61.9b, 70.10, 72.12, 110.7b (all applicable to, *inter alia*, any “employee of a licensee or applicant; or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or applicant”). As we indicated in the Statement of Considerations for the 1991 version of that rule, our statutory authority to issue orders is not confined to those who hold licenses from the Commission but rather is a uniquely broad and flexible authority that extends to any person who engages in conduct within the Commission’s subject-matter jurisdiction. Indeed, we consider this authority to extend to anyone who engages in conduct *affecting activities* within the Commission’s subject-matter jurisdiction — including those who (like PASNY) *have been* engaged in licensed activities.

We see no reason why the rationale justifying our jurisdiction over nonlicensees in the context of the “deliberate misconduct” regulations should not apply equally in the context of license transfer regulations. After all, if PASNY remains responsible for the disbursement of the decommissioning funds, PASNY would not only “affect[] activities” within our subject-matter jurisdiction but would be

directly “engage[d] in conduct” within that jurisdiction. Just as the Commission has the authority to issue notices of violation against nonlicensees in appropriate cases when requirements directly imposed upon nonlicensees are violated, we likewise have the authority to exercise enforcement authority against PASNY if it violates any of the requirements imposed in the Staff’s orders. Indeed, if PASNY were to fail to comply with the conditions we imposed on the transfer approvals, we could declare the approvals null and void, and PASNY would revert to being a licensee subject to the Commission’s usual authority over licensees. *See Shoreham*, CLI-92-4, 35 NRC at 80 n.7. Alternatively, we could reinstate PASNY as a licensee without removing the Entergy Transferees from the licenses.

Finally, even were PASNY not deemed a licensee due to a breach of these conditions, the NRC could still sue PASNY to enforce the provisions and purpose of the Trust Agreement. Section 10.11 of that Agreement provides that the provisions or purpose of this Agreement may be enforced by the NRC against the Authority and the Trustee with respect to the disbursement of the Funds to the extent necessary to ensure compliance with or satisfaction of the NRC’s decommissioning requirements. PASNY has agreed in writing to waive any right it may have to deny, contest, or challenge the Commission’s jurisdiction over PASNY with respect to either Indian Point 3 or FitzPatrick in any enforcement matter concerning disposition or use of decommissioning funds retained by PASNY. This waiver remains in effect until PASNY transfers the funds to Entergy or completion of the facilities’ decommissioning, whichever occurs first.

DECOMMISSIONING FUNDING

10 C.F.R. § 50.75(e)(1)

Intervenor claims that the creation of an exception to section 50.75(e)(1) in this proceeding could set a dangerous precedent for future cases in which the transferor may not have the same degree of financial strength as PASNY. We see no risk here of a dangerous precedent. In the area of decommissioning funding assurance, each transfer application is examined *on its own facts*. This will be especially true of applications seeking to use an assurance other than those specifically described in sections 50.75(e)(1)(i)-(v). Thus, a transferor less qualified than PASNY may have a more difficult time gaining our approval for its retention of a decommissioning trust fund pursuant to subsection (vi). Because of the fact-driven nature of our decommissioning rulings in this proceeding, their precedential value is, as a practical matter, limited to an indication of the Commission’s openness to funding arrangements not specifically enumerated in subsections (i)-(v).

RULEMAKINGS

ADJUDICATIONS

Issues such as transferor's retention of decommissioning funds may be addressed either in a rulemaking or an adjudicatory context. It is well established that an agency's decision to use rulemaking or adjudication in dealing with a problem is a matter of discretion. *See Kansas Gas and Electric Co. (Wolf Creek Generating Station, Unit 1)*, CLI-99-19, 49 NRC 441, 467 (1999); *Fire Protection for Operating Nuclear Power Plants* (10 CFR 50.48), CLI-81-11, 13 NRC 778, 800 (1981), citing, *inter alia*, *NAACP v. FPC*, 425 U.S. 662, 668 (1976). We expect few license transfer applications to include the kind of fund retention arrangement that we address here. Consequently, we prefer to address the fund retention issue on a case-by-case basis rather than expend the more significant resources required for a rulemaking. Moreover, the dismissal or suspension of the instant proceeding, pending a rulemaking, would result in a lengthy delay of our rulings on the FitzPatrick and Indian Point 3 transfers. Such a result would be contrary to the Commission's policy of "expeditious decisionmaking" in license transfer proceedings. *See* Final Rule, "Streamlined Hearing Process for NRC Approval of License Transfers," 63 Fed. Reg. 66,721, *passim* (Dec. 3, 1998).

LICENSE TRANSFER

REMEDIATION

Offsite remediation and taxpayer refunds are not within the scope of this license transfer proceeding.

DECOMMISSIONING FUNDING

10 C.F.R. § 50.75(e)(1)

The decommissioning funding "rule does not deal with costs of demolition of nonradioactive structures and equipment or with site restoration after termination of the NRC license. These matters are outside NRC's jurisdiction. . . ." *See* Final Rule, "General Requirements for Decommissioning Nuclear Facilities," 53 Fed. Reg. 24,018, 24,038 (June 27, 1988).

LICENSE TRANSFER: ROLE OF STAFF

NRC STAFF: ROLE IN LICENSE TRANSFER PROCEEDINGS

Under the procedural rules set forth in Subpart M, the NRC Staff is not required to be a party in a license transfer proceeding and is required only to offer into

evidence its SER(s) and to provide one or more sponsoring witnesses at the hearing. *See* 10 C.F.R. § 2.1316(b).

Notwithstanding the Staff's nonparty status, the Presiding Officer invited the NRC Staff to submit a brief enunciating its views on three issues: (i) to what extent does the NRC retain authority to control PASNY's decommissioning expenditures following divestiture of the two plants to the Entergy companies; (ii) whether Entergy FitzPatrick and Entergy Indian Point, as newly formed entities, are required to submit cost-and-revenue estimates for only a 5-year period or instead for the entire life of each license; and (iii) under what circumstances should an organization be deemed a newly formed entity. *See* LBP-01-4, 53 NRC 121, 130 n.10 (2001); Unpublished Memorandum and Order (NRC Staff Participation), dated Feb. 8, 2001. We consider the Presiding Officer's requests to be appropriate under the circumstances. Those requests did not compromise the NRC Staff's status as a nonparty, yet gave all parties the benefit of the Staff's expertise on an issue of first impression and also the Staff's familiarity with the details of the conditions it imposed on Applicants regarding this agency's continuing authority over PASNY. We believe that Intervenor's and Applicants' arguments on these issues were more finely tuned as a result of having the benefit of the Staff's views, and that the Commission itself has benefitted from having more and better briefs on these issues.

HEARINGS: LICENSE TRANSFER

LICENSE TRANSFER: HEARINGS

We do not construe our regulations as an absolute bar against attorneys or parties offering suggestions of questions at the hearing. *See* 10 C.F.R. §§ 2.1320(a)(3) and 2.1322(b). There may be unusual occasions where such suggestions are appropriate and useful. But Subpart M contemplates that parties submit their questions in advance. *See* 10 C.F.R. § 2.1322(a)(2)(ii). Free-form improvisation of questions by parties at the hearing has the potential to subvert Subpart M's intent to establish an informal process run by the presiding officer.

Parties are strongly encouraged to file prehearing questions. The parties should not be permitted to question witnesses directly at the hearing, and it will be purely a matter of the presiding officer's discretion whether to entertain any questions posed for the first time at the hearing. To discourage parties from saving their questions until the hearing, the presiding officers should exercise sparingly their authority to entertain suggestions for questions at the hearing. One example, however, of a situation that might well justify the exercise of such authority is the emergence of unexpected information as a result of the presiding officer's questions. To the limited extent the presiding officers do choose at the hearing to entertain suggestions for questions, the presiding officers should consider

permitting the parties to submit only *written* suggestions at specified times in the hearing.

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MEMORANDUM AND ORDER

Background

In this proceeding, the Power Authority of the State of New York (“PASNY” or “Transferor”) seeks the Commission’s authorization to transfer the operating licenses of both the Indian Point Nuclear Generating Unit No. 3 (“Indian Point 3”) and the James A. FitzPatrick Nuclear Power Plant (“FitzPatrick”). PASNY wishes to transfer its ownership interest in, and operating/maintenance responsibility for, the Indian Point 3 plant to Entergy Nuclear Indian Point 3, LLC (“Entergy Indian Point”), and Entergy Nuclear Operations, Inc. (“Entergy

Nuclear Operations’),¹ respectively. Similarly, PASNY wishes to transfer its ownership interest in, and operating/maintenance responsibility for, the FitzPatrick plant to Entergy Nuclear FitzPatrick, LLC (“Entergy FitzPatrick”) and Entergy Nuclear Operations, respectively.²

On November 9, 2000, the NRC Staff approved the two transfers in an administrative action that ran parallel to the instant adjudication.³ PASNY and the Entergy Transferees (collectively “Applicants”) consummated the transfers on November 21, 2000, and the NRC Staff amended the licenses on that same day to reflect the change in licensees. As we noted earlier in this proceeding, however,

Neither the Staff’s approvals, nor the closing of the sale affects the instant adjudicatory proceeding. The purpose of this proceeding is to resolve whether, for the reasons raised by the Petitioners, the Commission should disapprove the transfers and require the Applicants to return the plant ownership to the *status quo ante* or modify the license notwithstanding the Staff’s orders and the Applicants’ actual consummation of the sale.⁴

On November 27, 2000, the Commission issued CLI-00-22, in which we granted four petitions to intervene (or participate) submitted by five entities, all of whom sought to oppose one or both of the license transfer applications. Subsequent to our issuance of CLI-00-22, three of the five entities opposing the transfers withdrew from the case,⁵ leaving only Westchester County and the Citizens Awareness Network (“CAN”) still in the case and only CAN’s issues still in contention.

In CLI-00-22, we set the case for hearing and instructed the Chief Judge of the NRC’s Atomic Safety and Licensing Board Panel to appoint a Presiding Officer to conduct the hearing and develop the record. We found CAN’s decommissioning

¹ Entergy Nuclear Operations “is an entity . . . formed to operate . . . Indian Point 3 and FitzPatrick. . . . [Entergy Nuclear Operations] will operate, but will not own, [these] . . . plants.” Response to NRC Request for Additional Information Regarding License Transfer Application, dated July 14, 2001, Response to Question 1. This and all other Responses to NRC Staff Requests for Additional Information are incorporated into the license application. See *Power Authority of the State of New York* (Indian Point Nuclear Generating Unit No. 3), Order Approving Transfer of License and Conforming Amendment, 65 Fed. Reg. 70,843, 70,845 (Nov. 28, 2000); *Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant), Order Approving Transfer of License and Conforming Amendment, 65 Fed. Reg. 70,845, 70,847 (Nov. 28, 2000) (collectively “Staff Orders”).

² See License Transfer Applications, filed May 11 and 12, 2000. Entergy Corporation is the parent company to all three Entergy Transferees. See both Staff Orders, 65 Fed. Reg. at 70,843 (Indian Point 3) and 70,845 (FitzPatrick). Entergy Corporation also currently owns and operates six other nuclear plants through various subsidiaries: Arkansas Nuclear One Units 1 and 2, Grand Gulf Nuclear Station, River Bend Station, Waterford 3 Steam Electric Station, and Pilgrim Nuclear Power Station. See, e.g., both Applications at 6; FitzPatrick Safety Evaluation Report (“SER”), dated Nov. 9, 2000, at 2 (nonproprietary version entered into the Record following p. 167 of the March 13-14, 2001, Hearing Transcript (“Tr.”), and identified as Staff Exh. 1); Indian Point 3 SER, dated Nov. 9, 2000, at 2 (nonproprietary version entered into the Record following Tr. 167, and identified as Staff Exh. 2).

³ See Staff Orders, 65 Fed. Reg. at 70,844-45 (Indian Point 3), 70,847 (FitzPatrick).

⁴ See CLI-00-22, 52 NRC 266, 286 n.1 (2000), citing *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-17, 52 NRC 79, 82-83 (2000).

⁵ See LBP-00-34, 52 NRC 361 (2000) (approving withdrawal of the Town of Cortlandt and the Hendrick Hudson School District); LBP-01-5, 53 NRC 136 (2001) (approving withdrawal of Nuclear Generation Employees Association).

funding issues admissible (in part), and we also gave CAN the opportunity to review certain proprietary financial information of the three Entergy companies (collectively “Entergy”) so that CAN could formulate adequately supported financial qualifications issues. Our financial qualifications rule requires Entergy to submit 5-year cost-and-revenue data demonstrating its financial qualifications to operate and maintain the plants safely.⁶

After reviewing the proprietary data, CAN submitted a five-part issue regarding financial qualifications, portions of which the Presiding Officer admitted.⁷ On March 13-14, 2001, the Presiding Officer conducted a hearing on the admitted portions of CAN’s two issues involving financial qualifications and the decommissioning funds. Based on our review of the entire record, we reject CAN’s challenges to the license transfer applications and do not disturb the NRC Staff’s approval of those applications.

DISCUSSION

I. FINANCIAL QUALIFICATIONS ISSUES

A. Background

CAN argued in its petition to intervene that neither FitzPatrick nor Indian Point 3 has ever met, on a sustained basis, the revenue generation standards required under the Purchase and Sale Agreement, and that Entergy must therefore provide additional assurance of its financial wherewithal to operate and maintain the plants in a manner that protects the health and safety of both the plants’ workers and the public.⁸ Although CAN acknowledged that it had provided no affidavits, supporting documents or other evidence to support this argument, it claimed that this deficiency was excusable. CAN reasoned that Applicants’ own exclusion of certain financial information from the publicly available versions of the two license transfer applications had precluded CAN from comparing the anticipated operating costs with the anticipated revenues and thereby assessing Entergy’s ability to plan for maintenance outages or to build up sufficient funds for unexpected outages.⁹

In CLI-00-22, we ruled that “CAN’s claim of revenue shortfalls essentially challenges the Entergy companies’ cost and revenue projections — precisely the kind of challenge we have[, in prior cases,] indicated would be acceptable if

⁶ See 10 C.F.R. § 50.33(f)(2).

⁷ See LBP-01-4, 53 NRC 121 (2001) (admitting CAN’s revised issue on financial qualifications).

⁸ See CAN’s Petition to Intervene, dated July 31, 2000, at 55.

⁹ See CAN’s Reply Brief, dated Jan. 31, 2000, at 18.

based on sufficient facts, expert opinion, or documentary support.”¹⁰ We then concluded that “CAN’s explanation regarding the unavailability of relevant data entitles it to gain access to the data . . . before being held to our usual specificity requirements.”¹¹ We therefore authorized CAN to review Entergy’s proprietary cost-and-revenue information, subject to a protective order, and then to submit one or more properly formulated and supported financial qualifications issues.¹²

After reviewing the Entergy companies’ proprietary cost-and-revenue data, CAN submitted a new financial qualifications issue (with five subissues):

The license transfer applications do not provide adequate financial assurance for the safe operation of FitzPatrick and Indian Point 3 because the applications do not demonstrate an appropriate margin between anticipated operating costs and revenue projections, and the Entergy applicants do not provide evidence of access to sufficient reserve funding.

- A. [Entergy FitzPatrick’s and Entergy Indian Point’s] Property Tax Agreements with Local Municipalities Are Not Considered in Applicants’ Cost Projections.
- B. Applicants’ Revenue Projections Are Based on Unreasonable Assumptions [particularly concerning the two plants’ capacity factors].¹³
- C. Applicants’ Cost-and-Revenue Projections Are Not Adequate to Cover Common Increases in Operating Costs.
- D. The Supplemental Funding [letters of credit] Available to [Entergy FitzPatrick and Entergy Indian Point] Does Not Offer Adequate Financial Assurance to Protect the Public and Worker Health and Safety.
- E. The Entergy Applicants’ Market Revenue Projections Have Not Been Evaluated to Determine Whether Their Assumptions about Market Prices Are Reasonable. Market Factors in [Entergy FitzPatrick’s and Entergy Indian Point’s] Market Areas Could Introduce Significant Uncertainty and Prevent the Companies from Meeting their Revenue Requirements, Thereby Undermining Applicants’ Ability to Offer Adequate Financial Assurance.¹⁴

¹⁰ See 52 NRC at 300, citing both *GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station)*, CLI-00-6, 51 NRC 193, 207, 208 (2000), and *North Atlantic Energy Service Corp. (Seabrook Station, Unit 1)*, CLI-99-6, 49 NRC 201, 219-21 (1999).

¹¹ See 52 NRC at 300 (footnote omitted).

¹² See *id.*

¹³ The term “capacity factor” refers to “the ratio of the . . . electricity generated, for the period of time considered, to the energy that could have been generated at continuous full-power operation during the same period.” See “Glossary of Nuclear Terms,” found at <http://www.nrc.gov/NRC/EDUCATE/GLOSSARY>.

¹⁴ CAN also proposed three license conditions. See CAN’s Revised Contention on Financial Qualifications, dated Jan. 10, 2001, at 15-18. However, as we find no merit in any of CAN’s arguments regarding financial qualifications, we need not address its proposed conditions.

In support of its positions on these issues, CAN offered affidavits from its two witnesses, Messrs. Edward A. Smeloff and David A. Lochbaum, as expert testimony.¹⁵

The Applicants opposed the admission of CAN's new issue, arguing generally that all or part of it (1) fell outside the scope of the language in CLI-00-22 permitting submission of revised issues, (2) was untimely submitted, and/or (3) failed to meet the Commission's regulatory requirements for admissibility of issues. In support of their arguments, Applicants submitted an Affidavit by Mr. Barrett E. Green, a financial planning document relating to estimates of property tax expenses, and financial information regarding two Entergy subsidiaries (Entergy Global Investments, LLC [''EGI''] and Entergy International Limited [''EIL'']) that had agreed to provide supplemental funding to Entergy FitzPatrick and Entergy Indian Point in the form of letters of credit.¹⁶

In LBP-01-4, the Presiding Officer rejected Applicants' arguments that CAN's issues fell outside what the Commission contemplated in CLI-00-22 or were untimely:

the Commission perceived access to proprietary data as necessary to formulate a contention challenging the cost-and-revenue projections of the Licensees, but not requiring that proprietary data be actually incorporated into the contention itself. Although certain aspects of the contention could perhaps have been formulated earlier on the basis of nonproprietary information, [CAN] could not have . . . formulate[d] the entire issue or . . . determined whether certain of its claims incorporated therein are meaningful without at least having had access to the proprietary data.¹⁷

The Presiding Officer then turned to Applicants' third argument — the admissibility of the individual subissues. He rejected CAN's property-tax and market-price claims (all of subissue A and most of E) but admitted CAN's claims that Entergy should be required to submit estimates for receipts and operating costs "for the period of the license" rather than for "the first five years of operation"¹⁸ and CAN's claim that Entergy's cost-and-revenue projections are implausible (subissues B, C, D, and a small portion of E).

Below, we discuss at length the merits of CAN's financial qualifications claims. First, though, we consider a number of threshold procedural matters.

¹⁵ Applicants have not challenged the expertise of Mr. Lochbaum. However, earlier in the proceeding, Applicants did challenge the expertise of CAN's Mr. Smeloff. At the hearing, however, Applicants expressly stated that they were not challenging Mr. Smeloff's qualifications as an expert witness. *See* Tr. at 208 (Mr. Silberg). We therefore consider the issue waived.

¹⁶ *See* both Applications at 8.

¹⁷ *See* 53 NRC at 126.

¹⁸ Both quoted phrases are found in 10 C.F.R. § 50.33(f)(2). Regarding the confusion as to whether CAN actually raised this issue, *see* note 110, *infra*.

B. The Commission's Examination of Presiding Officer's Admissibility Rulings

Applicants, in their Final Statement of Position, seek Commission review of several (but not all) of the Presiding Officer's admissibility rulings in LBP-01-4 regarding admitted subissues within Issue 3.¹⁹ The Commission's procedural rules governing license transfer adjudications (Subpart M) do not expressly provide a procedural vehicle by which to challenge a Presiding Officer's admissibility rulings, and in that respect they differ from our other adjudicatory procedural rules (*e.g.*, Subparts G and L) where some admissibility rulings may be contested through an interlocutory appeal or a petition for review.²⁰ An unusual confluence of circumstances in this particular proceeding, however, renders appropriate our consideration of the admissibility rulings as to *all five* subissues.

In the initial stages of this proceeding, CAN did not have access to the proprietary versions of the FitzPatrick and Indian Point 3 license transfer applications, so it was unable to submit timely and properly supported issues regarding financial assurance. To rectify this problem, we instructed Entergy to provide CAN with access to those proprietary versions. At the same time, we instructed our Chief Judge to appoint a Presiding Officer. *See* CLI-00-22. Consequently, the responsibility for ruling on the admissibility of CAN's financial assurance issues fell to the Presiding Officer rather than to us. When promulgating the Subpart M rules, however, we had assumed that we would *ourselves* decide the admissibility of any issues in the first instance,²¹ and thus did not include in Subpart M a provision permitting Commission appellate review of a Presiding Officer's admissibility rulings.

In these circumstances, we believe that Applicants, CAN, and Westchester County are all entitled to the same Commission examination of the admissibility of CAN's revised financial assurance issues as we provided for CAN's other issues in CLI-00-22. Therefore, we review *infra* each of the Presiding Officer's admissibility rulings in LBP-01-4 regarding financial qualifications.²² For the most part, we reach the same result as the Presiding Officer.

¹⁹ *See* Applicants' Final Statement of Position, dated April 3, 2001, at 9-11. Applicants refer specifically to Subissue D only, but are essentially reiterating the general argument that they made earlier as to Subissues B, D, and E. *See* Applicants' Response to CAN's Contention on Financial Qualifications, dated Jan. 24, 2001, at 9-11 (Subissue B), 15-16 (Subissue D), and 17-20 (Subissue E).

²⁰ *See generally* 10 C.F.R. §§ 2.714a (Subpart G interlocutory appeals), 2.786(b) (Subpart G petitions for review), 2.1205(o) (Subpart L interlocutory appeals), 2.1253 (Subpart L petitions for review).

²¹ *See* 10 C.F.R. § 2.1308(d)(1).

²² In a more recent license transfer proceeding involving Indian Point Units 1 and 2, we avoided this problem by giving petitioners time both to review the proprietary version of the transfer application and then to provide revised issues — all prior to our threshold admissibility rulings and to our designating a Presiding Officer. *See Consolidated Edison Co. of New York* (Indian Point, Units 1 and 2), CLI-01-8, 53 NRC 225, 228, 230-31 (2001).

C. Applicants' Motion To Strike

Shortly before the hearing, Applicants filed a Motion to Strike nine statements in CAN's Initial Written Statement of Position on Issue #3 and the supporting expert testimony of Messrs. Smeloff and Lochbaum.²³ Applicants argued that CAN's Initial Statement of Position contained numerous attempts to raise new issues and arguments, all unrelated to CAN's Revised Issue 3²⁴ and that the new issues impermissibly addressed the safety of plant operations — not a matter before the Presiding Officer and the Commission in this proceeding.²⁵ At the hearing, the Presiding Officer denied Applicants' Motion to Strike, reasoning that the arguments were sufficiently tied to the admitted financial issues in this proceeding — all of which were themselves grounded in concerns about safe operation, maintenance, and decommissioning of the plants.²⁶ Applicants, in their Final Statement of Position, lodge a *de facto* appeal reiterating their Motion to Strike.

First, although one of CAN's statements (Statement 2, *supra* note 25) does little more than restate Entergy's obligation to demonstrate financial qualifications to operate Indian Point 3 and FitzPatrick safely, and is therefore unobjectionable, the remaining eight statements raise specific safety questions arising out of a shortage of funds. But a concern for safety constitutes the foundation of our

²³ See Applicants' Motion to Strike, dated March 5, 2001, at 6-10. See also Applicants' Final Statement of Position, dated April 3, 2001, at 11.

²⁴ See Applicants' Motion to Strike, dated March 5, 2001, at 6; Applicants' Response to CAN's Revised Contention on Financial Qualifications, dated Jan. 24, 2001, at 13.

²⁵ Applicants, in their Motion to Strike at 12 n.45, had objected to the following CAN arguments, all of which Applicants consider outside the scope of the admitted issues):

- (1) safety "may be sacrificed" because of a purported \$600 million debt resulting from the sale of the units (see CAN's Initial Written Statement of Position on Issue #3, dated Feb. 26, 2001, at 5; see also *id.* at 8);
- (2) Applicants "fail to demonstrate that the two plants can be operated safely for their license terms" because of the financial arrangements that were made to finance decommissioning and the continued operation of the reactors (see *id.* at 6);
- (3) "there is ample evidence that financial pressure can quickly erode the safety of nuclear reactors and create a workforce culture where willingness to conduct needed maintenance and training is undermined by an awareness of tight profit margins." See *id.* at 9.

Similarly, Applicants referred to purportedly new issues that one of CAN's witnesses, Mr. Lochbaum, had raised:

- (4) potential safety concerns arising from "failure to achieve" assumed performance levels (see Testimony of David A. Lochbaum, dated Feb. 23, 2001, at 3-4 ¶ 10);
- (5) possible "disincentives for plant workers to freely report potential safety problems" (see *id.* at 4 ¶ 11);
- (6) the "increased likelihood of worker errors" (see *id.* at 4-5 ¶ 12);
- (7) an increasing "risk to persons living in close proximity to the facilities" (see *id.* at 5 ¶ 13); and
- (8) discussion, at the hearing, of numerous "generic safety issues outlined in his written testimony" (see Tr. 72-98).

Likewise, Applicants cited testimony by CAN's expert witness, Mr. Smeloff, that

- (9) the Power Purchase Agreements "act as an inducement" to avoid required maintenance activities (see Testimony of Edward A. Smeloff, dated Feb. 26, 2001, at unnumbered page 6 ¶ 13).

²⁶ See Tr. 31-33.

financial qualifications rule.²⁷ If the Applicants are found to have met our rule, no further inquiry is necessary. We therefore agree with Applicants that the statements should have been struck from the record as irrelevant, and we reverse the Presiding Officer's ruling to the contrary.²⁸

Next, Applicants seek reversal of the Presiding Officer's purported decision not to strike a late-filed contention which CAN offered for the first time in a footnote to its February 26th Initial Statement of Position on Issue #3, i.e., that the license transfer applications (and the SERs)²⁹ were deficient for failing to discuss relationships among various Entergy companies, particularly regarding the parent company's absorbing of Entergy FitzPatrick's and Entergy Indian Point's retained earnings.³⁰ Applicants complain that the Presiding Officer incorrectly ruled that the lateness of this contention went to the weight it should be given rather than its admissibility.³¹

After examining the entire segment of the transcript dealing with this matter, we conclude that the Presiding Officer in actuality did not rule against Applicants. He stated no fewer than four times that he was *not* admitting any late-filed issues.³² We agree with the Presiding Officer's repeated rulings on admissibility of the late-filed issue. Indeed, CAN itself acknowledged twice that it was belatedly raising the issue³³ and only *at the hearing* did it seek to have the new issue considered for admission under our criteria for late-filed issues as set forth in

²⁷ See *Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 48 (1994). See also 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) ("The Atomic Energy Commission, in drafting the [original financial qualifications] rule, must have intuitively concluded that a licensee in financially straitened circumstances would be under more pressure to commit safety violations or to take safety 'shortcuts' than one in good financial shape").

²⁸ Our decision to strike the eight statements has had no bearing, as a practical matter, on our merits decision because CAN never developed these statements to the point where they might have required merits review.

²⁹ The conditions, limitations, and commitments contained in these SERs were subsequently incorporated into the Staff Orders cited at note 1, *supra*.

³⁰ Regarding the applications, see CAN's Initial Written Statement of Position on Issue #3, dated Feb. 26, 2001, at 12 n.5:

[T]he applications do not explain the financial and legal relationships between [Entergy FitzPatrick] and [Entergy Indian Point] and other Entergy companies described in the organizational chart submitted as Enclosure 7 to the applications. Important matters, such as the disposition of profits and/or retained earnings from [Indian Point 3] and FitzPatrick, or the apparent "cross-funding" of [Entergy FitzPatrick] and [Entergy Indian Point] through Entergy Nuclear Holding Cos. #1 and #2. This information is necessary to understand how [Entergy FitzPatrick] and [Entergy Indian Point]'s joint and several liabilities will be dealt with, as well as on what basis [Entergy FitzPatrick] and [Entergy Indian Point] will be able to rely on retained earnings to fund the operation of the reactors. These deficiencies should have been noted by the Staff under the filing requirements of § 50.33(f)(3)(i).

Regarding the SER, see Tr. 26 (Mr. Judson: "the staff did not propose a condition on the license transfer requiring that the Entergy Companies notify the NRC before the parent company absorbs any retained earnings").

³¹ See CAN's Revised Contention on Financial Qualifications, dated Jan. 10, 2001, at 13, citing Tr. 34.

³² See Tr. 33 (twice), 34, 36.

³³ See CAN's Initial Written Statement of Position on Issue #3, dated Feb. 26, 2001, at 12 n.5; Tr. 25-26 (Mr. Judson).

10 C.F.R. § 2.1308(b).³⁴ Even then, CAN did not seriously attempt to satisfy our late-filing standards — particularly the most important element of good cause. CAN argued merely that it had raised the issue “with adequate specificity”³⁵ and that the NRC Standard Review Plan recommends a Staff investigation of the same issue.³⁶ Such assertions do not come close to satisfying the late-filing requirements of Subpart M.³⁷ Accordingly, we affirm the Presiding Officer’s ruling from the bench rejecting this late-filed issue and, like the Presiding Officer, we decline to consider it.

Finally, Applicants complain that the Presiding Officer ruled that it would be appropriate to admit into evidence information involving “the safety of any plant anywhere in the country.”³⁸ Although we agree with Applicants that such matters are irrelevant,³⁹ we do not construe the record as suggesting that the Presiding Officer ever admitted such issues.

D. Analysis

I. Overview

Many of CAN’s financial-qualifications subissues are interrelated. Although we will analyze and resolve these subissues individually, we believe that the reader can better understand CAN’s overall position if we spell out not only the single subissues (which we summarized above and address in detail in the succeeding sections of the “Financial Qualifications” portion of this Order) but also the interrelationships among those subissues. The interrelationships involve the following cost and revenue concepts: capacity factor (a key determinant of a plant’s revenue),⁴⁰ credit lines (a source of funds to operate and maintain the plants during periods when current and retained revenue is unavailable), operating and maintenance (“O&M”) expenses (a key component in a plant’s costs), and penalties (imposed under power purchase agreements) for failing to achieve certain capacity-factor targets (a potentially key component in a plant’s costs).

³⁴ See Tr. 25-26 (Mr. Judson).

³⁵ See Tr. 25 (Mr. Judson).

³⁶ See Tr. 26 (Mr. Judson).

³⁷ See CLI-00-22, 52 NRC at 319 (“The Commission will not consider new issues or new arguments or assertions related to the admitted issues at the hearing, unless they satisfy our rules for late-filed issues (10 C.F.R. § 2.1308(b))”); *Consolidated Edison Co. of New York* (Indian Point, Units 1 and 2), CLI-01-8, 53 NRC 225, 229-30 (2001) (applying to late-filed issues the Commission’s rule, 10 C.F.R. § 2.1308(b), regarding late-filed petitions to intervene). Cf. *North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 222-23 (1999) (regarding late-filed petition to intervene).

³⁸ See Applicants’ Final Statement of Position, dated April 3, 2001, at 13.

³⁹ See pp. 535-36 and note 136, *infra*.

⁴⁰ See note 13, *supra*, defining “capacity factor.”

These concepts fit together in the following way: Ordinarily, a rate-deregulated plant's revenue comes from the sales of electricity — either on the open market or via power purchase agreements. The plant's sales revenue for a particular period is calculated by multiplying the unit price for a megawatt hour (MWh) of electricity by the number of MWh of power sold. The number of MWh of power sold is in turn computed by multiplying the size of the unit (measured in megawatts) by both its capacity factor (the percentage of total plant capacity actually used during the period to produce electricity) and the number of hours in that period.⁴¹ The plant's revenue pays for the plant's O&M expenses, decommissioning costs, and any underproduction penalties imposed under power purchase agreements. If the revenue exceeds these costs, the remainder is profit to the plant's owners. If the costs exceed the revenue, then the owners must make up the difference through such approaches as drawing down their lines of credit or their retained earnings.

CAN criticizes Applicants for failing to address what CAN believes is a realistic scenario: a relatively low 75% capacity factor combined with a 15% annual increase in operating and maintenance (“O&M”) expenses.⁴² CAN asserts that the low revenues (due to the plants' achieving a mere 75% capacity factor) and the rising O&M costs could combine to prevent Entergy from financially

⁴¹ See Written Direct Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated Feb. 23, 2001, at 8 ¶ 17 (entered into the Record following Tr. 186, and identified as Licensee Exh. 3).

CAN argues that we should give less weight to the testimony of Entergy's expert witnesses — Messrs. Green and Kansler — because they cannot reasonably be expected to evaluate the financial qualifications issues in a way unfavorable to their employer Entergy. See Tr. 194 (Mr. Judson). The same argument seemingly applies as well to Applicants' witnesses regarding the decommissioning funding issue — Messrs. Collins (an employee of PASNY) and Henderson (Vice President and General Tax Counsel for Entergy). We are aware of the longstanding legal axiom, in both this Commission and the courts, that a decisionmaking body may accord less relative weight to a witness who is an employee of a party than to a witness with no such financial ties. See generally *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-85-12, 21 NRC 644, 655 (1985) (emphasis added), *aff'd*, ALAB-818, 22 NRC 651 (1985), *rev'd on other grounds*, CLI-86-13, 24 NRC 22 (1986); *Houston Lighting and Power Co.* (South Texas Project, Units 1 and 2), LBP-79-30, 10 NRC 594, 595 (1979); *Tavoulareas v. Piro*, 759 F.2d 90, 115 n.30 (D.C. Cir. 1985), *vacated in part on other grounds on reh'g*, 763 F.2d 1472 (D.C. Cir.), *modified en banc on other grounds*, 817 F.2d 762 (D.C. Cir.), *cert. denied*, 484 U.S. 870 (1987). But this axiom does not mean that we should discount such testimony altogether. As always, the key to evaluating expert testimony is its logic and persuasiveness. In this proceeding, as in others involving expert witnesses, we have taken into account the financial interests of the witnesses.

⁴² See Declaration of Edward A. Smeloff, dated Jan. 10, 2001, at unnumbered pages 4-5 ¶¶ 14-16; CAN's Revised Contention on Financial Qualifications, dated Jan. 10, 2001, at 9; Testimony of Edward A. Smeloff, dated Feb. 26, 2001, at unnumbered page 8 ¶ 20 (entered into the Record following Tr. 192, and identified as CAN Exh. 2); Tr. 270 (clarifying that the 15% figure was intended to be an average annual figure rather than a cumulative 5-year figure).

CAN directs similar criticism at the Staff's SERs. However, we disregard this criticism because the caliber of the Staff's SERs is not at issue in a license transfer adjudication. See generally *Curators of the University of Missouri*, CLI-95-8, 41 NRC 386, 396 (1995) (“in adjudications, the issue for decision is not whether the Staff performed well, but whether the license application raises health and safety concerns”); *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 213 (1998) (“Adjudications are not the appropriate forum for resolving complaints about NRC Staff conduct”). For the same reason, we disregard CAN's other criticisms of the Staff's SERs. See CAN's Initial Written Statement of Position on Issue #3, dated Feb. 26, 2001, at 7, 12 n.5.

withstanding extended outages at one or both plants — even with its currently available credit lines.⁴³

Further, CAN looks to the capacity factor not only as a subissue in its own right, directly affecting the revenue stream of the two plants, but also as a factor that could exacerbate the costs of those plants.⁴⁴ Specifically, CAN is worried about the penalty clauses that appear in two of Entergy's three power purchase agreements with PASNY. Under these agreements, Entergy FitzPatrick and Entergy Indian Point agree to sell PASNY all of FitzPatrick's output through 2003, 31% of FitzPatrick's output in 2004, and all of Indian Point 3's output through 2004.⁴⁵ However, if either plant operates below an 85% capacity factor, the power purchase agreements entitle PASNY, with certain exceptions, to extract a penalty from these Entergy companies. CAN asserts that, with only a 75% capacity factor, the Entergy companies would incur penalties so significant that they might not be able profitably to operate the plants.⁴⁶ CAN similarly claims that the Entergy companies would find themselves without adequate financial resources if either suffered a 6-month outage (and the resulting penalties) prior to November 21, 2002 — even if the average capacity factor were 85% or higher for the duration of the 5-year period ending December 31, 2005.⁴⁷

CAN's underlying concern is that Entergy might sacrifice safe operation and maintenance if net revenues (revenue less expenses) fall too low.⁴⁸ Where (as here) an adjudication goes to hearing, it is Applicants' burden to show, by a preponderance of the evidence, that they meet our safety standards — in this case, our financial qualifications rule.⁴⁹ As we have cautioned in the past, however, we do not expect "absolute certainty" in the financial arena; it is enough for Applicants to rely on "plausible assumptions and forecasts."⁵⁰ With this general background in mind, we turn now to CAN's specific issues.

⁴³ See Declaration of Edward A. Smeloff, dated Jan. 10, 2001, at unnumbered page 6 ¶ 17; Testimony of Edward A. Smeloff, dated Feb. 26, 2001, at unnumbered page 8 ¶ 20. See generally CAN's Revised Contention on Financial Qualifications Issue, dated Jan. 10, 2001, at 3-4.

⁴⁴ See, e.g., CAN's Final Written Statement of Position on Issues Nos. 2 and 3, dated April 3, 2001, at 27.

⁴⁵ See both Applications at 6; both SERs at 3-4.

⁴⁶ See Declaration of Edward A. Smeloff, dated Jan. 10, 2001, at unnumbered page 6 ¶ 17; CAN's Initial Written Statement of Position on Issue #3, dated Feb. 26, 2001, at 3, 7, 10; Testimony of Edward A. Smeloff, dated Feb. 26, 2001, at unnumbered page 6 ¶¶ 12-13; CAN's Response to Applicants' Initial Statement of Position on Issue 3, dated March 5, 2001, at 3, 12.

⁴⁷ See Rebuttal Testimony of Edward A. Smeloff, dated March 5, 2001, *passim* (entered into the Record following Tr. 192, and identified as CAN Exh. 3); Tr. 268-69.

⁴⁸ See Testimony of Edward A. Smeloff, dated Feb. 26, 2001, at unnumbered page 6 ¶ 13; CAN's Reply to Applicants' Response to CAN's Revised Contention on Financial Qualifications, dated Jan. 31, 2001, at 19; CAN's Initial Written Statement of Position on Issue #3, dated Feb. 26, 2001, at 13; CAN's Final Written Statement of Position on Issues Nos. 2 and 3, dated April 3, 2001, at 27; Tr. 23.

⁴⁹ See *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 47, 63 (2001); *Commonwealth Edison Co.* (Zion Station, Units 1 and 2), ALAB-616, 12 NRC 419, 421 (1980).

⁵⁰ See *Seabrook*, CLI-99-6, 49 NRC at 222. We reiterated that same caution at the outset of this adjudication. See CLI-00-22, 52 NRC at 300.

2. *Subissue A: Whether Entergy FitzPatrick's and Entergy Indian Point's Property Tax Agreements with Local Municipalities Were Considered in Applicants' Cost Projections*

The Presiding Officer rejected this subissue on the ground that

[t]he [tax] payment amounts, which will affect the adequacy of projected revenues and hence the overall contention, will only affect the adequacy of revenue projections in a minimal way. Thus, this subissue does not warrant separate adjudication, although the bottom-line payment amounts must be considered in assessing the overall adequacy of revenue-and-cost projections.⁵¹

CAN has not challenged this ruling.

We agree with the Presiding Officer's *de minimis* finding. We also find support in Applicants' uncontroverted rebuttal statements that they in fact did include the estimated costs of the property tax settlements in the computation of the Transferees' expected costs and that those estimated costs were xxxxxxxxxxxxxxxxxxxx the \$16.28 million in actual tax settlement costs to which CAN referred.⁵²

3. *Subissue B: Whether Applicants' Revenue Projections Are Based on Unreasonable Assumptions*

a. Admissibility

The Presiding Officer ruled that this second subissue raised two admissible questions — one factual and one legal. The factual question concerns the reasonableness of the 85% capacity factor assumed by Applicants.⁵³ The legal question concerns whether the Entergy companies should be required to submit estimates for revenue and O&M costs over the life of the licenses or instead for only the first 5 years following the transfer.⁵⁴

Regarding the factual question, CAN had argued that Applicants' estimated capacity factor of 85% is significantly higher than the capacity factors actually achieved for either reactor from 1994 through 1999 — 52.3% at Indian Point 3 and 80.7% at FitzPatrick. CAN had asserted that the Commission should assume no more than a 75% capacity factor — a level at which neither reactor could

⁵¹ See LBP-01-4, 53 NRC at 127.

⁵² See Applicants' Response to CAN's Revised Contention on Financial Qualifications, dated Jan. 24, 2001, at 8; Affidavit of Barrett E. Green, dated Jan. 22, 2001, at 2 ¶¶ 3-4, appended to Applicants' Jan. 24th Response, *supra*. CAN, in its Reply Brief, could have challenged Applicants' statements, but chose not to do so.

⁵³ See both Applications at 7.

⁵⁴ See LBP-01-4, 53 NRC at 128-30. Regarding the confusion surrounding CAN's intention to raise this issue, see note 110, *infra*.

operate profitably.⁵⁵ The Applicants challenged this subissue on the ground that it was late-filed, and the Presiding Officer rejected that challenge for the reasons stated in p. 511 of this Order, *supra*. We agree with the Presiding Officer's ruling and adopt it as our own.

Regarding the legal question, the Presiding Officer pointed out that,

[u]nder 10 C.F.R. § 50.33(f)(2), an applicant for an operating license (including organizations such as [Entergy FitzPatrick and Entergy Indian Point]) must submit "information that the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated operation costs for the period of the license" (emphasis supplied) [but that t]he section goes on to require that an applicant submit "estimates for total annual operating costs for each of the first five years of operation of the facility." In addition, a "newly-formed entity organized for the primary purpose of . . . operating a facility" must include certain additional information (10 C.F.R. § 50.33(f)(3)), and the Commission may request such a newly formed entity [such as Entergy FitzPatrick and Entergy Indian Point] to submit additional or more-detailed information, including "information regarding a licensee's ability to continue the conduct of the activities authorized by the license." 10 C.F.R. § 50.33(f)(4).⁵⁶

The Presiding Officer rejected Applicants' claim that CAN's challenge to the use of 5-year economic projections is impermissible, untimely, and a collateral attack on NRC regulations. He concluded that section 50.33(f)(2) itself "appears to support the view advanced by CAN, particularly since [Entergy FitzPatrick and Entergy Indian Point] appear to be newly formed entities organized primarily for operating the reactors in question."⁵⁷ The Presiding Officer also relied on our ruling in *Seabrook* that 5-year projections are not always decisive:

Section 50.33(f)(2) nowhere declares that the proffering of 5-year projections will, *per se*, prove adequate in any and all cases. To the contrary, the rule contains a "safety-valve" provision explicitly reserving the possibility that, in particular circumstances, and on a case-by-case basis, additional protections may be necessary. *See* 10 C.F.R. § 50.33(f)(4) (to ensure adequate funds for safe operation, NRC may require "more detailed or additional information" if appropriate). . . . [The Intervenor] is entitled to argue that *this case* calls for additional financial qualification measures beyond 5-year projections and that the Applicants therefore have not met their burden under section 50.33(f)(2) to satisfy Commission financial qualification requirements.⁵⁸

The Presiding Officer also concluded that CAN's claim was a challenge not to section 50.33(f)(2) itself, but only to Applicants' interpretation of that rule. We agree with the Presiding Officer's ruling on the admissibility of this legal question, and we adopt it as our own.

⁵⁵ *See* CAN's Revised Contention on Financial Qualifications, dated Jan. 10, 2001, at 7; Declaration of Edward A. Smeloff, dated Jan. 10, 2001, at unnumbered page 5 ¶ 14.

⁵⁶ *See* LBP-01-4, 53 NRC at 128-29.

⁵⁷ *See id.* at 129.

⁵⁸ *See id.*, quoting CLI-99-6, 49 NRC at 220.

b. *Merits*

(1) **THE APPROPRIATENESS OF APPLICANTS' ESTIMATED CAPACITY FACTOR**

CAN asserts that the actual capacity factors for the Indian Point 3 and FitzPatrick reactors in recent years have been so far below Applicants' prospective capacity-factor estimate of 85%⁵⁹ that they undermine the estimate. Specifically, CAN claims that Indian Point 3's average capacity factor for the years 1994-1999 was only 52.3% and that FitzPatrick's average capacity factor for that same period was only 80.7%. CAN also points out that Indian Point 3 operated at a capacity factor of less than 75% for 4 of the last 6 years and that FitzPatrick operated below 75% for 3 of the last 6 years. Based on these figures, CAN urges the Commission to assume, for purposes of determining financial qualifications, no more than a 75% capacity factor for the two plants. The conclusion and gravamen of CAN's argument is that such a 75% capacity factor would result in the unprofitable operation of both reactors and in the depletion of Entergy's reserve funding — especially when paired with (i) what CAN considers unrealistically low cost projections and (ii) the potential penalties for underproduction of electricity.⁶⁰

Applicants dispute CAN's numbers, supporting arguments, and ultimate conclusion. Applicants respond that they based their 85% capacity-factor projections on "recent performance of the [Indian Point] 3 and FitzPatrick facilities [under PASNY's management], the historic performance of [other] units owned by the Entergy Corporation . . . and affiliated companies, and the extent to which, based on judgment and experience, it is reasonable to expect that [Entergy Nuclear Operations] will be able to improve on the performance of nuclear generation assets after acquiring them."⁶¹ More specifically, Applicants assert that Indian Point 3 has attained average capacity factors of 92% during the last 3 years (1998-2000) and 93% during the last 2 years, and that FitzPatrick achieved average capacity factors of 83% and 89% during those same two

⁵⁹ See both Applications at 7.

⁶⁰ See CAN's Revised Contention on Financial Qualifications, dated Jan. 10, 2001, at 6-8; Declaration of Edward A. Smeloff, dated Jan. 10, 2001, at unnumbered page 5 ¶ 14; Testimony of Edward A. Smeloff, dated Feb. 26, 2001, at unnumbered pages 6-7 ¶¶ 14-15; CAN's Final Written Statement of Position on Issues Nos. 2 and 3, dated April 3, 2001, at 28. We discuss these two paired factors in sections I.D.4 (p. 534 *et seq.*) and I.D.3.b(2) (p. 523 *et seq.*) of this Order, respectively.

⁶¹ See Applicants' Initial Written Statement of Position on Issue 3 (CAN's Revised Contention on Financial Qualifications), dated Feb. 26, 2001, at 3; Written Direct Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated Feb. 23, 2001, at 5 ¶ 11. Given that Entergy Nuclear Operations is a new company and thus has no "experience," we assume that Applicants intended to refer to the experience of other Entergy organizations.

periods.⁶² In further support of Entergy's ability to attain or exceed 85% capacity factors at these two plants, Applicants point to the average capacity factor of all Entergy nuclear plants of 85.5% in the last 2 years and 85.7% in the last 3 years.⁶³ Finally, Applicants express confidence that Entergy's proven ability both to operate nuclear plants safely and efficiently and to integrate new plants into its system⁶⁴ will result in the projected 85% capacity factors for FitzPatrick and Indian Point 3.⁶⁵

In determining the merits of this subissue, we accord great weight to the recent capacity factors of the two plants.⁶⁶ This is because these numbers reflect not only the recent condition of the plants but also the recent caliber of work expended by the same employees who will, in the future, be performing the plants' day-to-day operation and maintenance.⁶⁷ We find this information considerably more relevant than the capacity factors at other Entergy (or non-Entergy) nuclear plants that may be in quite different physical condition and operated by a quite different caliber of labor force. Entergy has made no meaningful attempt to equate FitzPatrick and Indian Point 3 with other plants in these two respects. And although we find some assurance in the past successes of the three Entergy Applicants' parent and affiliates (as reflected in Entergy's second and third arguments) and also in the

⁶² See Applicants' Initial Written Statement of Position on Issue 3 (CAN's Revised Contention on Financial Qualifications), dated Feb. 26, 2001, at 4; Written Direct Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated Feb. 23, 2001, at 6 ¶ 13; Rebuttal Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated March 2, 2001, at 3 ¶ 9. See also FitzPatrick SER at 4 (listing FitzPatrick's capacity factors for 1998 and 1999 as 73.2% and 93.9%, respectively); Indian Point 3 SER at 4 (listing Indian Point 3's capacity factors for 1998 and 1999 as 89.8% and 85.99%, respectively).

We note that the agency has subsequently revised FitzPatrick's 1999 capacity factor to 93.5% and Indian Point 3's 1999 capacity factor to 86.0%. See "NRC Information Digest," NUREG-1350 (Vol. 12, Oct. 2000), found at the NRC Website at <http://www.nrc.gov/NRC/NUREGS/SR1350/V12/sr1350v12.html>. We also note that Applicants' 93% figure for Indian Point 3 is inconsistent with the 2-year average of 87.9% as calculated from the numbers in NUREG-1350.

⁶³ See Applicants' Initial Written Statement of Position on Issue 3 (CAN's Revised Contention on Financial Qualifications), dated Feb. 26, 2001, at 4; Written Direct Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated Feb. 23, 2001, at 7 ¶ 15.

⁶⁴ See note 2, *supra*.

⁶⁵ See Applicants' Initial Written Statement of Position on Issue 3 (CAN's Revised Contention on Financial Qualifications), dated Feb. 26, 2001, at 4; Written Direct Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated Feb. 23, 2001, at 6-7 ¶ 14 and at 8 ¶ 16.

⁶⁶ In addition to Applicants' 2- and 3-year figures, Applicants point out that the capacity factors for Indian Point 3 and FitzPatrick were 95.1% and 97.2%, respectively, for the 41 days in 2000 that Entergy actually owned the plants. See Written Direct Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated Feb. 23, 2001, at 5 ¶ 10. We decline to rely on capacity factors for so short a period.

⁶⁷ The Entergy Applicants have represented that they will retain most of the two plants' current labor force. See both Applications at 2 ("Upon closing, all employees within [PASNY's] Nuclear Generation Department, and certain other employees supporting the Nuclear Generation Department, will become employees of" Entergy Nuclear Operations); Indian Point 3 Application at 17 ("Personnel currently responsible for providing technical support will continue to do so after the transfer"); FitzPatrick Application at 15 (same); Tr. 259 (Mr. Kansler: "I agree that the people primarily operating these plants are still ex-NYPA [i.e., ex-PASNY] people. . . . So, yes, it's all ex-NYPA people").

Entergy companies' ability to benefit from each other's experiences, our assurance is lessened by the fact that Entergy Operations Inc. (operator of Entergy's fleet in the South) is not the designated operator of either FitzPatrick or Indian Point 3.⁶⁸ Regardless, any such assurance would hardly be enough to offset a history of low capacity factors for the two plants at issue here.

Turning then to the proffered capacity factors themselves, we are faced with a choice between two sets of "recent" capacity-factor averages as proxy for future capacity factors: CAN's figures reflecting a 6-year period and Applicants' reflecting 2- and 3-year periods. We believe that Applicants make by far the stronger case for their proxies.

Applicants explain that the higher performance levels during the last 2 and 3 years are the result of plant improvements during PASNY's prolonged self-imposed outages in the early 1990s,⁶⁹ recent PASNY management changes, and PASNY's recently demonstrated ability to execute a 38-day refueling outage at FitzPatrick and a 40-day refueling outage at Indian Point 3 (both of which were significantly shorter than previous outages at the respective plants).⁷⁰ Applicants further explain that they anticipate no maintenance outages similar in duration to those of the early and mid-1990s.⁷¹

In our view, these facts and explanations provide strong support for Applicants' position that the more recent 2- and 3-year periods are better indicators of the two plants' future performance than a 6-year period containing weaker management and much longer outages. CAN gives us no reason to doubt any of these facts

⁶⁸ See CAN's Final Written Statement of Position on Issues Nos. 2 and 3, dated April 3, 2001, at 28. CAN concurs that we should at least "give some weight to [Entergy's capacity factor] record at the other plants they've owned"). See Tr. 258 (Mr. Smeloff). See also CAN's Final Written Statement of Position on Issues Nos. 2 and 3, dated April 3, 2001, at 28 ("Entergy's record at its reactors in Region IV . . . is not as relevant as the operating history of the reactors being transferred").

Messrs. Green and Kansler (Entergy's witnesses) raise a fourth justification — that their estimate of an 85% capacity factor falls almost exactly in the middle of the capacity factors of plants nationwide. See Rebuttal Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated March 2, 2001, at 4 ¶ 10. We do not find this reference to the experience at all other United States plants instructive on the issue of the appropriate capacity factor for an individual plant. See note 136, *infra*.

⁶⁹ See Applicants' Initial Written Statement of Position on Issue 3 (CAN's Revised Contention on Financial Qualifications), dated Feb. 26, 2001, at 4; Written Direct Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated Feb. 23, 2001, at 6 ¶ 13. See also Tr. 72 (Mr. Lochbaum: Indian Point 3 had a 0% capacity factor in 1994); Tr. 302 (Mr. Smeloff: FitzPatrick had 100% downtime and a 0% capacity factor in 1992, and Indian Point had a 13.6% capacity factor in 1993); CAN's Final Written Statement of Position on Issues Nos. 2 and 3, dated April 3, 2001, at 28-29 (Indian Point 3 had a 0% capacity factor in 1994 and was shut down for more than 2 years between 1993 and 1995; FitzPatrick was shut down for more than 1 year between 1991 and 1992).

⁷⁰ See Applicants' Initial Written Statement of Position on Issue 3 (CAN's Revised Contention on Financial Qualifications), dated Feb. 26, 2001, at 4; Written Direct Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated Feb. 23, 2001, at 8 ¶ 16. See generally Tr. 259 (Mr. Kansler: PASNY "in the past three years, at both plants have [*sic*] shown remarkable improvement in running its plant [*sic*]"); Tr. 260 (Mr. Kansler: PASNY "ran these units well for the past three years. . . . [and] did a very good job bringing these units up to snuff"); Tr. 350 (Mr. Kansler, making similar statements).

⁷¹ See Tr. 254-55.

and explanations. Nor does it offer any other justification why CAN's own 6-year period provides the better proxy for future capacity factors. CAN merely says that, "[b]ecause the Entergy applicants are newly formed entities, CAN believes that NRC must look back farther than 3 years in order to determine whether the 5-year projections are reasonable."⁷² CAN provides no support in the record or in logic for this unsubstantiated "belief." For the reasons set forth above, we find Entergy's projected 85% capacity factor — based on recent developments at FitzPatrick and Indian Point 3 — more plausible than CAN's 75% projection.

(2) THE EFFECT ON COSTS IF THE CAPACITY FACTOR TARGET IS MISSED AND UNDERPRODUCTION PENALTIES ARE IMPOSED

Even if CAN's capacity-factor predictions were to prove accurate, such a development would make no difference to Entergy's financial qualifications unless one or both of two further events transpired: (1) the financial penalties resulting from the reduced capacity factor would lower the available retained earnings and credit lines to the point that the plants could not be safely operated and maintained, or (2) the loss of revenue resulting from the reduced capacity factor would have the same effect. We consider the penalties question first.⁷³

We find that the record provides an insufficient basis to justify CAN's concern that the penalties from failure to meet the capacity-factor target have a realistic likelihood of jeopardizing Entergy's financial ability to operate and maintain the plants safely. Applicants convincingly assert that, even applying CAN's estimated 75% capacity factor (and CY2000 average prices), Indian Point 3 would still earn \$xxxx million in net revenue during the 5-year period of 2001-2005, and FitzPatrick during the same period would lose only \$xxx million — an amount easily covered by a \$20 million credit line available from EGI.⁷⁴ Applicants further point out that, even were FitzPatrick to suffer this hypothetical \$xxx million loss, it would still incur no penalties.⁷⁵

CAN does not challenge Applicants' dollar figures, as such, or the calculations underlying them.⁷⁶ These uncontroverted figures give us confidence in the

⁷² See CAN's Revised Contention on Financial Qualifications Issue, dated Jan. 10, 2001, at 7. (The context of CAN's statement makes clear that CAN is referring to capacity-factor projections rather than the 5-year cost-and-revenue projections.)

⁷³ We address the loss-of-revenue question in our discussion of Subissue C, beginning at p. 534 of this Order, *infra*.

⁷⁴ See Applicants' Initial Written Statement of Position on Issue 3 (CAN's Revised Contention on Financial Qualifications), dated Feb. 26, 2001, at 5; Written Direct Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated Feb. 23, 2001, at 11-12 ¶ 20; Applicants' Response to CAN's Initial Statement of Position on Issue 3, dated March 5, 2001, at 5; Rebuttal Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated March 2, 2001, at 5 ¶ 12; Tr. 345-49 (Mr. Green).

⁷⁵ See Written Direct Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated Feb. 23, 2001, at 12 ¶ 20.

⁷⁶ See Tr. 250-51 (Mr. Smeloff).

conservatism of Applicants' projected capacity factor. Also, for the reasons set forth below, we find the "penalty" hypothetical offered by Applicants more convincing than a corresponding "penalty" hypothetical offered by Mr. Smeloff, CAN's expert witness, concerning Indian Point 3 (or his more general arguments regarding FitzPatrick).

Entergy, in its hypothetical, provides convincing *plant-specific* justifications for the assumption of only a 30- to 40-day refueling outage every 2 years and occasional shorter maintenance-related outages. Entergy initially explains why it foresees no lengthy outages for time-consuming nonroutine maintenance matters such as replacement of steam generators, reactor vessels, and core shrouds at the two plants.⁷⁷ Next, Entergy explains that its estimated length of refueling outages at the FitzPatrick and Indian Point 3 plants (days numbering in the mid-30s, declining over 5 years to about 30 days)⁷⁸ is generally consistent with Indian Point 3's and FitzPatrick's recent refueling outages of 38 and 40 days, respectively.⁷⁹ Finally, Entergy calculates that it could reach its 85% capacity-factor target even if it had 18 days of routine maintenance outages (over and above a 36-day refueling outage, during which it would also perform maintenance) in refueling years and 54 days of routine maintenance outages in nonrefueling years.⁸⁰ We find these three plant-specific explanations persuasive, and CAN has given us no reason to question them.⁸¹

By contrast, only a small portion of Mr. Smeloff's Indian Point 3 hypothetical is based on facts and argument specific to that plant, and that portion either is unsupported by record evidence or ignores the record evidence supportive of Entergy's position. The remainder of the Smeloff hypothetical appears to rest on unjustified surmise. Because the Smeloff hypothetical serves as a centerpiece of CAN's "penalty" issue, we consider each of the hypothetical's elements in some detail.

Six-Month Outage at Indian Point 3

In the first portion of the hypothetical, Mr. Smeloff poses an example in which he claims Entergy could find itself without sufficient funds to operate and maintain the plants safely. Mr. Smeloff assumes a 6-month outage at Indian Point 3 occurring prior to November 21, 2002. He argues that Entergy would have to pay contractual penalties to PASNY if the capacity factor falls under

⁷⁷ See notes 89 and 118, *infra*.

⁷⁸ See Tr. 243 (Mr. Green). See also Tr. 244 (Mr. Kansler, referring to "a 36-day outage").

⁷⁹ See note 70, *supra*.

⁸⁰ See Tr. 244-45 (Mr. Kansler). As noted *supra*, Entergy plans to refuel these plants every 2 years (Tr. 245, Mr. Kansler) — hence the distinction between the refueling and nonrefueling years.

⁸¹ Entergy also offers the following non-plant-specific justification for its hypothetical: the shortening of the refueling outage period will result in significant part from applying to these two plants the lessons already learned at the other nuclear plants run by Entergy affiliates. See Tr. 246 (Mr. Kansler).

80% during the first 2 years of PASNY's power purchase agreement with Entergy (a period that extends to November 21, 2002). Mr. Smeloff calculates that Entergy's penalties "would probably exceed \$45 million assuming the cost of replacement power at \$53.74 per megawatt hour" — the annual average price of electricity in the year 2000 for the area of New York State serviced by the Indian Point 3 plant.⁸²

Mr. Smeloff also seeks to bolster his 6-month figure by referring cryptically at the hearing to "the guideline that there be sufficient funds to go through a six-month period of time."⁸³ We assume that Mr. Smeloff means to refer here to the 6-month outage posited in NUREG-1577. Mr. Smeloff, however, never explains why the 6-month outage reference from NUREG-1577 accurately reflects a likely outage period for Indian Point 3. Moreover, Mr. Smeloff misreads the language of NUREG-1577. Contrary to his view, it does not establish a standard that a plant have sufficient cash to pay O&M costs during a 6-month outage. Rather, it provides merely that a transferee can satisfy our financial qualifications requirements by *either* filing adequate cost-and-revenue projections for a 5-year period, *or* holding a sufficiently high bond rating, *or*, "if an applicant cannot meet these criteria, . . . [submitting] information on cash or cash equivalents . . . sufficient to pay fixed operating costs during an outage of at least 6 months."⁸⁴

In other words, under the guidance set out in NUREG-1577, the NRC Staff does not consider an applicant's financial wherewithal to handle a 6-month outage unless the Staff first concludes that the applicant's cost-and-revenue projections (or its bond rating) are inadequate. No such inadequacy is present here. We find below (at pp. 530-37) that Entergy has submitted plausible 5-year projections upon which we can rely. Neither our financial qualifications rule nor the guidance document to which Mr. Smeloff referred suggests a further requirement to set aside funds to cover a 6-month outage.

The record in this proceeding, in any event, does not persuade us of the probability of a 6-month outage at Indian Point 3. Mr. Smeloff points out that, within the last 6 years, twenty-three plants with a 75% or lower capacity factor have had outages of at least 6 months.⁸⁵ His references to the experiences at other plants are not helpful in informing our consideration of what to expect at Indian Point 3 — especially given CAN's failure to support adequately its 75% capacity assumption (*see* immediately preceding section). CAN and Mr. Smeloff offer other, similar industrywide numbers to support their position that a 6-month

⁸² See Rebuttal Testimony of Edward A. Smeloff, dated March 5, 2001, at unnumbered page 2 ¶¶ 3-5; Tr. 250-52 (Mr. Smeloff), 269 (Mr. Smeloff), 279 (Mr. Smeloff, positing a \$48 million penalty for Indian Point 3).

⁸³ See Tr. 257 (Mr. Smeloff).

⁸⁴ See "Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance," NUREG-1577 (Rev. 1, March 1999), at 5.

⁸⁵ See Tr. 247-48, 268-69 (both Mr. Smeloff).

outage is reasonable to anticipate at Indian Point 3.⁸⁶ These supporting data fail for the same reason as a basis for Mr. Smeloff's argument. CAN's historical data show merely that outages of 6 months (or more) are possible, not that such outages are particularly likely at Indian Point 3.⁸⁷

Finally, Mr. Smeloff relies on two bases that do specifically relate to Indian Point 3. His first plant-specific basis is his assertion that the plant could not, from the perspective of cash flow, survive a 6-month outage occurring prior to November 21, 2002. Again, however, he offers no evidence for his underlying premise that Indian Point 3 is currently vulnerable to such an extended outage. His second plant-specific basis is that both FitzPatrick and Indian Point 3 have already experienced back-to-back outages, each of which exceeded 1 year.⁸⁸ But the record suggests that, during those shutdowns, PASNY successfully addressed the same kinds of problems that CAN indicates could lead to future major maintenance outages. We find persuasive Mr. Kansler's following testimony on this matter:

[T]hese plants . . . have already been through long shutdowns in the past [and] have addressed a lot of those issues [i.e., those that would lead to lengthy maintenance outages], so that the probability in our mind that we're going to run up against a six-month outage is extremely low. . . . [A] six-month shutdown. Sure, the possibility exists, but we don't foresee what's going to drive us into that situation over the next five years.⁸⁹

Mr. Smeloff does not address how PASNY's curative work affects the likelihood of a lengthy outage.

Twenty-Million-Dollar Net Loss at Indian Point 3

In the second portion of Mr. Smeloff's Indian Point 3 hypothetical, he states that he has calculated at more than \$100 million Entergy Indian Point's lost

⁸⁶For instance, CAN notes that, during the last 15 years, nearly a quarter of the nation's nuclear power plants have been shut down for a year or more, that there were forty 6-month outages at nuclear plants in the United States from 1994 through 1999, and that nineteen 12-month outages occurred during that same 6-year period. See CAN's Revised Contention on Financial Qualifications Issue, dated Jan. 10, 2001, at 10 n.11; Declaration of Edward A. Smeloff, dated Jan. 10, 2001, at unnumbered page 6 n.6. See also Declaration of Edward A. Smeloff, dated Jan. 31, 2001, at unnumbered pages 3-5 ¶9 (listing numerous outage times at various reactors — including simultaneous outages of multiple-unit reactors — that far exceed 6 months). See also Tr. 247-48 and 268-69 (where Mr. Smeloff notes that 23 plants have experienced outages of at least 6 months in the last 6 years). CAN and Mr. Smeloff also offer 12 examples of utilities having two or more plants out of service simultaneously. See Testimony of Edward A. Smeloff, dated Feb. 26, 2001, at unnumbered pages 9-10 ¶22.

⁸⁷To the extent Mr. Smeloff claims that the difference between an 85% capacity factor and a 75% capacity factor over a 5-year period equates to 6 months of plant downtime (see CAN's Final Written Statement of Position on Issues Nos. 2 and 3, dated April 3, 2001, at 29), we find his assertion flawed in that it rests on data for other plants and is thus not sufficiently tied to Indian Point 3 to help us in our deliberations (see note 136 and accompanying text at pp. 536-37, *infra*). Also, as discussed in the preceding section of this Order, CAN has not demonstrated that we should use its 75% capacity-factor estimate rather than Applicants' 85% figure.

⁸⁸See Tr. 248.

⁸⁹See Tr. 254-55. See also the written and oral testimony of Messrs. Green and Kansler, cited at note 118, *infra*.

statement that “Applicants’ Power Purchase Agreement imposes a requirement that FitzPatrick and Indian Point 3 be run at average capacity factors of 85% [and] if [they] do not satisfy this requirement, they will face penalties”⁹⁷ suggests a simplistic reading of the quite complex penalty provisions of the power purchase agreements, in view of the agreements’ many exceptions. Mr. Smeloff’s testimony (both written and oral) does not provide sufficient details to persuade us otherwise.

(Mr. Green). Given the significance of the penalty issue in this proceeding, we quote in full the description found in Messrs. Green’s and Kansler’s Direct Testimony:

There are three PPAs [power purchase agreements] between the Entergy companies and [PASNY]. The first PPA is between [Entergy Indian Point] and [PASNY] for 100% of [the Indian Point 3 plant’s] output from the closing until December 31, 2004 and is priced at \$36/MWh [megawatt hour] (“ENIP PPA”). The second PPA is between [Entergy FitzPatrick] and [PASNY] for a portion of [the FitzPatrick plant’s] output from the closing until December 31, 2004 and is priced at \$32/MWh (“ENF PPA1”). The power sold under the ENF PPA1 ranges from 45.45% to 30.9% of [the FitzPatrick plant’s] output depending upon the year. The third PPA is between [Entergy FitzPatrick] and [PASNY] for the balance of [the FitzPatrick plant’s] output from closing until December 31, 2003 and is priced at \$29/MWh (“ENF PPA2”). ENF PPA2 is for all of [the FitzPatrick plant’s] output not sold under ENF PPA1.

ENIP PPA and ENF PPA1 contain provisions that potentially impose financial penalties if the plants operate below an average capacity factor of 85%. ENF PPA2 does not contain any such provisions, and there are no performance obligations or penalties under ENF PPA2. Under ENIP PPA and ENF PPA1, if one of the plants operates below 85%, the relevant Entergy company [Entergy FitzPatrick and Entergy Indian Point] must pay [PASNY] the difference between the PPA price and the market price to the extent of the shortfall. Should such a shortfall occur, the financial obligation would be calculated by subtracting the PPA price from the market price in every hour that the unit was not operating or operating at reduced capacity. That set of data would be weighted averaged and the weighted average amount that [PASNY] paid above the PPA price would be multiplied times the supply shortfall in MWh. If the average amount that [PASNY] paid above the PPA price was negative (i.e., if [PASNY] was able to purchase replacement energy on the open market at an average price lower than the PPA price), there would be no financial obligation since [PASNY] had not suffered a financial loss and did not need to be made whole.

The capacity factor financial penalties are based on averaging capacity factor over two periods — period one, running from the date of closing of the sale of the plants to the second anniversary of the closing date (November 21, 2000 to November 21, 2002 or 2 years), and period two, which runs from the day after the end of period one until December 31, 2004 (November 22, 2002 to December 31, 2004 or 2 years and 40 days). These periods roughly correspond to the two-year operating cycle of the units which includes one planned refueling outage for each unit in each period. There are only two points in time when [Entergy FitzPatrick and Entergy Indian Point] would potentially become obligated to make a payment to [PASNY], the end of period one (November 21, 2002) and the end of period two (December 31, 2004).

The ENIP PPA and ENF PPA1 also allow up to a 5% carryover from period one to period two, both positive and negative. This means that if a plant operates as low as 80% capacity factor in period one, then no financial “true up” (payment to [PASNY]) will be required until the end of period two. If the capacity factor in period two exceeds the guaranteed 85% level, then excess generation in period two will count toward the deficit in period one. Should a plant operate below 80% in period one, the relevant Entergy company would incur an obligation to pay [PASNY] the financial true up for the capacity factor deficit below 80% at the end of period one.

If generation in period one exceeds the guaranteed level, then that excess generation (up to 5%) will carry over to period two. Therefore if a unit operates at 90% capacity factor in period one, that unit can operate at 80% capacity factor in period two without incurring a financial obligation to [PASNY]. Operation above 90% capacity factor in period one does not carry over into period two. However, the additional revenues associated with operation above an 85% capacity factor are significant and would improve overall financial performance (higher net income and retained earnings) above the projections presented in the application.

In summary, a plant can operate below an 85% capacity factor for all or part of the five-year period and not incur a financial penalty if (a) the plant operates above the 85% capacity factor to an extent that offsets the shortfall, or (b) the average market price is below the PPA price during the periods when the plant operates below an 85% capacity factor.

⁹⁷ See CAN’s Revised Contention on Financial Qualifications Issue, dated Jan. 10, 2001, at 6 (footnote omitted).

Mr. Smeloff also argues that he considers it quite possible for the loss in income at Indian Point 3 to be significantly greater than suggested by his hypothetical \$20 million figure, due to his use of a “very conservative” price per megawatt hour of \$53.74. He explains that the price of electricity for the first 2 months of 2001 exceeded \$95 per megawatt hour and that prices in this part of New York State typically rise even higher during the summer.⁹⁸ Mr. Smeloff’s argument ignores Entergy’s practice of conducting its planned outages during periods of slack demand and low market prices.⁹⁹ This practice would reduce both the likelihood and the amount of a penalty because “a large portion of the market prices that would be averaged into any shortfall calculation will come from lower price periods during which the planned outages are conducted.”¹⁰⁰ We also do not understand how Mr. Smeloff can conclude that his \$53.74 price figure is “very conservative,” given that he acknowledges this as the area’s “average price for the year 2000.”¹⁰¹

FitzPatrick

In addition to his hypothetical regarding the Indian Point 3 plant, Mr. Smeloff also addresses the FitzPatrick plant, although in much more general terms. He explains that the average price of electricity in FitzPatrick’s part of New York State is currently (i.e., in January and February, and perhaps early March of 2001) \$40.00 per megawatt hour — \$8.00 higher than the rate specified in the FitzPatrick power purchase agreement. He does not calculate the penalties and lost revenue that would result from a 6-month outage at that plant. Rather, he argues that “it is reasonable to assume that [FitzPatrick] could suffer substantial penalties for production shortfalls,”¹⁰² and also that, due to the interlocking nature of the two plants’ letters of credit, the FitzPatrick plant could experience cash-flow problems if it has a 75% capacity factor at the same time as Indian Point 3 experiences an extended outage.¹⁰³ He further notes that Entergy’s experts have not analyzed the cash flow of either plant in the event that there are simultaneous extended outages at both.¹⁰⁴

Mr. Smeloff fails to offer any calculations in support of his conclusions, nor does he offer any justification why we should consider the current electricity rates

⁹⁸ See Rebuttal Testimony of Edward A. Smeloff, dated March 5, 2001, at unnumbered page 3 ¶ 7.

⁹⁹ See Rebuttal Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN’s Revised Contention on Financial Qualifications, dated March 2, 2001, at 5 ¶ 13.

¹⁰⁰ See *id.*

¹⁰¹ See Rebuttal Testimony of Edward A. Smeloff, dated March 5, 2001, at unnumbered page 3 ¶ 7 (emphasis added). See also Rebuttal Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN’s Revised Contention on Financial Qualifications, dated March 2, 2001, at 6 ¶ 13 (indicating that the average price for electricity from Indian Point 3 for 2000 was \$53.74 per megawatt hour).

¹⁰² See Rebuttal Testimony of Edward A. Smeloff, dated March 5, 2001, at unnumbered pages 3-4 ¶ 8.

¹⁰³ See *id.* at unnumbered page 4 ¶ 9.

¹⁰⁴ See *id.* at unnumbered page 4 ¶ 10.

for January and February (and perhaps early March) to be an appropriate proxy for the *average annual* rates. The electricity rates in New York State are higher in the winter and summer than in the spring and fall.¹⁰⁵ And as Applicants point out, “a large portion of the market prices that would be averaged into a shortfall computation under the [power purchase agreements] will come from lower price periods during which scheduled plant outages will be conducted [and] the most recent (2000) average prices for [FitzPatrick] are well below the peaks cited by Mr. Smeloff.”¹⁰⁶

Further, the power purchase agreements’ penalty provisions permit Entergy to average certain overproduction periods (i.e., 2-year periods when the capacity factor exceeds 85%) with underproduction periods, so that the failure to achieve the 85% goal at FitzPatrick during a particular 2-year period will not necessarily result in a penalty. Moreover, a multiyear average capacity factor of less than 85% at FitzPatrick would not trigger a penalty if the average market price is less than the power purchase agreement price during the period when the plant operates below an 85% capacity factor.¹⁰⁷ It is unclear from the record whether Mr. Smeloff takes either of these factors into account when reaching his conclusions regarding FitzPatrick (just as it was unclear whether he took such complexities into account in his “penalty” arguments regarding Indian Point 3).

**(3) THE NEED FOR FINANCIAL QUALIFICATIONS INFORMATION
(COST-AND-REVENUE PROJECTIONS) BEYOND ENTERGY’S
PROFFERED 5-YEAR PROJECTIONS**

There can be no doubt that Applicants have provided all the 5-year projected cost-and-revenue data required by 10 C.F.R. § 50.33(f)(2) — a step that would, in most instances, resolve the question whether an applicant had demonstrated financial qualifications. Given the Commission’s holding in *Seabrook*, quoted *supra* at p. 519, there can likewise be no doubt that the Commission has the authority to seek further financial qualifications information from Applicants in those unusual instances in which we believe the 5-year projections are inaccurate or insufficient. The question here is whether this proceeding qualifies as one of those unusual instances in which an applicant’s 5-year data do not provide us the requisite “reasonable assurance” that the Transferees can obtain the funds

¹⁰⁵ See Tr. 254 (Mr. Green: Electricity demand “is probably slightly higher in the summer on air conditioner load than it is in the winter on heating load. But it is not surprising to me that the January/February price for power in New York is relatively high compared to an average price for power in New York”).

¹⁰⁶ See Applicants’ Response to CAN’s Initial Statement of Position on Issue 3, dated March 5, 2001, at 6; Rebuttal Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN’s Revised Contention on Financial Qualifications, dated March 2, 2001, at 5 ¶ 13.

¹⁰⁷ See Direct Written Testimony of Messrs. Green and Kansler, quoted at note 96, *supra*. See also Applicants’ Initial Written Statement of Position on Issue 3 (CAN’s Revised Contention on Financial Qualifications), dated Feb. 26, 2001, at 5.

necessary to operate and maintain the two plants during the remaining periods of their respective licenses.¹⁰⁸ Were we to conclude that the 5-year projections are either inaccurate or insufficient to provide this assurance, then we could require further information and, if appropriate, impose conditions on the license transfer.

CAN asserts that, under the particular facts surrounding these applications, the 5-year data provide insufficient assurance of the Entergy companies' financial qualifications.¹⁰⁹ CAN requests that Applicants be required to submit cost-and-revenue data through the year 2008, due to the fact that Entergy's \$106 million annual contractual obligations to PASNY (for the purchase of the facilities and fuel) continue through 2007.¹¹⁰ According to CAN, the inclusion of the year 2008 would show the impact of the payments for facilities and fuel on Entergy's projections for the years 2001-2007.¹¹¹

We do not see how the additional data that CAN requests would assist the financial qualifications inquiry in this proceeding. Any projected data for the outlying years 2006-2008 would, at least in the current factual situation, be so speculative as to be unworthy of our reliance. At the hearing, CAN said much the same thing.¹¹² Applicants would have us impose an absolute bar on the use of projected data beyond the regulatorily specified 5-year period.¹¹³ We do not go so far. Determinations of "how speculative is too speculative" need to be made on a case-by-case basis.

When we set the time period at 5 years for our projected cost-and-revenue data requirement, we recognized that such projected data become less and less

¹⁰⁸ See 10 C.F.R. § 50.33(f)(2). Applicants and CAN appear to agree on this point. See Applicants' Response to CAN's Revised Contention on Financial Qualifications, dated Jan. 24, 2001, at 22; CAN's Revised Contention on Financial Qualifications, dated Jan. 10, 2001, at 9, 13.

¹⁰⁹ See CAN's Response to Applicants' Written Statement of Position on Issue 3, dated March 5, 2001, at 15-16.

¹¹⁰ See CAN's Written Statement of Position on Issue 3, dated Feb. 26, 2001, at 14; CAN's Response to Applicants' Written Statement of Position on Issue 3, dated March 5, 2001, at 16; Tr. 203-04.

There has been considerable confusion as to whether CAN has gone so far as to argue that the Commission should require Applicants to submit cost-and-revenue data for *each remaining year* in the lives of the two licenses. Applicants and the Presiding Officer believe that CAN does present this argument. See Applicants' Written Statement of Position on Issue 3, dated Feb. 26, 2001, at 10, 20; LBP-01-4, 53 NRC at 128. CAN denies that it has done so, but claims instead that it was asserting merely that the 5-year projections and other evidence of financial qualifications "must be strong enough to show that the applicant is likely to have sufficient funds not only during the period projected, but in fact for the remaining period of the license in question." See CAN's Final Written Statement of Position on Issues Nos. 2 and 3, dated April 3, 2001, at 39. See also CAN's Response to Applicants' Written Statement of Position on Issue 3, dated March 5, 2001, at 15. Under the circumstances, we do not need to resolve this matter — for CAN either never raised or has withdrawn the issue as Applicants and the Presiding Officer understood it.

¹¹¹ See CAN's Response to Applicants' Written Statement of Position on Issue 3, dated March 5, 2001, at 16.

¹¹² See Tr. 196 (CAN's Mr. Judson: "[T]o project more than five years down the road I think would be speculative, and I think we've actually agreed . . . with the applicants about that in this proceeding"); Tr. 204-05 (Mr. Judson: "[D]etailed cost and revenue projections for the remaining period of the licenses [i.e., after 2005] we thought was . . . too speculative").

¹¹³ See Applicants' Written Statement of Position on Issue 3, dated Feb. 26, 2001, at 16-18.

credible the further one predicts into the future.¹¹⁴ We also recognized that, if the projections proved inaccurate or did not reflect the situation at a plant after the 5-year period, then our reactor safety oversight program likely would reveal safety-related effects from a financial shortfall and we could respond accordingly.¹¹⁵

CAN also requests that Applicants determine if and when they may need to plan for potentially large maintenance expenses (such as steam generator replacement) and/or outages at the plants.¹¹⁶ CAN justifies this request on the ground that “the material condition of key reactor equipment and systems could change” during the period 2001-2007.¹¹⁷ Applicants’ expert witness, Mr. Kansler, has already addressed this request, informing both CAN and the Commission on the record that they foresee no major maintenance expenses or outages during the remaining lives of these plants:

[T]he steam generators . . . have been replaced. Albeit 12 years old, . . . those generators are very healthy and they’re maintained very healthy, [*sic*] so we don’t see any reason why those generators would have to be replaced over the remaining life of the units. . . . [T]he vessel is good for the end of life through the license termination as it exists, using the existing methodology that the NRC recommends. . . . [T]he vessel internals are good for the life of the plant to the end of the license as long as we stay within the guidelines of the vessel internals program. So, right now, we see no reason why any of those three major components would cause a long outage or require replacement or anything different than the current programs that are already in place through the end of the license for both units.¹¹⁸

Next, CAN criticizes Applicants for failing to discuss either the volatility of the deregulated market or the risk that construction of new power plants in New York State would exert a strong downward pressure on wholesale electricity

¹¹⁴ Cf. Tr. 197-98 (Mr. Wood [of the NRC Staff]: “I think one way to look at those five-year projections is that they are a surrogate for the longer term of the license. . . . [B]ecause of the unreliability of projections farther out than five years or so, those were taken by the Commission when they promulgated the rule as . . . the only really meaningful piece of information that you could get to make that longer term determination”).

¹¹⁵ See generally *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000), citing *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 306-07 (1997) (“in the end, NRC inspections and enforcement actions go a long way toward ensuring compliance with our requirements”); *Oyster Creek*, 51 NRC at 209, 210, 212, 214; Summary of and Response to Comments, preceding “Final Policy Statement on the Restructuring and Economic Deregulation of the Electric Utility Industry,” 62 Fed. Reg. 44,071, 44,073 (Aug. 19, 1997) (“the NRC continues to believe that its primary tool for evaluating and ensuring safe operations at its licensed facilities is through its inspection and enforcement programs”). See also Tr. 198 (Mr. Wood: “I think the Commission also recognized that the financial qualifications requirements aren’t viewed in a vacuum, that there are other parts of the Commission’s programs, the reactor oversight program, that also gets to what happens if those projections are not borne out down the road”).

¹¹⁶ See CAN’s Response to Applicants’ Written Statement of Position on Issue 3, dated March 5, 2001, at 16-17; Tr. 204.

¹¹⁷ See CAN’s Response to Applicants’ Written Statement of Position on Issue 3, dated March 5, 2001, at 16.

¹¹⁸ See Tr. 221. See also Rebuttal Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN’s Revised Contention on Financial Qualifications, dated March 2, 2001, at 13 ¶24 (entered into the Record following Tr. 186, and identified as Licensee Exh. 4); Tr. 220 (Mr. Green: no projected steam generator, core shroud or reactor vessel replacements during the period 2005-2008).

prices.¹¹⁹ In support of its criticism, CAN refers the Commission to many proposed new generation and interconnection facilities that could, in the next few years, greatly supplement New York State's currently available electric supply — by roughly 19,000 and 25,000 megawatts by 2003 and 2005, respectively.¹²⁰ CAN also alludes to political and regulatory uncertainties inherent in deregulation.¹²¹ Further, CAN points to Entergy's late arrival in the New York State market and suggests that this could undermine its ability to obtain stable contracts.¹²² CAN therefore asks the Commission to review Applicants' projections to determine the likelihood of such political and regulatory uncertainties, market volatility, price drops, and difficulty in obtaining stable contracts.¹²³

We do not consider such general concerns sufficient to undermine the adequacy of the 5-year data as an indicator of Entergy's financial qualifications to operate and maintain the plants for the duration of their licenses. We explained to CAN earlier in this proceeding that “[c]hallenges to Entergy's financial qualifications ‘ultimately will prevail only if [they] can demonstrate relevant *uncertainties significantly greater* than those that usually cloud business outlooks.’”¹²⁴ The market volatility and potential power plant competition on which CAN relies do not rise above the level of the usual business uncertainties to which we alluded in CLI-00-22 and CLI-99-6.

Moreover, CAN's argument about market volatility necessarily applies in one fashion or another to *all* license transfers to nonutilities in the current deregulated market and so would *ipso facto* render any such prospective transferee's 5-year data insufficient to demonstrate financial qualifications. The exception would therefore swallow the rule, at least insofar as it applies to the increasingly common nonutility owners and operators of nuclear power plants.

Political and regulatory uncertainty, new interconnections and new generating facilities are always risks for sellers of electricity. As we stated in *Seabrook*, the Commission “will accept financial assurances based on *plausible assumptions and forecasts*, even though the possibility is not insignificant that things will turn out less favorably than expected. Thus, the mere casting of doubt on some aspects of proposed funding plans is not itself sufficient to defeat a finding of reasonable assurance.”¹²⁵

CAN, however, argued at the hearing that its evidence satisfies *Seabrook's* “‘significantly greater uncertainty’” test, by posing the possibility that higher costs

¹¹⁹ See Declaration of Edward A. Smeloff, dated Jan. 10, 2001, at unnumbered page 7 ¶ 20; Testimony of Edward A. Smeloff, dated Feb. 26, 2001, at unnumbered page 12 ¶ 24; CAN's Revised Contention on Financial Qualifications, dated Jan. 10, 2001, at 12, 16.

¹²⁰ See CAN's Revised Contention on Financial Qualifications, dated Jan. 10, 2001, at 14-15 & n.15.

¹²¹ See CAN's Response to Applicants' Written Statement of Position on Issue 3, dated March 5, 2001, at 16.

¹²² See *id.* at 15.

¹²³ See *id.* at 16.

¹²⁴ See CLI-00-22, 52 NRC at 300, quoting *Seabrook*, CLI-99-6, 49 NRC at 222 (emphasis added).

¹²⁵ See CLI-99-6, 49 NRC at 222 (emphasis added).

and lower revenue (due to a lower-than-85% capacity factor) could place Entergy FitzPatrick and Entergy Indian Point in a financial deficit.¹²⁶ CAN goes on to argue that “if a business can’t tolerate more than one adverse circumstance going on at the same time in terms of its projections, that actually is more clouded than most business outlooks.”¹²⁷ This argument is not without force as an abstract matter but, as we rule in this Order, CAN has not shown that any of the adverse circumstances on which it relies (i.e., higher costs, lower revenue, and inability to line up stable sales contracts) are likely to occur. Consequently, CAN has failed to undermine what we find in this Order to be Applicants’ “plausible assumptions and forecasts.”¹²⁸

4. *Subissue C: Whether Applicants’ Cost-and-Revenue Projections Are Adequate To Cover Common Increases in Operating Costs*

a. Admissibility

This subissue is based on the premises that Applicants’ estimated O&M costs are “on the low end of those common in the nuclear industry,”¹²⁹ that those costs can reasonably be expected to increase annually by at least 15%¹³⁰ and, accordingly, that Applicants’ projections must be analyzed to take into account the combined effects of these increased operating expenses and the decreased capacity factors (the latter of which was discussed in Subsection I.D.3, *supra*).¹³¹ CAN does not appear to assert that Applicants’ projections are necessarily invalid, only that the Commission should conduct a sensitivity analysis to evaluate Applicants’ ability to withstand what CAN believes is a reasonable increase in O&M costs (i.e., a 15% increase).¹³² CAN’s expert witness, Mr. Smeloff, also asserts that

¹²⁶ See Tr. 206-07 (Mr. Judson).

¹²⁷ See Tr. 207-08 (Mr. Judson).

¹²⁸ See CLI-99-6, 49 NRC at 222.

¹²⁹ See LBP-01-4, 53 NRC at 130.

¹³⁰ See Declaration of Edward A. Smeloff, dated Jan. 10, 2001, at unnumbered pages 4-5 ¶¶ 14-16 (recommending use of a 15% cost increase when performing a sensitivity analysis); Testimony of Edward A. Smeloff, dated Feb. 26, 2001, at unnumbered page 8 ¶ 20 (same) (entered into the Hearing Transcript immediately following page 192 and identified as CAN Exh. 2); Tr. 270 (Mr. Smeloff, clarifying that the 15% figure was intended to be an average annual figure over a 5-year period rather than a cumulative 5-year figure). *Accord* LBP-01-4, 53 NRC at 130.

¹³¹ See CAN’s Revised Contention on Financial Qualifications, dated Jan. 10, 2001, at 8-9. *See also* Declaration of Edward A. Smeloff, dated Jan. 10, 2001, at unnumbered page 4, ¶¶ 14-15; CAN’s Reply to Applicants’ Response to CAN’s Revised Contention on Financial Qualifications, dated Jan. 31, 2001, at 11; CAN’s Initial Written Statement of Position on Issue #3, dated Feb. 26, 2001, at 9; CAN’s Response to Applicants’ Initial Written Statement of Position on Issue 3, dated March 5, 2001, at 12. *Accord* LBP-01-4, 53 NRC at 130.

¹³² Some of CAN’s submissions suggest that it challenges Applicants’ cost estimates. *See* CAN’s Initial Written Statement of Position on Issue #3, dated Feb. 26, 2001, at 9 (the two plants’ “projected [O&M] costs could reasonably be expected to increase by 15% over the levels projected, potentially for years at a time”). In the main, however, CAN appears to focus on the need for a sensitivity analysis. *See* CAN’s Reply to Applicants’ Response

(Continued)

FitzPatrick's and Indian Point 3's O&M cost estimates should be raised closer to the level of Salem Nuclear Generating Station's costs.¹³³ In response, Applicants characterized the subissue as vague and speculative, and also insufficiently detailed in that it lacked any basis for the 15% increase claim and failed to analyze the two plants' past cost-and-revenue experiences.

The Presiding Officer concluded that this subissue came down to a dispute between CAN's and Applicants' experts as to how predicted cost increases must be calculated and that the subissue was therefore admissible.¹³⁴ Our review of the hearing transcript confirms the Presiding Officer's conclusion that this issue boils down to a dispute between the parties' experts and therefore raises a "genuine dispute with the applicant on a material issue of . . . fact."¹³⁵ Therefore, we concur with the Presiding Officer's ruling on this subissue's admissibility.

b. Merits

Given our rulings in the preceding section regarding capacity factors, we find no need to consider the combined effects of a 10% capacity factor decrease (from 85% down to 75%) and a 15% annual cost increase. We therefore consider the cost increase issue alone and, here too, rule against CAN.

We are unpersuaded by CAN's comparisons to the industry average for O&M costs. The industry average for O&M costs is not particularly germane to these same two plants. Such costs can vary greatly from plant to plant, or from region to region. Mr. Smeloff and CAN have given us no sound reason why we should consider as relevant the O&M costs at the Salem plants which have never been operated by either PASNY or an Entergy company, or why those plants' O&M costs from 1992 to 1996 are indicative of similar kinds of expenses

to CAN's Revised Contention on Financial Qualifications, dated Jan. 31, 2001, at 12. *See also* CAN's Response to Applicants' Initial Written Statement of Position on Issue 3, dated March 5, 2001, at 9 ("CAN plainly has not contended that the Entergy Companies' cost projections are *invalid*, but merely that, for purposes of establishing the Applicants' financial qualifications, their projections must be analyzed for both increased operating expenses and decreased capacity factors" (internal quotation marks omitted)), 10-11 ("CAN and Mr. Smeloff have not argued that the operating cost levels projected are invalid, but merely that [the two plants] should reasonably be able to withstand adverse circumstances potentially outside of the Entergy companies' control"). However, even if CAN were asserting that the Applicants' cost projections were invalid because of a failure to assume a 15% increase, CAN fails to support this assertion.

¹³³ *See* Declaration of Edward A. Smeloff, dated Jan. 10, 2001, at unnumbered page 5 ¶ 14; CAN's Reply to Applicants' Response to CAN's Revised Contention on Financial Qualifications, dated Jan. 31, 2001, at 11; Tr. 188, 267-68 (both Mr. Smeloff).

¹³⁴ *See* LBP-01-4, 53 NRC at 130-31.

¹³⁵ *See* 10 C.F.R. § 2.1306(b)(2)(iv).

that FitzPatrick and Indian Point 3 will incur under Entergy's ownership and management subsequent to the year 2000.¹³⁶

We also find that CAN and Mr. Smeloff offer no basis to support their own estimate of a 15% annual increase in O&M costs (other than comparisons to the Salem plant's O&M costs).¹³⁷ Rather, we find (as did the NRC Staff in its SERs) that the Applicants' "projected expenses fall in line with [the two plants'] historical trends."¹³⁸ Moreover, neither Mr. Smeloff nor CAN contests Applicants' calculations that indicate both FitzPatrick and Indian Point 3 would

¹³⁶ Both parties repeatedly attempt to bolster their respective arguments on both O&M costs and capacity factor by alluding to situations at other power plants. See CAN's Initial Written Statement of Position on Issue #3, dated Feb. 26, 2001, at 10-11 (referring to Maine Yankee); Testimony of David A. Lochbaum, dated Feb. 23, 2001, at 2-3 ¶9 (referring to the 6-year capacity-factor performance of the overall nuclear power plant industry in the United States), and at 4 ¶¶ 10-11 (Maine Yankee) (inserted into the Hearing Transcript immediately following p. 66); Testimony of Edward A. Smeloff, dated Feb. 26, 2001, at unnumbered page 8 ¶ 19 (Salem), unnumbered page 4 ¶ 7 (Rancho Seco), and unnumbered page 7 ¶ 16 (Rancho Seco); Rebuttal Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated March 2, 2001, at 8 ¶ 16 (River Bend); Tr. 23 (Mr. Judson, referring specifically to Maine Yankee and also referring more generally to "examples in the industry that show that under similar circumstances safety can be compromised"), Tr. 70-72 (Mr. Lochbaum, referring to the 6-year capacity-factor performance of the overall nuclear power plant industry in the United States), Tr. 72-73 (Mr. Lochbaum, referring to Maine Yankee), Tr. 74 (Mr. Lochbaum, referring to River Bend), Tr. 76 (Mr. Lochbaum, referring to Maine Yankee), Tr. 85-89 (Mr. Lochbaum, referring to the 6-year capacity-factor performance of the overall nuclear power plant industry in the United States), Tr. 89-93 (Mr. Lochbaum, referring to Maine Yankee), Tr. 249 (Mr. Smeloff, referring to Salem and Rancho Seco), Tr. 257 (Mr. Smeloff, referring to Rancho Seco), Tr. 267 (Mr. Smeloff, referring to Salem), Tr. 269 (same), Tr. 270 (same), Tr. 288-90 (Mr. Smeloff, referring to Salem and Rancho Seco), Tr. 351 (Mr. Kansler, referring to Salem); Tr. 360 (Mr. Smeloff, referring to Salem); CAN's Final Written Statement of Position on Issues Nos. 2 and 3, dated April 3, 2001, at 29 & 31 (referring to industrywide outage experience), 33 (Maine Yankee), 35 (Rancho Seco, Salem, and Indian Point 2), 36 (Salem); Applicants' Final Statement of Position, dated April 3, 2001, at 43-44 (referring to historic and current industry O&M costs), 44 (referring to River Bend), 45 (referring to Salem).

For the same reasons as enunciated in the text, we find these references unhelpful to our analysis of the instant license transfer applications. Neither party established an adequate foundation for drawing comparisons to these other plants (e.g., a party discussing major anticipated expenses at Indian Point 3 might point out that another nuclear plant's steam generators are the same make and age as those at Indian Point 3, have about the same number of hours of use, and need replacement). As Applicants themselves pointed out at the hearing, "[w]e should not expect the Commission to have to wade through safety issues that relate to other plants in other places of the country that do not relate directly to the matters that you have admitted in this case." Tr. 15-16 (Mr. Silberg).

¹³⁷ See, e.g., CAN's Final Written Statement of Position on Issues Nos. 2 and 3, dated April 3, 2001, at 36-38, where CAN claims to justify its 15% figure but instead merely challenges Entergy's O&M calculations and explanations.

¹³⁸ See both SERs at 6. We also find (as did the Staff) that the anticipated upward pricing pressure in the northeastern United States would suggest an increase in the two plants' revenues that would partially or wholly offset any cost increase (assuming other factors such as capacity factor remained the same). See both SERs at 6, stating:

[In] the North American Electric Reliability Council (NERC) [10-Year] Reliability Assessment for 1998 through 2007, dated October 1998[. . .] NERC predicts that the Northeast Power Coordinating Council . . . which includes [Indian Point 3 and FitzPatrick] will see generating capacity margins dropping from 17.3% in 1998 to 5.0% in 2007. Such a trend would indicate that market prices are subject to upward pricing pressure. Therefore the staff finds that the applicants' assumptions for market prices are reasonable, as shrinking generating capacity margins should cause market prices of electricity to increase in the area, assuming other factors remaining equal [*sic*].

And we further find that, even if electricity rates in the areas that FitzPatrick and Indian Point 3 serve were to increase at a rate lower than Entergy anticipates, the plants could still be operated and maintained consistent with the protection of the public health and safety. See Indian Point 3 SER at 6 (concluding that Indian Point 3 could incur a 17% drop in revenue and still break even); FitzPatrick SER at 6 (concluding that Indian Point 3 could incur a 12% drop in revenue and still break even); both SERs at 7.

make a profit even if their O&M costs increased 15% annually during the 2001-2005 period.¹³⁹ Indeed, Mr. Smeloff concedes the point when he states that Mr. “Green’s assertion that [the two plants] could each withstand a 15% increase in O&M costs is only true if such an increase were to occur without a drop in capacity factor.”¹⁴⁰

Finally, we find no merit in CAN’s argument that Entergy’s need to finance the debt that paid for the two plants will impair its ability to pay for O&M costs. CAN ignores the critical fact that Entergy included its interest expenses in its cost-and-revenue projections and showed that total revenues less interest expenses would still leave enough funds to cover O&M costs.¹⁴¹

The long and short of the matter is that we find Entergy’s cost analysis more persuasive than the corresponding analysis offered by CAN. We see no basis in the cost evidence presented prior to and at the hearing that would justify rejecting or modifying the license transfers at issue here.

5. *Subissue D: Whether the Supplemental Funding Available to Entergy FitzPatrick and Entergy Indian Point Offers Adequate Financial Assurance To Protect the Public and Worker Health and Safety*

In this subissue, CAN claims that the supplemental funding available to Entergy FitzPatrick and Entergy Indian Point offers inadequate financial assurance to protect the public and worker health and safety.¹⁴² Such funding comprises (1) a credit agreement with Entergy Global Investments, Inc. (“EGI”) to provide \$20 million each to Entergy FitzPatrick and Entergy Indian Point as a working capital credit line, and (2) a credit agreement with Entergy International Ltd. (“EIL”) for a total of \$50 million to be shared by Entergy FitzPatrick and Entergy Indian Point.¹⁴³

¹³⁹ See Applicants’ Written Statement of Position on Issue 3, dated Feb. 26, 2001, at 7 ¶ 16; Written Direct Testimony of Barrett E. Green and Michael R. Kansler on CAN’s Revised Contention on Financial Qualifications, dated Feb. 23, 2001, at 17 ¶ 28. Cf. Indian Point 3 SER at 6 (concluding that Indian Point 3 could incur a 17% drop in revenue and still break even); FitzPatrick SER at 6 (concluding that Indian Point 3 could incur a 12% drop in revenue and still break even).

¹⁴⁰ See CAN’s Response to Applicants’ Initial Written Statement of Position on Issue 3, dated March 5, 2001, at 11.

¹⁴¹ The NRC Staff confirmed Applicants’ conclusion. See both SERs at 5 (where “Interest Expense” is a line item). We also note that Applicants’ inclusion of interest expenses in their 5-year cost-and-revenue projections is consistent with the Commission’s own inclusion of interest expenses in its term “operation costs” in 10 C.F.R. § 50.33(f).

¹⁴² See CAN’s Revised Contention on Financial Qualifications Issue, dated Jan. 10, 2001, at 9.

¹⁴³ See, e.g., both SERs at 7.

CAN, in its Initial Written Statement of Position on Issue #3, dated Feb. 26, 2001, at 12-14, argues for the first time that the supplemental funding arrangements (i.e., letters of credit from EGI and EIL) are irrelevant to the financial qualifications issue in this proceeding. CAN raises this issue quite late in the proceeding and does not attempt to satisfy the Commission’s late-filing requirements set forth in 10 C.F.R. § 2.1308(b). See note 37, *supra*.

CAN's expert, Mr. Smeloff, points out that these credit lines represent one of only two financial sources from which Entergy FitzPatrick and Entergy Indian Point companies can pay for the plants' fixed operating expenses during an extended outage.¹⁴⁴ He claims that this level of funding would support only relatively short outage at a single facility or a slightly longer collective outage for the two reactors — too small an operating reserve, in Mr. Smeloff's view.¹⁴⁵ CAN notes that, during the last 15 years, nearly a quarter of the nation's nuclear power plants have been shut down for a year or more,¹⁴⁶ that there were forty 6-month outages at nuclear plants in the United States from 1994 through 1999, and that nineteen 12-month outages occurred during that same 6-year period.¹⁴⁷ CAN and Mr. Smeloff also offer twelve examples of utilities having two or more plants out of service simultaneously.¹⁴⁸ Regarding the insufficiency of such an operating reserve, CAN also relies on Entergy FitzPatrick's and Entergy Indian Point's status as newly formed entities that are not public utilities.¹⁴⁹

CAN further claims that the credibility of the credit arrangements have not been clearly established, and points to the possibility that the Transferees could "need to draw on those agreements and then find that the required funds are not available could compromise safety at FitzPatrick and/or [Indian Point] 3."¹⁵⁰ CAN and Mr. Smeloff assert that both EIL and EGI's fiduciary interests are closely intertwined with those of Entergy FitzPatrick and Entergy Indian Point. They also argue that it is unclear from the two license transfer applications whether EIL and EGI performed due diligence examinations of Entergy FitzPatrick's and Entergy Indian Point's business plans, or whether EIL and EGI have sufficiently large and sufficiently liquid assets to meet the terms of the credit lines, especially as neither is a well-known financial institution. CAN and Mr. Smeloff suggest the need for audited financial statements to determine the answers to these questions;

¹⁴⁴ The other source is retained earnings.

¹⁴⁵ See CAN's Revised Contention on Financial Qualifications Issue, dated Jan. 10, 2001, at 9-10; Declaration of Edward A. Smeloff, dated Jan. 10, 2001, at unnumbered pages 5-6 ¶¶ 17-18; CAN's Reply to Applicants' Response to CAN's Revised Contention on Financial Qualifications, dated Jan. 31, 2001, at 18; Testimony of Edward A. Smeloff, dated Feb. 26, 2001, at unnumbered page 9 ¶ 21. Cf. Rebuttal Testimony of Edward A. Smeloff, dated March 5, 2001, at unnumbered page 4 ¶ 9 ("If cash from the EIL line of credit is necessary to maintain the workforce at IP3 during an extended outage it would not be available for [Entergy FitzPatrick] if the capacity factor falls significantly below what has been forecast").

¹⁴⁶ See CAN's Revised Contention on Financial Qualifications Issue, dated Jan. 10, 2001, at 10 n.11.

¹⁴⁷ See Declaration of Edward A. Smeloff, dated Jan. 10, 2001, at unnumbered page 6 n.6. See also Declaration of Edward A. Smeloff, dated Jan. 31, 2001, at unnumbered pages 3-5 ¶ 9, listing numerous outage times at various reactors (including simultaneous outages of multiple-unit reactors) that far exceed the maximum outage for which EGI's and EIL's funds would cover.

¹⁴⁸ See Testimony of Edward A. Smeloff, dated Feb. 26, 2001, at unnumbered pages 9-10 ¶ 22.

¹⁴⁹ See CAN's Revised Contention on Financial Qualifications Issue, dated Jan. 10, 2001, at 10. Presumably, CAN finds this status significant because Entergy FitzPatrick and Entergy Indian Point cannot rely on either New York Public Service Commission or the Federal Energy Regulatory Commission to assure reimbursement of its costs. Cf. *id.* at 18 ("the Entergy applicants cannot return to ratepayers for . . . cost increases").

¹⁵⁰ See *id.* at 11; CAN's Initial Written Statement of Position on Issue #3, dated Feb. 26, 2001, at 13.

they also propose that the Commission require a line of credit with a traditional financial institution (rather than with an interlocking entity).¹⁵¹

Applicants respond that the Commission has already ruled that questions regarding the sufficiency of supplemental funding do not constitute grounds for a hearing, “on the ground that NRC rules do not mandate supplemental funding.”¹⁵² According to Applicants, there is no reason “why CAN should fare better the second time around with this previously rejected contention.”¹⁵³ In the alternative, Applicants claim that the issue was based on nonproprietary versions of the applications and should therefore be rejected as untimely.¹⁵⁴ Finally (and in apparent contradiction to its immediately preceding argument), Applicants acknowledge that Mr. Smeloff’s knowledge of the cash and cash equivalents of EGI and EIL arises from the proprietary data made available to CAN, but claim that Mr. Smeloff has misread the financial statements and that, contrary to his claim, the actual cash and cash equivalent amounts available to EIL and EGI are more than sufficient to support the lines of credit.¹⁵⁵

The Presiding Officer first concluded that

[t]his subissue may to some extent rely on information available other than through the proprietary information. But the issue as a whole can be better understood after reference to the proprietary data. As set forth by CAN, its arguments on this subissue “are based in part on the financial statements of EGI and EIL, which were not available to CAN prior to” CLI-00-22.¹⁵⁶

The Presiding Officer relied in part on Applicants’ acknowledgment that one crucial aspect of the issue was only available through the proprietary data.

Second, the Presiding Officer examined the nature of the subissue and concluded that it did not “focus solely on the *amount* of supplemental funding required so as to be barred by the prohibitions of CLI-00-22.”¹⁵⁷ Indeed, he found that the subissue focused only incidentally on the amount of supplemental funding and instead primarily sought “to determine the adequacy of supplemental funding in the context of the [Entergy FitzPatrick’s] and [Entergy Indian Point’s] asserted status as non-electrical utilities that are newly formed entities and their ability to

¹⁵¹ See CAN’s Revised Contention on Financial Qualifications Issue, dated Jan. 10, 2001, at 10-11; CAN’s Reply to Applicants’ Response to CAN’s Revised Contention on Financial Qualifications, dated Jan. 31, 2001, at 14-15; Declaration of Edward A. Smeloff, dated Jan. 10, 2001, at unnumbered pages 6-7 ¶ 19; Testimony of Edward A. Smeloff, dated Feb. 26, 2001, at unnumbered page 11 ¶ 23; CAN’s Initial Written Statement of Position on Issue #3, dated Feb. 26, 2001, at 13-14; Tr. 314-15 (Mr. Smeloff).

¹⁵² See Applicants’ Response to CAN’s Contention on Financial Qualifications, dated Jan. 24, 2001, at 15, *quoting* CLI-00-22, 52 NRC at 300.

¹⁵³ See Applicants’ Response to CAN’s Contention on Financial Qualifications, dated Jan. 24, 2001, at 15.

¹⁵⁴ See *id.* at 15-16.

¹⁵⁵ See *id.* at 16; Affidavit of Barrett E. Green, dated Jan. 22, 2001, at unnumbered pages 2-3 ¶ 5.

¹⁵⁶ See LBP-01-4, 53 NRC at 132, *quoting* CAN’s Reply to Applicants’ Response to CAN’s Revised Contention on Financial Qualifications, dated Jan. 31, 2001, at 16.

¹⁵⁷ See LBP-01-4, 53 NRC at 132 (emphasis added).

demonstrate the validity of projected operations and maintenance . . . costs in the context of cost-and-revenue projections.’’¹⁵⁸

Finally, the Presiding Officer concluded that “[t]he crucial unresolved question in this subissue is the difference of opinion between Mr. Smeloff and Mr. Green, both of whom appear to be qualified experts, on the *limited liquidity* of EGI and EIL’s assets.’’¹⁵⁹ He therefore admitted for litigation the issue of the extent to which the limited liquidity of EGI and EIL’s assets undermines Entergy FitzPatrick’s and Entergy Indian Point’s ability to demonstrate reasonable financial assurance, as required by 10 C.F.R. § 50.33(f).¹⁶⁰

Our rules do not contemplate hearings on supplemental funding questions. As we stated earlier in this proceeding, “the ‘sufficiency’ *vel non* of the \$90 million supplemental funding does not constitute grounds for a hearing’’¹⁶¹ because the funds are “not [, strictly speaking,] required by our rules [and the issue] therefore lies outside the bounds of our license transfer hearing process — which focuses on whether [the Transferee] meets the required financial and technical qualifications.’’¹⁶² Given that our regulations do not require supplemental funding as part of a showing of financial qualifications, we do not see why the creditworthiness of the guarantor would be any more germane than the amount of the supplemental funding guarantee itself (an issue we rejected earlier in this proceeding). As we have already concluded that Applicants’ cost-and-revenue projections provide us the requisite assurance of the Entergy Applicants’ financial qualifications, we need not consider Entergy’s promise of supplemental funds as part of our financial qualifications inquiry.

In any event, we do not share CAN’s concerns that Entergy will prove unable to make good on its supplemental funding commitment.¹⁶³ Based on the uncontradicted representations of Mr. Barrett (one of Applicants’ expert witnesses), EIL’s and EGI’s cash and cash equivalents are valued at an amount many times higher than the amounts of the lines of credit that they support.¹⁶⁴ And, contrary to CAN’s view, Entergy commits liquid funds. Entergy expert Barrett E. Green indicated that the vast majority of the assets held by EIL and EGI are in commercial paper, about 10% are in a mutual fund, and about 2% are

¹⁵⁸ See *id.*

¹⁵⁹ See *id.* (emphasis added).

¹⁶⁰ See *id.* at 132-33.

¹⁶¹ See CLI-00-22, 52 NRC at 299.

¹⁶² See *id.* at 300 n.22, quoting *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 178 (2000).

¹⁶³ We reject, however, Applicants’ assertion that CAN presented this argument for the first time at the hearing. See Applicants’ Final Statement of Position, dated April 3, 2001, at 57. To the contrary, CAN raised the argument in its Revised Contention on Financial Qualifications on January 10th. See CAN’s Revised Contention on Financial Qualifications, dated Jan. 10, 2001, at 10.

¹⁶⁴ See Affidavit of Barrett E. Green, dated Jan. 22, 2001, at unnumbered pages 2-3 ¶ 5.

in a note receivable from an affiliate company.¹⁶⁵ Mr. Green represents, without contradiction from CAN, that the commercial paper and the mutual fund are highly liquid (with the daily commercial paper market averaging \$150 billion¹⁶⁶) and that the proceeds from their redemption would be available on or close to the *same day* as the sale.¹⁶⁷ Given the ready marketability of mutual fund shares and commercial paper, we have no reason to believe that EIL and EGI would be unable to provide funds in a timely manner to Entergy FitzPatrick and Entergy Indian Point if called upon to do so.

As additional protection, since Entergy FitzPatrick and Entergy Indian Point have proffered the guarantee whether or not it is mandated by our regulations, the NRC Staff has imposed a license condition prohibiting Entergy from diminishing or voiding these guarantees.¹⁶⁸ We presume that the Transferees will comply with the requirements of their licenses.¹⁶⁹ Moreover, Applicants aver that these funds are dedicated specifically to the potential needs of FitzPatrick and Indian Point 3 and would therefore be unavailable to other Entergy entities.¹⁷⁰

In short, as a legal matter, the amount and liquidity of Entergy's supplemental funds are irrelevant to this litigation because our rules do not require such funds to be set aside.¹⁷¹ As a practical matter, Entergy has in fact committed supplemental funds, a voluntary commitment that appears meaningful and, if necessary, enforceable by virtue of the Staff's license condition. We see no basis for further inquiry into the supplemental funds matter.

¹⁶⁵ See Attachment 3 ("Cash and cash equivalents holdings of Entergy International Ltd., LLC and Entergy Global Investments, Inc.") to Affidavit of Barrett E. Green, dated Jan. 22, 2001.

¹⁶⁶ See Written Direct Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated Feb. 23, 2001, at 17 ¶ 29.

¹⁶⁷ See Applicants' Initial Written Statement of Position on Issue 3 (CAN's Revised Contention on Financial Qualifications), dated Feb. 26, 2001, at 7-8 ¶¶ 17-19; Written Direct Testimony and Joint Affidavit of Barrett E. Green and Michael R. Kansler on CAN's Revised Contention on Financial Qualifications, dated Feb. 23, 2001, at 17-18 ¶ 29 (the domestic commercial paper has same-day liquidity, the European commercial paper has a 2-day settlement period, and the mutual fund has same-day liquidity).

¹⁶⁸ See Staff Orders, 65 Fed. Reg. at 70,845 (Indian Point 3), 70,847 (FitzPatrick). See also both SERs at 7.

¹⁶⁹ See, e.g., *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-9, 53 NRC 232, 235 (2001); *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000); *Curators of the University of Missouri*, CLI-95-8, 41 NRC 386, 400 (1995); *Northern Indiana Public Service Co.* (Bailly Generating Station, Nuclear-1), ALAB-207, 7 AEC 957, 958 (1974); *Virginia Electric and Power Co.* (North Anna Power Station, Units 3 and 4), LBP-74-56, 8 AEC 126, 148 (1974).

¹⁷⁰ See Applicants' Answer to CAN's Request for Hearing, dated Aug. 10, 2000, at 26 n.20. See also CLI-00-22, 52 NRC at 299.

¹⁷¹ See CLI-00-22, 52 NRC at 300 (concluding that "NRC rules do not mandate supplemental funding" and that "[t]he parent company guarantee is supplemental information and not material to the financial qualifications determination under 10 C.F.R. § 50.33(f)(2)").

6. *Subissue E: The Entergy Applicants' Market Revenue Projections Have Not Been Evaluated To Determine Whether Their Assumptions About Market Prices Are Reasonable. Market Factors in Entergy FitzPatrick's and Entergy Indian Point's Market Areas Could Introduce Significant Uncertainty and Prevent the Companies from Meeting Their Revenue Requirements, Thereby Undermining Applicants' Ability To Offer Adequate Financial Assurance*

CAN here asserts that neither the Staff nor Applicants have adequately evaluated Entergy's market revenue projections for the two plants (i) in light of significant uncertainty in the market such as utility deregulation and planned new generation and also (ii) in light of Applicants' providing revenue data for only 5 years (instead of for the full period remaining on the two licenses). CAN acknowledges the difficulty in predicting market prices but nonetheless seeks a "deeper investigation of applicant's financial reserves," which CAN alleges its own expert witness has done.¹⁷²

According to Applicants, CAN's claim should be rejected as untimely because CAN relies only on publicly available testimony given in another licensing proceeding involving market volatility in New England, publicly available energy generation projections in New York State, and news accounts of deregulation effects in California — all of which could have been cited without access to proprietary data. Applicants further claim that, even if the subissue is ruled to be timely, the NRC Staff has already performed a detailed analysis of Entergy's market projections. Applicants fault CAN both for failing to provide any specific criticism of the NRC Staff's methodology and for asserting nothing more than its preference for a more thorough review of the facts.¹⁷³

The Presiding Officer first noted that he had already admitted (in Subissue 2) the question whether financial projections of the Entergy companies should extend for 5 years or for the remaining term of the license (a legal interpretation of 10 C.F.R. § 50.33(f)). The Presiding Officer then found unpersuasive Applicants' argument that this subpart of the contention be considered late-filed, and hence inadmissible, due to the use of publicly available information. Again, he explained that, "even though this information may have been available at the time the original contention was filed, proprietary information provided by the Licensees was arguably necessary for CAN to assess the adequacy of [Applicants'] and Staff's projections."¹⁷⁴

However, the Presiding Officer ultimately rejected this subissue for lack of the requisite specificity. He ruled that the projections and estimates sought by CAN

¹⁷² See CAN's Revised Contention on Financial Qualifications, dated Jan. 10, 2001, at 12.

¹⁷³ See Applicants' Response to CAN's Revised Contention on Financial Qualifications, dated Jan. 24, 2001, at 17-20.

¹⁷⁴ See LBP-01-4, 53 NRC at 133.

are so speculative, subjective, and uncertain that there is no assurance that the figures could reflect accurately [Applicants'] situation in the future [and that], even if I accepted CAN's position with respect to the need for a further analysis of the projected market conditions, CAN has not stated what aspects, or a methodology for projecting these figures, in the Staff's report that it regards as inadequate.¹⁷⁵

We agree with the Presiding Officer's rejection of this subissue. Moreover, we would add that, at p. 533 of this Order, we considered and rejected CAN's "uncertainty" argument.

7. *CAN's Proposed Conditions*

CAN also proposed three license conditions which would, according to CAN, address its concerns regarding financial qualifications.¹⁷⁶ However, as we find no merit in any of CAN's arguments regarding financial qualifications, we need not address its proposed conditions.

8. *Additional Commission Observations*

Although we have confidence in the NRC Staff's ability to evaluate license transfer applications and to assess the financial qualifications of the Transferees, we would also note that such review is not the agency's only line of defense in matters of financial qualifications. We continue to view our inspection and enforcement programs as the major vehicles by which to ensure plant safety.¹⁷⁷ Moreover, the team that prepared the financial qualifications portions of the FitzPatrick and Indian Point 3 SERs likewise is keeping abreast of Licensees' financial condition by both reading their annual reports and financial statements¹⁷⁸

¹⁷⁵ See *id.* at 134

¹⁷⁶ See CAN's Revised Contention on Financial Qualifications, dated Jan. 10, 2001, at 17-19:

Should the Commission determine that it would be more prudent to impose license conditions rather than dismiss the application, the following conditions would address the major flaws and insufficiencies in the proposed transaction as it stands:

1) The Commission should require that the level of supplemental funding in the form of letters of credit or sureties provided by Entergy and/or its other subsidiaries be sufficient to cover a one-year shutdown for extensive maintenance at each reactor. . . .

2) In the alternative, Entergy Corp. or any of its other subsidiaries should be prevented from absorbing any retained earnings of [Entergy FitzPatrick] and [Entergy Indian Point 3] (or Entergy Nuclear Investment Co. #1 and #2) until such a 1-year reserve is established and placed in escrow until needed. . . . As part of this condition, it would also be necessary to require that Entergy, Entergy Global Investments, and/or Entergy Investments provide supplemental funding equivalent to that in Condition #1 above until the reserve is established, or in case it cannot be.

3) In another alternative, the Commission could require that [PASNY] continue its obligation to insure the safe operation of FitzPatrick and [Indian Point] 3. . . .

¹⁷⁷ See authority cited in note 115, *supra*. See also Tr. 330-31, 334-36 (all Mr. Wood). Regarding the Commission's confidence in its inspection and enforcement programs, see generally the authority cited in note 115, *supra*.

¹⁷⁸ See Tr. 334, 381, 384 (all Mr. Wood).

and also following the trade press,¹⁷⁹ and this team will notify the Commission if problems arise.¹⁸⁰ (As Mr. Robert Wood of the NRC Staff correctly stated at the hearing, “severe financial distress from any of the licensees is something that’s not going to be hidden from view very long.”¹⁸¹) Finally, if the Commission notes that financial problems are compromising the safety of the plant and the public, we will require the plant to take corrective action and, if it does not or cannot comply, we can shut down the plant.¹⁸²

II. DECOMMISSIONING FUNDING ISSUES

As part of their transfer agreements, Applicants have created an unusual arrangement whereby PASNY would keep the decommissioning funds after transferring the FitzPatrick and Indian Point 3 plants to the Entergy companies,¹⁸³ (Ordinarily, a Transferee would receive a decommissioning fund along with the nuclear plant with which it was associated.) By leaving the funds with PASNY (a state entity exempt from federal taxes), Entergy seeks to avoid any risk of having to pay capital gains tax on the funds. The funds for decommissioning each of the two facilities are currently held in a Master Decommissioning Trust, comprising a separate fund for each facility and administered by the Bank of New York as trustee.¹⁸⁴ The funds may be spent *only* on decommissioning activities for the two facilities.¹⁸⁵ PASNY may transfer either fund to the Entergy companies at the expiration of the operating license, or upon the dismantlement of the unit, or if the funds become taxable.¹⁸⁶ Under the terms of the decommissioning agreement between PASNY and the Entergy companies, PASNY’s decommissioning obligations are limited to the amounts in the funds,

¹⁷⁹ See Tr. 334, 335, 337 (all Mr. Wood).

¹⁸⁰ See Tr. 381 (Mr. Wood).

¹⁸¹ See Tr. 335.

¹⁸² We note that the NRC Staff and Entergy agree on this point. See Tr. 307-09 (Mr. Wood); Tr. 329-43 (Messrs. Green and Wood); Tr. 333 (Mr. Green).

¹⁸³ See, e.g., both SERs at 2, 8. The arrangement appears, however, not to be unique. See Tr. 142-44 (Mr. Hom). It is similar to arrangements used in the transfer of the Crystal River, Three Mile Island-1, and Public Service Electric and Gas Company’s holdings in Hope Creek, Peach Bottom Units 1 and 2, and Salem Units 1 and 2. See *id.*; FitzPatrick Application at 14 n.4; Indian Point 3 Application at 16 n.4.

¹⁸⁴ See FitzPatrick Application at 11; Indian Point 3 Application at 12-13, 15; both SERs at 8; Applicants’ Initial Written Statement of Position [on Issue #2], dated Jan. 12, 2001, at 4; Written Direct Testimony and Affidavit of George W. Collins, dated Jan. 10, 2001, at 2 ¶ 5 (entered into the Record following Tr. 42, and identified as Licensee Exh. 2); Tr. 47, 55 (both Mr. Silberg).

¹⁸⁵ See FitzPatrick Application at 11, 12, 13; Indian Point 3 Application at 13, 15; Staff Orders, 65 Fed. Reg. at 70,844 (Indian Point 3), 70,846 (FitzPatrick); Applicants’ Initial Written Statement of Position [on Issue #2], dated Jan. 12, 2001, at 4; Written Direct Testimony and Affidavit of George W. Collins, dated Jan. 10, 2001, at 2 ¶ 5 and at 6 ¶ 16.

¹⁸⁶ See both Applications at 2; FitzPatrick SER at 3; Indian Point 3 SER at 2; Applicants’ Initial Written Statement of Position [on Issue #2], dated Jan. 12, 2001, at 4; Written Direct Testimony and Affidavit of George W. Collins, dated Jan. 10, 2001, at 3 ¶ 8 and at 4 ¶ 11.

though the total amount PASNY has agreed to pay for decommissioning may decrease if Entergy acquires nuclear power plants adjacent to either Indian Point 3 or FitzPatrick.¹⁸⁷

In CLI-00-22, we admitted two of CAN's issues regarding this arrangement: whether NRC approval of the transfers will deprive the Commission of authority to require PASNY to conduct "remediation" during decommissioning, and whether, under those circumstances, PASNY would no longer have access to the decommissioning trust funds for the remediation that it would need to complete.¹⁸⁸ We noted that CAN's issues were related to another then-pending (but subsequently withdrawn) issue: whether PASNY's retention of the decommissioning funds was consistent with the requirements of 10 C.F.R. § 50.75.¹⁸⁹ We instructed CAN to address its own decommissioning issues in the context of that issue, and we pointed out to CAN that the decommissioning trust agreement had been modified somewhat by the NRC Staff's November 9, 2000 orders (at 6 ¶9).¹⁹⁰ For the reasons set forth below, we find that the funding arrangement here is consistent with our regulations and raises no concerns as to public health and safety. Because we find in Applicants' favor regarding CAN's decommissioning funding issue, we need not consider the series of conditions that CAN proposes as a means to mitigate its health-and-safety concerns.¹⁹¹

A. Compliance with 10 C.F.R. § 50.75(e)(1)(vi)

CAN objects to Applicants' decommissioning funding arrangement on the ground that it is dissimilar to two of the five preapproved types of decommissioning funding arrangements that are specified in section 50.75(e)(1)(i) and (iii) and on

¹⁸⁷ See FitzPatrick Application at 2, 11; Indian Point 3 Application at 2, 13; both SERs at 2, 8; Applicants' Initial Written Statement of Position [on Issue #2], dated Jan. 12, 2001, at 5, 8; Written Direct Testimony and Affidavit of George W. Collins, dated Jan. 10, 2001, at 5 ¶14.

¹⁸⁸ See CLI-00-22, 52 NRC at 302 n.25. See also CAN's Reply Brief, dated Aug. 17, 2000, at 14. See also CAN's Statement on Issue #2, dated Jan. 12, 2001, at 3. Concerning the confusion in this adjudication surrounding the definition of "remediation," see p. 552, *infra*.

¹⁸⁹ The Nuclear Generation Employees Association ("the Association"), in its now-withdrawn Petition to Intervene, had raised the issue whether Applicants' arrangement is consistent with the Commission's own decommissioning requirements of 10 C.F.R. § 50.75(e). According to the Association, section 50.75(e) requires the Transferees to hold the decommissioning funds. The Association disputed Applicants' claim that the license transfer request meets the requirements of 10 C.F.R. § 50.75(e)(1)(vi), i.e., that Applicant provide financial assurance "equivalent" to that offered by the decommissioning devices (e.g., a surety or insurance arrangement) specified in the earlier portions of section 50.75(e)(1). The Association asserted that outstanding questions of tax liability limit the availability of the decommissioning funds and also that Applicants have imposed various contractual limitations upon the availability of the funds (i.e., limits based upon plants owned, limits on the Authority's liability, and provisions to pay less than the full decommissioning funding). The Association also asserted that the arrangement contravenes 10 C.F.R. § 50.75(e)(1)(v), which specifies that the terms of the contract must be with the licensee's customers and must include provisions requiring the electricity buyers to pay for decommissioning.

¹⁹⁰ See CLI-00-22, 52 NRC at 302 n.25. See also Orders Approving Transfer of License and Conforming Amendments, Docket Nos. 50-286 and 50-333, 65 Fed. Reg. 70,843 & 70,845 (Nov. 28, 2001).

¹⁹¹ See CAN's Statement on Issue #2, dated Jan. 12, 2001, at 15-18.

which Applicants purportedly rely.¹⁹² While we agree with CAN that Applicants' arrangement is dissimilar to those set out in subsections (i) and (iii), we disagree with the assumption apparently underlying CAN's argument, i.e., that a funding arrangement must be identical to, or at least a very close approximation of, one or more of the preapproved arrangements in order to merit approval under section 50.75(e)(1)(vi).¹⁹³

Rather, as our rules state, a funding arrangement qualifies for approval under subsection (vi) if it provides a level of decommissioning funding assurance "equivalent" to the level provided by the arrangements set forth in subsections (i) through (v). Applicants may *combine* different mechanisms to achieve this required equivalence. Subsection (vi) itself plainly establishes an "equivalence" test:

(vi) Any other mechanism *or combination of mechanisms*, that provides, as determined by the NRC upon its evaluation of the specific circumstances of each licensee submittal, assurance of decommissioning funding *equivalent* to that provided by the mechanisms specified in paragraphs (e)(1)(i) through (v) of this section.

(Emphasis added.)¹⁹⁴

We find that a multitude of provisions in the Applications, as conditioned by the NRC Staff, collectively give us the requisite assurance, "equivalent" to the assurance given by the particular funding devices authorized by our rules, that the decommissioning funds will be available to PASNY.¹⁹⁵

¹⁹² See CAN's Statement on Issue #2, dated Jan. 12, 2001, at 5-9; CAN's Response to Applicants' Initial Statement of Position and Written Direct Testimony on CAN Issue #2, dated Feb. 1, 2001, at 10-12 (pointing out various differences between Applicants' proposed method and the methodology set forth in subsection (iii)).

¹⁹³ See Tr. 138 (Mr. Judson: "this doesn't satisfy the standard of prepayment in the NRC's regulations"); CAN's Response to Applicants' Initial Statement of Position and Written Direct Testimony on CAN Issue #2, dated Feb. 1, 2001, at 7-8 & n.5.

¹⁹⁴ See also CLI-00-22, 52 NRC at 302 ("the issue here is whether the Applicants' financial assurance arrangement is lawful . . . and 'equivalent' of those otherwise prescribed in . . . 10 C.F.R. § 50.75(e)(1)(i)-(v)").

Regarding combination of mechanisms, see "Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance," NUREG-1577 (Rev. 1, March 1999), at 13 (contemplating that transferees would propose "[t]hird-party guarantee mechanisms . . . used in combination with other assurance mechanisms" (emphasis added)). See also *id.*:

As indicated in [subsection (vi)], the reviewer should evaluate other decommissioning funding assurance mechanisms or *combinations of mechanisms* proposed by licensees or license applicants on a case-by-case basis to determine that the mechanism or *combination of mechanisms* provide assurance of decommissioning funding equivalent to that provided by the funding mechanisms specified in [other subsections of section 50.75(e)(1)].

(Emphasis added.)

¹⁹⁵ The amount of the decommissioning trust funds meets the requirements of the prepayment decommissioning funding assurance using the formulae in 10 C.F.R. § 50.75(c). See both SERs at 9; Written Direct Testimony and Affidavit of George W. Collins, dated Jan. 10, 2001, at 2-3 ¶ 6. As CAN acknowledges, the sufficiency of the amount currently in the decommissioning funds is not at issue in this proceeding. See CAN's Response to Applicants' Initial Written Statement of Position and Written Direct Testimony on CAN Issue #2, dated Feb. 1, 2001, at 5 & n.1.

- (i) The Trust agreement limits the use of the funds' assets to decommissioning expenses as defined by the NRC;¹⁹⁶
- (ii) The Trust Agreement permits no contribution of property to the trusts other than liquid assets;¹⁹⁷
- (iii) The Trust Agreement prohibits investments in securities of PASNY or Entergy companies and limits investments in entities owning nuclear power plants;¹⁹⁸
- (iv) No disbursements from the funds may be made until the trustee has first given the NRC 30 days written notice of the payment and no disbursements may be made if the trustee receives prior written objection from the NRC;¹⁹⁹
- (v) No material modification can be made to the trust without NRC's prior written consent;²⁰⁰
- (vi) PASNY's interest in the trusts can be transferred only to the licensed owner of the unit responsible for decommissioning and is not subject to claims of PASNY's creditors;²⁰¹
- (vii) PASNY is prohibited from terminating any trust fund established under the Master Trust without obtaining prior written consent of the NRC;²⁰²
- (viii) Because of PASNY's status as a corporate municipal instrumentality and a political subdivision of the State, and because of New York State's pledge not to limit or alter PASNY's rights until PASNY's contractual obligations are satisfied, a trust held by PASNY could provide more assurance than trusts held by an investor-owned utility;²⁰³ and
- (ix) The Bank of New York's fiduciary duties as trustee, the pre-funded character of the decommissioning funds, the similarities with third-party guarantees, and the conditions included in the NRC Staff's two orders approving the license conditions (including those added as conforming license conditions) provide additional assurance of the availability of decommissioning funds when needed.²⁰⁴

¹⁹⁶ See FitzPatrick Application at 11, 12, 13; Indian Point 3 Application at 13, 15; Staff Orders, 65 Fed. Reg. at 70,844 (Indian Point 3), 70,846 (FitzPatrick); both SERs at 8, 13. See also Written Direct Testimony and Affidavit of George W. Collins, dated Jan. 10, 2001, at 3-4 ¶ 9.

¹⁹⁷ See FitzPatrick Application at 12; Indian Point 3 Application at 14; Staff Orders, 65 Fed. Reg. at 70,844 (Indian Point 3), 70,846 (FitzPatrick); FitzPatrick SER at 9, 13; Indian Point 3 SER at 8, 13.

¹⁹⁸ See FitzPatrick Application at 12; Indian Point 3 Application at 14; Staff Orders, 65 Fed. Reg. at 70,844 (Indian Point 3), 70,846 (FitzPatrick); FitzPatrick SER at 9, 14; Indian Point 3 SER at 9, 13-14.

¹⁹⁹ See FitzPatrick Application at 12, 13-14; Indian Point 3 Application at 14, 15; Staff Orders, 65 Fed. Reg. at 70,844 (Indian Point 3), 70,846 (FitzPatrick); both SERs at 9, 14. See also Written Direct Testimony and Affidavit of George W. Collins, dated Jan. 10, 2001, at 3 ¶ 9 (referring to NRC Staff modification to the Trust Agreement); Tr. 57 (Mr. Silberg).

²⁰⁰ See FitzPatrick Application at 12; Indian Point 3 Application at 14; Staff Orders, 65 Fed. Reg. at 70,844 (Indian Point 3), 70,846 (FitzPatrick); both SERs at 9, 14. See also Written Direct Testimony and Affidavit of George W. Collins, dated Jan. 10, 2001, at 4 ¶ 9.

²⁰¹ See FitzPatrick Application at 13; Indian Point 3 Application at 15; both SERs at 8. See also Tr. 46 (Messrs. Collins and Silberg), 47 (Mr. Silberg: "under the conditions that are established, no money can be transferred from the funds without prior notice to the NRC and cannot be transferred with NRC objections. So, presumably, NRC would not allow transfer of these funds to creditors not involved in decommissioning. . . .").

²⁰² See Staff Orders, 65 Fed. Reg. at 70,844 (Indian Point 3), 70,847 (FitzPatrick); both SERs at 11, 14.

²⁰³ See both SERs at 9, 10, 12.

²⁰⁴ See *id.* at 9, 12-14.

These extensive protective measures satisfy us regarding the integrity and sufficiency of the PASNY-Entergy decommissioning funding arrangements. Nothing in CAN's presentation at the hearing persuades us otherwise.

First, CAN criticizes the conclusion in the NRC Staff's SERs that the arrangement is similar to a "prepayment" method (in section 50.75(e)(1)(i)).²⁰⁵ (The Staff had concluded that the funds can be expected to grow to levels that will satisfy the Commission's minimum funding requirements.²⁰⁶) More specifically, CAN objects that the funds have not yet reached full value and are not being transferred to Entergy.²⁰⁷ CAN seems here to be arguing that without a transfer of the funds themselves and without the funds' values reaching the amounts required under the regulations, the funds cannot strictly be said to be "prepaid."

This argument misses the mark in several respects. CAN offers no support for its assumption that either an actual transfer or a full-value fund amount is essential to "prepayment," nor do we find any such support in our "prepayment" rule (subsection (i)). Indeed, that rule plainly does not call for full-valued fund amounts. As CAN acknowledges,²⁰⁸ subsection (i) expressly provides for the absence of full funding by permitting the licensee to take credit for a 2% real rate of return on investment.²⁰⁹ CAN's failure to come to grips with the 2% return provision undercuts its criticism of the funds' not having yet reached their full expected value. Further, CAN's argument contradicts its acknowledgment that the sufficiency of the funding amount is not at issue in this proceeding.²¹⁰

As for CAN's complaint about the absence of actual transfer of funds to Entergy, nothing in our prepayment rules requires such a transfer. CAN is correct, of course, that the PASNY-Entergy arrangement does not meet our prepayment rule in every particular. But this does not matter. CAN's argument simply ignores the fundamental point that Applicants are seeking to qualify the funds *not* under the "prepayment" provisions of subsection (i) as such, *but rather* under the "equivalent-assurance" provisions of subsection (vi).

In a related argument concerning subsection (i), CAN asserts that the possibility of PASNY holding the trust for 75 years (even without considering license renewal) undermines any argument that the proposed methodology is the "equivalent" of the prepayment methodology referenced in subsection (i).²¹¹ But the 75-year period is irrelevant to this license transfer proceeding because the

²⁰⁵ Ironically, CAN itself acknowledges the similarity. See CAN's Statement on Issue #2, dated Jan. 12, 2001, at 6 ("The arrangement approximates the requirements of 50.75(e)(1)(i), but the Staff acknowledges" certain dissimilarities).

²⁰⁶ See both SERs at 9.

²⁰⁷ See CAN's Statement on Issue #2, dated Jan. 12, 2001, at 5-6.

²⁰⁸ See *id.* at 5.

²⁰⁹ See FitzPatrick SER at 9-10; Indian Point 3 SER at 9.

²¹⁰ See CAN's Response to Applicants' Initial Written Statement of Position and Written Direct Testimony on CAN Issue #2, dated Feb. 1, 2001, at 5 & n.1.

²¹¹ See *id.* at 9. Cf. FitzPatrick SER at 10-11; Indian Point 3 SER at 10.

holding period is the same whether PASNY or Entergy holds the licenses. Either way, the funds remain in a decommissioning trust and are dedicated solely to the decommissioning of the two plants.

Next, CAN criticizes the NRC Staff for concluding that the PASNY-Entergy arrangement was similar to the “surety” method of decommissioning funding (in section 50.75(e)(1)(iii)).²¹² The Staff had relied on PASNY’s traditionally strong bond ratings and New York State’s commitment not to disband or reorganize PASNY without first ensuring the satisfaction of all of its contractual obligations.²¹³ CAN acknowledges the similarities between the proposed arrangement and the “surety method, insurance, or other guarantee method” provided in subsection (iii), but nonetheless objects that PASNY does not meet the requirements of subsection (iii) by being regulated or licensed as a surety company, being a parent of the Transferees, or being an appropriate federal or state agency.²¹⁴

CAN asserts that “[t]he fact that the future ratings of [PASNY]’s bonds rests on [its] participation in an increasingly volatile and competitive energy market is far from the level of assurance offered by the comparatively stable and conservative strategy of a licensed surety company.”²¹⁵ CAN further argues, relying on a 1998 NRC Staff rulemaking analysis, that the Staff “only contemplate[d] separate or ‘captive’ insurers licensed as such” and assumed that “providers of financial mechanisms such as surety bonds and letters of credit [would] require[] collateral for a portion or the full amount of the mechanism.”²¹⁶ CAN finds an analogy in the Staff’s concern (expressed in its 1998 analysis) about the willingness of a utility to issue a guarantee for decommissioning nuclear plants once it had spun off those plants into separately incorporated companies.²¹⁷ CAN points out that PASNY has similarly divested itself of its nuclear assets,²¹⁸ but that PASNY does not even go so far as to offer a guarantee — instead merely agreeing to hold and make payments from the decommissioning funds.²¹⁹

²¹² See CAN’s Statement on Issue #2, dated Jan. 12, 2001, at 6-7.

²¹³ See both SERs at 10, 12.

²¹⁴ See CAN’s Statement on Issue #2, dated Jan. 12, 2001, at 6.

²¹⁵ See *id.* at 7; Tr. 141-42 (Mr. Judson).

²¹⁶ See CAN’s Statement on Issue #2, dated Jan. 12, 2001, at 7, citing SECY-98-164, “Final Rule on Financial Assurance Requirements for Decommissioning Nuclear Power Reactors” (July 2, 1998), Attachment 5 (the Staff’s regulatory analysis), § 3.2.4 (“Availability and Security of Financial Assurance Mechanisms to Supplement or Replace External Sinking Funds”).

²¹⁷ See CAN’s Statement on Issue #2, dated Jan. 12, 2001, at 7, citing SECY-98-164, “Final Rule on Financial Assurance Requirements for Decommissioning Nuclear Power Reactors” (July 2, 1998), Attachment 5 (the Staff’s regulatory analysis), § 3.2.4 (“Availability and Security of Financial Assurance Mechanisms to Supplement or Replace External Sinking Funds”).

²¹⁸ See CAN’s Statement on Issue #2, dated Jan. 12, 2001, at 7, citing SECY-98-164, “Final Rule on Financial Assurance Requirements for Decommissioning Nuclear Power Reactors” (July 2, 1998), Attachment 5 (the Staff’s regulatory analysis), § 3.2.4 (“Availability and Security of Financial Assurance Mechanisms to Supplement or Replace External Sinking Funds”).

²¹⁹ See CAN’s Statement on Issue #2, dated Jan. 12, 2001, at 8-9.

CAN's line of argument ignores several critical points. Again, Applicants' failure to meet the precise terms of an NRC-approved decommissioning funding method (here, the "surety" method) is not decisive. Applicants are not seeking approval of the arrangement under subsection (iii) and therefore do not need to satisfy all the requirements of that subsection. Also, though PASNY is not a regulated or licensed surety or parent company, the financial assurance at issue here is actually *greater* than that provided by a surety or parent — Applicants' assurance takes the form of money that has already been deposited in the two funds, as opposed to a mere promise of a surety, guarantee, or insurance policy to pay the money at some future time.²²⁰ Finally, CAN's question about PASNY's failure to offer a "guarantee" seems to us irrelevant. The Bank of New York, not PASNY, holds the decommissioning funds, and is obliged to preserve and disburse them under specified conditions.²²¹

CAN next examines subsections (i) and (iii) collectively and argues that the regulations preclude Applicants from showing that their proposed mechanism "could qualify as a combination of Prepayment and Surety mechanisms."²²² CAN argues that the reference in subsection (vi) to a "combination of mechanisms"

require[s] separate arrangements that reinforce each other, if the applicant cannot provide a single satisfactory mechanism. For instance, if an applicant's prepayment did not satisfy financial assurance requirements, they would be required to combine it with a satisfactory insurance, guarantee or surety method.²²³

CAN's argument is not particularly clear.²²⁴ We assume CAN means to assert that an applicant's plan must fully satisfy at least one of the standards enumerated in subsections (i) through (v) to qualify as "equivalent" assurance under subsection (vi). Such an interpretation would render subsection (vi) superfluous. It would also unduly constrain the flexibility that subsection (vi) accords to applicants in structuring their decommissioning funding methods, and would thus run counter to the Commission's intention to at least consider, on a case-by-case basis, funding assurance mechanisms not expressly permitted under subsections (i) through (v). In promulgating subsection (vi), we intended to give applicants the flexibility necessary to structure methods outside the parameters of any one of the five methods set forth in subsections (i) through (v), or to combine

²²⁰ See FitzPatrick Application at 15 ("current funding level exceeds the amount needed to meet the NRC's minimum funding requirements"); Indian Point 3 Application at 16 (same). For an explanation of the calculations justifying this conclusion, see Response to NRC Request for Additional Information Regarding License Transfer Information, dated June 16, 2001, Response to Question 3.

²²¹ Further, as noted at note 42, *supra*, the NRC Staff's actions are not at issue in a license transfer adjudication.

²²² See CAN's Response to Applicants' Initial Written Statement of Position and Written Direct Testimony on CAN Issue #2, dated Feb. 1, 2001, at 7-8.

²²³ See *id.* at 8 n.5.

²²⁴ Regarding a party's duty to present its arguments clearly, see *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-94-6, 39 NRC 285, 297-98 (1994) (and authority cited therein).

portions of those subsections in such a way as to provide the same end-result of funding assurance.²²⁵

Perhaps recognizing the bankruptcy of its effort to hold Applicants to the precise terms of our approved decommissioning funding methods (subsections (i) through (v)), CAN turns directly to subsection (vi) and argues that the NRC Staff's above-cited regulatory analysis of that subsection nowhere "contemplates the possibility" of Applicants' kind of arrangement.²²⁶ But the Staff's failure to refer, in advance, to the precise arrangement later developed by PASNY and Entergy merely suggests to us that the Staff could not anticipate every kind of arrangement that license transfer applicants or decommissioning planners might submit under subsection (vi). That provision was deliberately left open-ended, and allows for innovative funding arrangements as long as they provide protections equivalent to preapproved funding methods. Here, by a preponderance of the evidence, Applicants have shown that their arrangements provide assurance of adequate decommissioning funding.

Lastly, CAN claims that the issue it raised concerning PASNY's access to the decommissioning funds does not concern whether those funds are available for "decommissioning." CAN asserts that the issue instead focuses upon the unavailability of the funds for the offsite "remediation" activities for which Entergy disclaims responsibility.²²⁷ CAN asserts that (1) PASNY's "remediation responsibilities do not fall under the NRC regulation's rubric concerning decommissioning and (2) amendments to the Master Decommissioning Trust and the conditions NRC Staff have [*sic*] placed on the license transfer limit [PASNY] to withdrawing funds for the purpose of compensating the Entergy companies solely for the cost of decommissioning."²²⁸

CAN is here raising again the offsite remediation issue that we rejected earlier in this proceeding. In CLI-00-22, we held that the decommissioning "trust

²²⁵ This idea was implied in the NRC Staff's statement in NUREG-1577 regarding subsection (vi):

Third-party guarantee mechanisms such as surety bonds or letters of credit, should guarantee the total amount of currently estimated decommissioning costs. If these mechanisms are used in combination with other assurance mechanisms, *the combined amount should at least equal current estimated decommissioning costs.*

See "Standard Review Plan on Power Reactor Licensee Financial Qualifications and Decommissioning Funding Assurance," NUREG-1577 (Rev. 1, March 1999), at 13 (emphasis added). See also Final Rule, "Financial Assurance Requirements for Decommissioning Nuclear Power Reactors," 63 Fed. Reg. 50,465, 50,469, 50,473 (Sept. 22, 1998).

²²⁶ See CAN's Statement on Issue #2, dated Jan. 12, 2001, at 7, citing SECY-98-164, "Final Rule on Financial Assurance Requirements for Decommissioning Nuclear Power Reactors" (July 2, 1998), Attachment 5 (the Staff's regulatory analysis), § 3.2.4 ("Availability and Security of Financial Assurance Mechanisms to Supplement or Replace External Sinking Funds").

²²⁷ See CAN's Statement on Issue #2, dated Jan. 12, 2001, at 3; CAN's Response to Applicants' Initial Written Statement of Position and Written Direct Testimony on CAN Issue #2, dated Feb. 1, 2001, at 6; Tr. 51-52 (Ms. Katz), 109-11 (Mr. Judson), 113 (Ms. Katz, referring to offsite contamination and referring to PASNY's shipments of contaminated waste to a landfill).

²²⁸ See CAN's Response to Applicants' Initial Written Statement of Position and Written Direct Testimony on CAN Issue #2, dated Feb. 1, 2001, at 4.

cannot be used for offsite remediation.’’²²⁹ Given that the issue we admitted for hearing deals with onsite decommissioning funding rather than offsite remediation funding, the latter issue is beyond the scope of this proceeding.²³⁰ It is likewise beyond the proceeding’s scope because the transfers themselves will not affect the extent to which any remediation money is available for withdrawal from the two decommissioning funds.²³¹

We must acknowledge that CLI-00-22 was internally inconsistent regarding CAN’s remediation issues. In that order, we excluded one offsite remediation issue, yet we admitted another one as a decommissioning subissue. In admitting the latter as an issue, we inadvertently failed to focus sufficiently on the *offsite* context in which the issue was being presented to us. We mistakenly assumed that CAN was using the term ‘‘remediation’’ as a loose synonym for ‘‘decommissioning.’’ Although the particular language we cited in CLI-00-22 did not expressly state that the remediation at issue was offsite,²³² CAN’s language preceding the cited passage did indicate that the context was offsite remediation.²³³ Had we recognized the offsite context, we would not have admitted the issue — for the reasons set forth in the section of CLI-00-22 dealing with ‘‘Lack of Provision for Offsite Remediation.’’²³⁴

B. The Commission’s Post-Transfer Regulatory Authority over PASNY

CAN asserts that approval of the applications would deprive the Commission of any post-transfer regulatory authority to ensure that PASNY satisfies the NRC’s requirements for decommissioning and remediation of the site. CAN

²²⁹ See 52 NRC at 308. See generally Final Rule, ‘‘General Requirements for Decommissioning Nuclear Facilities,’’ 53 Fed. Reg. 24,018, 24,021 (June 27, 1988) (emphasis added):

[D]ecommissioning involves those activities necessary to remove a *facility* safely from service and to reduce residual radioactivity to a level that permits release of *the property* for unrestricted use and termination of license.

* * * *

The decommissioning rule applies to the *site, buildings and contents, and equipment* associated with a nuclear facility. . . .

²³⁰ See 52 NRC at 319 (‘‘The Commission . . . will not consider claims rejected in the course of this opinion’’).

²³¹ These two rulings rejecting CAN’s remediation argument should not be construed to mean either that we view CAN’s concerns as insignificant or that CAN lacks remedies for its offsite remediation concerns. If CAN believes that PASNY has illegally spilled nonradioactive waste, then it may be able to approach the Environmental Protection Agency for remedial action under the ‘‘Superfund’’ statute. See Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601-9675. Alternatively, if CAN believes that PASNY has spilled radioactive material offsite in violation of the NRC regulations in effect at the time of the spills, then CAN may file a petition under 10 C.F.R. § 2.206 seeking enforcement action.

²³² See CLI-00-22, 52 NRC at 302 n.25, citing Reply of CAN to Applicants’ Answer to CAN’s Request for Hearing and Petition to Intervene, dated Aug. 17, 2000, at 14.

²³³ See Reply of CAN to Applicants’ Answer to CAN’s Request for Hearing and Petition to Intervene, dated Aug. 17, 2000, at 13.

²³⁴ See 52 NRC at 306-08.

expresses this concern notwithstanding the NRC Staff's imposition of a set of license conditions requiring PASNY's acceptance of continuing NRC regulatory authority with regard to its administration of the decommissioning funds to cover Entergy's decommissioning and radiological remediation responsibilities. CAN is concerned that, even with these license conditions, the agency would still lack the same degree of direct regulatory authority over PASNY that it would have if PASNY were to remain a licensee. According to CAN, this is because the Commission's regulations do not provide for retention of authority and enforcement power over a former licensee. CAN also expresses particular concern about PASNY's continuing offsite remediation responsibility in light of Entergy's disclaimer of responsibility for cleaning up any offsite contamination that occurred during PASNY's term of ownership.²³⁵

The answer to CAN's concerns turns both on the conditions that the Staff's orders have imposed on Applicants and on the scope of the Commission's jurisdiction over unlicensed persons pursuant to section 161(i) of the Atomic Energy Act ("AEA") to enforce such conditions.²³⁶ We believe that the Staff-imposed conditions provide the Commission with adequate control over PASNY's expenditure of the decommissioning funds and thereby provide the degree of assurance we deem necessary. These conditions require that the relevant decommissioning trust agreements between PASNY and the trustee (the Bank of New York) include mechanisms for the NRC to bar disbursements, to require disbursements to satisfy NRC decommissioning requirements, and to prevent PASNY from terminating the decommissioning trust funds without the NRC's consent.²³⁷

²³⁵ See CAN's Statement on Issue #2, dated Jan. 12, 2001, at 3-6, 9-12.

²³⁶ As we explained in the Statement of Considerations on the "deliberate misconduct" rule, "Section 161i of the AEA provides the Commission with broad authority to issue such regulations and orders as the Commission deems necessary to govern any activity authorized pursuant to the AEA in order to protect public health and safety." See Final Rule, "Deliberate Misconduct by Unlicensed Persons," 63 Fed. Reg. 1890, 1891 (Jan. 13, 1998), referring to 42 U.S.C. § 2201(i). See generally Final Rule, "Revisions to Procedures to Issue Orders; Deliberate Misconduct by Unlicensed Persons," 56 Fed. Reg. 40,664, 40,666-69 (Aug. 15, 1991) (repeatedly referring to the broad and flexible authority that the AEA conferred upon the Commission').

²³⁷ See Staff Orders, 65 Fed. Reg. at 70,844 (Indian Point 3), 70,846-47 (FitzPatrick):

(7) The decommissioning trust agreement shall provide that no disbursements or payments from the trust, other than for ordinary administrative expenses, shall be made by the trustee until the trustee has first given the NRC 30 days prior written notice of the payment. In addition, the trust agreement shall state that no disbursements or payments from the trust shall be made if the trustee receives prior written notice of objection from the Director, Office of Nuclear Reactor Regulation.

(9) The decommissioning trust agreement shall provide that the provisions or purpose of the trust agreement may be enforced by the NRC against [PASNY] and the trustee with respect to the disbursement of the trust funds to the extent necessary to ensure compliance with or satisfaction of the NRC's decommissioning requirements. The NRC shall not be a beneficiary of the trust or of any of the trust funds, unless required by law to be so for the sole purpose of enforcing the provisions or purpose of the trust agreement as set forth above.

(Continued)

We recognize, however, that imposition of such conditions may be insufficient, in and of itself, to ensure compliance if the agency lacks the post-transfer regulatory authority to enforce those conditions. We addressed the subject inferentially 9 years ago in a license transfer proceeding involving the Shoreham Nuclear Power Station. There, we imposed a condition requiring the former licensee to take back the license if the approved transferee were dissolved by a state court.²³⁸ The imposition of this condition in *Shoreham* implies a continuing authority over former licensees even after they transfer their licenses to other entities.

We have also discussed such post-transfer jurisdiction in the context of our “deliberate misconduct” rule.²³⁹ As we indicated in the Statement of Considerations for the 1991 version of that rule, our statutory authority to issue orders “is not confined to those who hold licenses from the Commission”²⁴⁰ but rather is a “uniquely broad and flexible authority”²⁴¹ which extends “to any person . . . who engages in conduct within the Commission’s subject matter jurisdiction.”²⁴² Indeed, we consider this authority to extend to anyone “who engages in conduct *affecting activities* within the Commission’s subject-matter

(10) [The decommissioning trust agreement shall require that] PASNY may not terminate any fund established under the Master Trust for [FitzPatrick and Indian Point 3] except after requesting and obtaining written consent from the Director, Office of Nuclear Reactor Regulation, or the Director, Office of Nuclear Material Safety and Safeguards, as appropriate.

See also both SERs at 14. In addition, Condition 8 also requires the decommissioning trust agreement to provide that the trust agreement shall not be modified in any material respect without the prior written consent of the Director, Office of Nuclear Reactor Regulation. *See* FitzPatrick Order, 65 Fed. Reg. at 70,846, and Indian Point 3 Order, 65 Fed. Reg. at 70,844. *See also* both SERs at 14; Written Direct Testimony and Affidavit of George W. Collins, dated Jan. 10, 2001, at 4 ¶9. Thus, once the required conditions were implemented in the trust agreements, they would remain in effect absent express NRC authorization to the contrary.

²³⁸ *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-92-4, 35 NRC 69, 80 n.7 (1992).

²³⁹ *See* 10 C.F.R. §§ 30.10, 40.10, 50.5, 60.11, 61.9b, 70.10, 72.12, 110.7b (all applicable to, *inter alia*, any “employee of a licensee or applicant; or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or applicant”).

²⁴⁰ *See* 56 Fed. Reg. at 40,667. *See also* 56 Fed. Reg. at 40,666 (“whether an individual holds an NRC license or not is irrelevant to th[e] inquiry” of the Commission’s authority under section 161(i) “to impose orders on entities that engage in particular activities”), 40,668 (the Commission’s “authority is not based on whether such persons hold licenses”), 40,669 (the Commission has authority to “issue notices of violation against non-licensees ‘in appropriate cases when requirements directly imposed upon non-licensees are violated’”).

²⁴¹ *See* 56 Fed. Reg. at 40,666, 40,668; and 63 Fed. Reg. at 1892. *See also* 56 Fed. Reg. at 40,666 (“very broad powers”), 40,667 (“exceptionally broad” authority).

²⁴² *See* 56 Fed. Reg. at 40,666. *See also* 63 Fed. Reg. at 1891 (“Having this enforcement authority available will help the NRC pursue redress in cases of deliberate misconduct by unlicensed persons acting within the scope of the Commission’s jurisdiction”); *id.* at 1892 (quoting 56 Fed. Reg. at 40,667):

Where Congress does not include statutory provisions governing *in personam* jurisdiction, it is appropriate to look to the scope of the subject matter jurisdiction in order to determine the scope of *in personam* jurisdiction. Since Congress did not include any specific personal jurisdiction provision in the 1954 Act, or any limitations on such jurisdiction, the NRC is authorized to assert its personal jurisdiction over persons based on the maximum limits of its subject matter jurisdiction. The agency’s personal jurisdiction is established when a person acts *within the agency’s subject matter jurisdiction*.

(Final emphasis added.)

jurisdiction’’²⁴³ — including those who (like PASNY) “*have been engaged in licensed activities.*’’²⁴⁴

We see no reason why the rationale justifying our jurisdiction over nonlicensees in the context of the “deliberate misconduct” regulations should not apply equally in the context of license transfer regulations. After all, if PASNY remains responsible for the disbursement of the decommissioning funds, PASNY would not only “affect[] activities” within our subject matter jurisdiction but would be directly “engage[d] in conduct” within that jurisdiction. Just as the Commission has the authority to “issue notices of violation against nonlicensees in appropriate cases when requirements directly imposed upon non-licensees are violated,’’²⁴⁵ we likewise have the authority to exercise enforcement authority against PASNY if it violates any of the requirements imposed in the Staff’s orders.²⁴⁶ Indeed, if PASNY were to fail to comply with the conditions we imposed on the transfer approvals, we could declare the approvals null and void, and PASNY would revert to being a licensee subject to the Commission’s usual authority over licensees.²⁴⁷ Alternatively, we could reinstate PASNY as a licensee without removing the Entergy Transferees from the licenses.²⁴⁸

Finally, even were PASNY not deemed a licensee due to a breach of these conditions, the NRC could still sue PASNY to enforce the provisions and purpose of the Trust Agreement. Section 10.11 of that Agreement provides that “[t]he provisions or purpose of this Agreement^[249] may be enforced by the NRC against the Authority and the Trustee with respect to the disbursement of the Funds to the extent necessary to ensure compliance with or satisfaction of the NRC’s decommissioning requirements.’’²⁵⁰ PASNY has agreed in writing to waive any right it may have to deny, contest, or challenge the Commission’s jurisdiction over PASNY with respect to either Indian Point 3 or FitzPatrick in any enforcement matter concerning disposition or use of decommissioning funds retained by PASNY. This waiver remains in effect until PASNY transfers the funds to Entergy or completion of the facilities’ decommissioning, whichever occurs first.²⁵¹

²⁴³ See 63 Fed. Reg. at 1891 (emphasis added).

²⁴⁴ See 56 Fed. Reg. at 40,665 (emphasis added).

²⁴⁵ See *id.* at 40,669 (internal quotation marks omitted).

²⁴⁶ See Staff Orders, 65 Fed. Reg. at 70,843 (Indian Point), 70,846 (FitzPatrick); both SERs at 14.

²⁴⁷ See *Shoreham*, CLI-92-4, 35 NRC at 80 n.7.

²⁴⁸ See Tr. 148-49 (Mr. Hom).

²⁴⁹ The purpose of the Trust is “to accumulate and hold funds” for the decommissioning of FitzPatrick and Indian Point 3, “and to use such funds, in the first instance, for expenses related to” decommissioning the facilities. See Master Decommissioning Trust Agreement, § 2.01, as amended Nov. 21, 2000.

²⁵⁰ This provision was added to the Agreement by the “First Amendment to Master Decommissioning Trust Agreement,” dated Nov. 21, 2000. See *also* both SERs at 14.

²⁵¹ See Staff Orders, 65 Fed. Reg. at 70,843 & 70,844-45 (Indian Point 3), 70,845 & 70,847 (FitzPatrick); both SERs at 11, 13. See *also* Applicants’ Initial Written Statement [on Issue #2], dated Jan. 12, 2001, at 7-8; Tr. 57 (Mr. Silberg).

In sum, we are confident that we have sufficient post-transfer regulatory authority to ensure that PASNY satisfies the NRC's requirements for decommissioning.

C. Entergy's Financial Ability To Pay Potential Capital Gains Tax

CAN argues that Entergy may not have the financial stability to pay any capital gains tax that the Internal Revenue Service ("IRS") might impose on the decommissioning funds.²⁵² CAN claims that there remain "uncertainties and unresolved questions regarding the tax status of the decommissioning fund[s]."²⁵³ Although the Entergy Applicants acknowledge liability for any capital gains tax on the funds, it argues that such an occurrence is "not likely under current tax law" and, in any event, would be paid by Entergy [referring here to the parent company] rather than the two trusts.²⁵⁴

We find only brief mention in the record of CAN's underlying premises that one or more of the Applicants has actually sought an IRS ruling and that PASNY's retention of the funds is somehow linked to a favorable IRS ruling.²⁵⁵ Even this brief reference has been subsequently overtaken by the Applicants' statements at the hearing that they have not asked, and will not ask, for an IRS ruling.²⁵⁶ For these reasons, we reject CAN's "capital gains tax" argument.

D. Precedential Effect of Creating an Exception to 10 C.F.R. § 50.75(e)(1)

CAN claims that the creation of an exception to section 50.75(e)(1) in this proceeding could set a dangerous precedent for future cases in which the transferor may not have the same degree of financial strength as PASNY.²⁵⁷ We see no risk here of a dangerous precedent. In the area of decommissioning funding assurance, each transfer application is examined *on its own facts*. This will be especially true of applications seeking to use an assurance other than those specifically described in sections 50.75(e)(1)(i)-(v). Thus, a transferor less qualified than

²⁵² See CAN's Statement on Issue #2, dated Jan. 12, 2001, at 13; CAN's Response to Applicants' Initial Written Statement of Position and Written Testimony on CAN Issue #2, dated Feb. 1, 2001, at 10. Cf. CAN's Statement on Issue #2, dated Jan. 12, 2001, at 2 (PASNY "has agreed to retain the decommissioning trust fund (pending a favorable IRS ruling on its tax status)").

²⁵³ See CAN's Statement on Issue #2, dated Jan. 12, 2001, at 2. See also CAN's Response to Applicants' Initial Statement of Position and Written Direct Testimony on CAN Issue #2, dated Feb. 1, 2001, at 13-14.

²⁵⁴ See Written Direct Testimony and Affidavit of Joseph T. Henderson, dated Jan 11, 2001, at 3 (entered into the Record following Tr. 41, and identified as Licensee Exh. 1).

²⁵⁵ See Indian Point 3 Application at 14 n.3 ("In both of these license transfers it was anticipated that the seller would only hold the funds temporarily until favorable tax rulings were obtained"); FitzPatrick Application at 12 n.3 (same).

²⁵⁶ See, e.g., Applicants' Final Statement of Position, dated April 3, 2001, at 31.

²⁵⁷ See CAN's Statement on Issue #2, dated Jan. 12, 2001, at 14.

PASNY may have a more difficult time gaining our approval for its retention of a decommissioning trust fund pursuant to subsection (vi). Because of the fact-driven nature of our decommissioning rulings in this proceeding, their precedential value is, as a practical matter, limited to an indication of the Commission's openness to funding arrangements not specifically enumerated in subsections (i)-(v).

In a related argument, CAN asserts that the suitability of the PASNY-Entergy arrangement presents the Commission a generic issue that would be better addressed in a rulemaking, and that we should therefore either dismiss or suspend the transfer applications pending completion of an appropriate rulemaking.²⁵⁸ But issues such as Transferor's retention of decommissioning funds may be addressed either in a rulemaking or an adjudicatory context.²⁵⁹ We expect few license transfer applications to include the kind of fund retention arrangement that we address here. Consequently, we prefer to address the fund retention issue on a case-by-case basis rather than expend the more significant resources required for a rulemaking. Moreover, the dismissal or suspension of the instant proceeding, pending a rulemaking, would result in a lengthy delay of our rulings on the FitzPatrick and Indian Point 3 transfers. Such a result would be contrary to the Commission's policy of "expeditious decisionmaking" in license transfer proceedings.²⁶⁰

E. PASNY's Conflict of Interest

CAN asks the Commission to ascertain whether the potential for PASNY to profit from the license transfer arrangement (by retaining any difference between the final amount in the funds and the amount Entergy ultimately needs to decommission the facilities) constitutes a conflict of interest with PASNY's fiduciary obligations to the ratepayers and citizens of New York. More specifically, CAN posits that, on the one hand, PASNY has a fiduciary responsibility to ratepayers and citizens of New York State for "growing" the decommissioning trust funds and being certain that it has all the funds necessary to do a complete decommissioning and cleanup of the IP3 and FitzPatrick reactor sites; on the other hand, the proposed licensing agreement provides PASNY an incentive to permit Entergy to perform the cheapest decommissioning permissible

²⁵⁸ See *id.* at 15-16.

²⁵⁹ It is well established that an agency's decision to use rulemaking or adjudication in dealing with a problem is a matter of discretion. See *Kansas Gas and Electric Co.* (Wolf Creek Generating Station, Unit 1), CLI-99-19, 49 NRC 441, 467 (1999) ("the Supreme Court has repeatedly emphasized that the choice between rulemaking and adjudication lies primarily in the informed discretion of the administrative agency") (internal quotation marks and citations omitted); *Fire Protection for Operating Nuclear Power Plants* (10 CFR 50.48), CLI-81-11, 13 NRC 778, 800 (1981), citing, *inter alia*, *NAACP v. FPC*, 425 U.S. 662, 668 (1976).

²⁶⁰ See Final Rule, "Streamlined Hearing Process for NRC Approval of License Transfers," 63 Fed. Reg. 66,721, *passim* (Dec. 3, 1998).

under the NRC regulations, so that PASNY will get the maximum amount of surplus decommissioning funds.²⁶¹

CAN overstates PASNY's degree of control over the decommissioning process, in that it is not PASNY but Entergy Nuclear Operations (through its contract with Entergy Nuclear, Inc.) that dictates how decommissioning will be performed,²⁶² and it is Entergy Nuclear Inc. that will conduct the decommissioning.²⁶³ PASNY's role is limited to paying for the decommissioning — and even the minimal degree of control inherent in *that* role is diminished by the fact that the Bank of New York is trustee of the Decommissioning Fund.

CAN also raises, for the first time in its Final Statement of Position, the argument that PASNY faces a conflict of interest because it does not intend to use any excess funds for offsite remediation or to return the money to the taxpayers.²⁶⁴ We fail to follow the logic of this argument (*see* note 224, *supra*) and, in any event, find it irrelevant — given that offsite remediation and taxpayer refunds are not within the scope of this proceeding (*see* p. 551-52, *supra*).

F. CAN's Proposed Conditions

CAN asks the Commission to make its approval of the license transfer applications contingent upon PASNY's acceptance of three decommissioning-related conditions: (i) the decommissioning funds be transferred to Entergy FitzPatrick and Entergy Indian Point as a condition of approving the applications;²⁶⁵ (ii) PASNY accept the Commission's authority regarding PASNY's offsite remediation responsibilities; and (iii) PASNY submit Schedule 5.13 and complete an Environmental Impact Statement²⁶⁶ to determine the actual scope of PASNY's offsite remediation responsibilities.²⁶⁷ Given our rejection of CAN's arguments on the merits of decommissioning funding assurance, we need not reach its proposed

²⁶¹ See CAN's Response to Applicants' Initial Written Statement of Position and Written Testimony on CAN Issue #2, dated Feb. 1, 2001, at 14-18; Tr. 156-57 (Mr. Judson); CAN's Final Written Statement of Position on Issues Nos. 2 and 3, dated April 3, 2001, at 8.

²⁶² See Applicants' Response to NRC Request for Additional Information Regarding License Transfer Application, dated June 13, 2000, Response to Question 4 at 2:

[P]ursuant to Section 2.4 of the Decommissioning Agreements[, PASNY] and Entergy Nuclear, Inc. ("ENI") are required to enter into an agreement whereby ENI would decommission the plant. . . . The Entergy owners, through their authorized agent, Entergy Nuclear Operations, Inc., would at all times retain ultimate control over the decommissioning activities of ENI and its contractors It is contemplated that . . . ENI would do the decommissioning work, including the hiring of contractors to carry out such work, subject to the ultimate control of the Entergy owners.

²⁶³ See both Applications at 2.

²⁶⁴ See CAN's Final Written Statement of Position on Issues Nos. 2 and 3, dated April 3, 2001, at 8.

²⁶⁵ See CAN's Statement on Issue #2, dated Jan. 12, 2001, at 16.

²⁶⁶ At the hearing, CAN clarified that it is seeking an Environmental Impact Statement to determine whether there is a need for remediation, not to determine whether the radiation levels at the offsite disposal site are illegal. *See* Tr. 128 (Mr. Judson).

²⁶⁷ See CAN's Statement on Issue #2, dated Jan. 12, 2001, at 17-18. *See also* CAN's Final Written Statement of Position on Issues Nos. 2 and 3, dated April 3, 2001, at 11, 12.

conditions. Moreover, in CLI-00-22, we declined to impose CAN's proposed remediation and environmental condition.²⁶⁸ We see nothing in the final record that persuades us that this ruling in CLI-00-22 was erroneous.²⁶⁹

III. OBSERVATIONS REGARDING THE SUBPART M HEARING PROCESS

The hearing in the instant proceeding was the first we have held under the Subpart M procedural rules. As would be expected with an untested set of procedures, there arose several situations that our regulations did not anticipate or in which those regulations were insufficiently clear. To assist the parties and presiding officers in future Subpart M proceedings, we take this opportunity to address these matters.

A. Role of the NRC Staff

Under the procedural rules set forth in Subpart M, the NRC Staff is not required to be a party in a license transfer proceeding and is required only to offer into evidence its SER(s) and to provide one or more sponsoring witnesses at the hearing.²⁷⁰ In this particular proceeding, the Staff chose not to be a party.

Notwithstanding the Staff's nonparty status, the Presiding Officer invited the NRC Staff to submit a brief enunciating its views on three issues: (i) to what extent does the NRC retain authority to control PASNY's decommissioning expenditures following divestiture of the two plants to the Entergy companies; (ii) whether Entergy FitzPatrick and Entergy Indian Point, as newly formed entities, are required to submit cost-and-revenue estimates for only a 5-year period or instead for the entire life of each license; and (iii) under what circumstances should an organization be deemed a newly formed entity.²⁷¹ The Staff filed a brief on February 26, 2001, in which it addressed the first of these issues and agreed to sponsor witnesses who would address the second and third issues at the hearing.²⁷²

²⁶⁸ See 52 NRC at 307-09.

²⁶⁹ Indeed, Applicants point out that Schedule 5.13 deals with *nonradiological* remediation issues. See Applicants' Response to CAN's Statement of Position [on Issue #2], dated Feb. 1, 2001, at 7; Tr. 55-56, 112 (Mr. Silberg); Applicants' Final Statement of Position, dated April 3, 2001, at 30. The decommissioning funding "rule does not deal with costs of demolition of nonradioactive structures and equipment or with site restoration after termination of the NRC license. These matters are outside NRC's jurisdiction. . . ." See Final Rule, "General Requirements for Decommissioning Nuclear Facilities," 53 Fed. Reg. 24,018, 24,038 (June 27, 1988).

²⁷⁰ See 10 C.F.R. § 2.1316(b).

²⁷¹ See LBP-01-4, 53 NRC at 130 n.10; Unpublished Memorandum and Order (NRC Staff Participation), dated Feb. 8, 2001.

²⁷² See NRC Staff's Brief regarding NRC Authority over Decommissioning Expenditures by PASNY, dated Feb. 26, 2001, at 3 nn.2, 3.

We consider the Presiding Officer's requests to be appropriate under the circumstances. Those requests did not compromise the NRC Staff's status as a nonparty, yet gave all parties the benefit of the Staff's expertise on an issue of first impression and also the Staff's familiarity with the details of the conditions it imposed on Applicants regarding this agency's continuing authority over PASNY.²⁷³ We believe that CAN's and Applicants' arguments on these issues were more finely tuned as a result of having the benefit of the Staff's views, and that the Commission itself has benefitted from having more and better briefs on these issues.

B. Presiding Officer's Accepting Oral Questions from, and Allowing Dialogue Between, the Parties at the Hearing

Twice during the hearing, the Presiding Officer invited parties to suggest questions for him to pose to witnesses.²⁷⁴ He explained that his authority to solicit such questions stemmed from 10 C.F.R. §§ 2.1320(a)(3) and 2.1322(b).²⁷⁵ Applicants objected to soliciting questions, on the ground that such an invitation contravened both the spirit and letter of Subpart M.²⁷⁶

We do not construe our regulations as an absolute bar against attorneys or parties offering suggestions of questions at the hearing.²⁷⁷ There may be unusual occasions where such suggestions are appropriate and useful. But, in our view, Applicants' concerns regarding oral questions at the March 13-14 hearing are generally well taken. Subpart M contemplates that parties submit their questions in advance.²⁷⁸ Free-form improvisation of questions by parties at the hearing has the potential to subvert Subpart M's intent to establish an informal process run by the presiding officer.

This was the first hearing conducted using the new Subpart M procedures and we appreciate that unanticipated difficulties that might arise under such circumstances. We have no doubt that, as we gain more practice using Subpart M procedures, there will be lessons learned and improvements to the process. For example, we were surprised that the parties did not avail themselves of the opportunity to submit prehearing questions to the Presiding Officer. Had the litigants posed their questions to the Presiding Officer before the hearing as Subpart M contemplates, we believe the questioning of witnesses would have been more orderly and efficient.

²⁷³ See p. 553, *supra*.

²⁷⁴ See Tr. 76, 373.

²⁷⁵ See Tr. 77-82.

²⁷⁶ See Tr. 77-82, 84 (Mr. Silberg); Applicants' Final Statement of Position, dated April 3, 2001, at 15-17.

²⁷⁷ See 10 C.F.R. §§ 2.1320(a)(3) and 2.1322(b).

²⁷⁸ See 10 C.F.R. § 2.1322(a)(2)(ii).

To ensure that Subpart M hearings run more smoothly in the future, we provide the following guidance. Parties are strongly encouraged to file prehearing questions. The parties should not be permitted to question witnesses directly at the hearing, and it will be purely a matter of the presiding officer's discretion whether to entertain any questions posed for the first time at the hearing. To discourage parties from saving their questions until the hearing, the presiding officers should exercise sparingly their authority to entertain suggestions for questions at the hearing. One example, however, of a situation that might well justify the exercise of such authority is the emergence of unexpected information as a result of the presiding officer's questions. To the limited extent the presiding officers do choose at the hearing to entertain suggestions for questions, the presiding officers should consider permitting the parties to submit only *written* suggestions at specified times in the hearing. The Commission directs the presiding officers and parties to use these or other effective techniques to ensure the orderly conduct of hearings.

Conclusion

1. The Commission *grants* in part and *denies* in part Applicant's challenges to the Presiding Officer's rulings on the admissibility of various subissues concerning Financial Qualifications.
2. The Commission *grants* in part and *denies* in part Applicants' *de facto* appeal of the Presiding Officer's denial of their Motion to Strike.
3. The Commission *rejects* CAN's challenges to the two license transfer applications, and *approves* issuance of the NRC Staff's transfer orders.
4. The Commission *withholds* this Order from public release for 3 working days, giving Applicants an opportunity to review it and to advise us if we have inadvertently included in the Order any information that they consider proprietary. If, by the end of that period, Applicants have not informed us of any proprietary information in the Order, the Commission *instructs* the Office of the Secretary to release the Order to the public on the fourth working day following its issuance. Prior to the Commission's release of the document to the public, the parties are not permitted to discuss the Order with members of the public and must not release any part of the Order to the public.

IT IS SO ORDERED.

For the Commission²⁷⁹

ANDREW L. BATES
Acting Secretary of the Commission

Dated at Rockville, Maryland,
this 21st day of June 2001.

²⁷⁹ Commissioner Dicus was not present for the affirmation of this Order. If she had been present, she would have approved it.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Richard A. Meserve, Chairman
Greta Joy Dicus
Nils J. Diaz
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)

June 27, 2001

ORDER

In a May 31, 2001 order, the Atomic Safety and Licensing Board referred to the Commission the Board's ruling on where to set the regulatory standard for aircraft crash hazards at Applicant Private Fuel Storage, L.L.C.'s proposed independent spent fuel storage installation (ISFSI) site. *See* LBP-01-19, 53 NRC 416 (2001). Consistent with our policy to accept Board certifications and referrals where "early resolution" of issues is desirable, we grant review and set the case for briefing. *See Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation)*, CLI-00-3, 52 NRC 23, 28-29 (2000).

The Applicant, Private Fuel Storage, L.L.C., seeks a license to operate an ISFSI on the Skull Valley Goshute Indian Reservation in Utah. NRC regulations require that the site be evaluated to determine credible accident scenarios associated with external and internal hazards, both natural and man-made, and the facility be designed to withstand credible accidents. *See* 10 C.F.R. Part 72, Subparts E and F.

In its Aircraft Crash Impact Hazard Report (Rev. 4, Aug. 11, 2000), Private Fuel Storage argued that any accident with a less than one in a million (10^{-6}) per year probability of occurring — "benchmark probability" — was not a

credible accident. In its September 29, 2000, final Safety Evaluation Report, the NRC Staff, accepting PFS's reasoning, agreed that the appropriate benchmark probability was one in a million per year. *See* SER at 15-77. The State of Utah contends, however, that the benchmark probability for air crash hazards should be 1 in 10 million (10^{-7}), a higher standard. The Board found that the benchmark probability should be set at 10^{-6} , but referred the standard for the Commission's review. *See* LBP-01-19 53 NRC at 430-31. We accept the referral and direct interested parties to submit briefs as follows:

All interested parties should submit electronic copies of briefs, with paper copies to follow, by July 13, 2001. The briefs should be no more than twenty pages in length. Reply briefs should be submitted no later than July 23, 2001, and should not exceed ten pages in length.

IT IS SO ORDERED.

For the Commission¹

ANNETTE VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 27th day of June 2001.

¹Commissioner Diaz was not present for the affirmation of this Order. If he had been present, he would have approved it.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Dr. Jerry R. Kline
Dr. Peter S. Lam

In the Matter of

Docket No. 72-22-ISFSI
(ASLBP No. 97-732-02-ISFSI)

PRIVATE FUEL STORAGE, L.L.C.
(Independent Spent Fuel Storage
Installation)

June 14, 2001

In this proceeding concerning the application of Private Fuel Storage, L.L.C. (PFS), under 10 C.F.R. Part 72 to construct and operate an independent spent fuel storage installation (ISFSI), the Licensing Board defers ruling on the request of Intervenor State of Utah to admit late-filed contention Security-J, Law Enforcement. The Board postpones its admissibility determination regarding this contention, in which the State asserts that recently adopted Utah legislation prohibiting any local governmental entity from entering into an arrangement to provide municipal services (including law enforcement assistance) to an ISFSI renders PFS unable to comply with the regulatory mandate that a “[d]ocumented liaison with a designated response force or local law enforcement agency (LLEA) must be established to permit timely response to unauthorized penetration or activities,” 10 C.F.R. § 73.51(d)(6), because of a pending federal district court challenge to the constitutionality of that state enactment.

RULES OF PRACTICE: CONTENTIONS (DEFERRAL OF RULING)

Reflecting a concern about the efficient use of presiding officer and party resources in a proceeding, where it is clear that the legal issue that will be

central — and likely dispositive — in any agency litigation regarding a potentially admissible contention is also the central issue in pending litigation in a superior judicial forum (i.e., a federal district court), the presiding officer can avoid the injudicious use of the presiding officer's and the parties' time and resources by deferring a ruling on the admissibility of that contention.

MEMORANDUM AND ORDER

(Deferring Admissibility Ruling on Late-Filed Contention Security-J)

Pending before the Licensing Board is the April 13, 2001 request of Intervenor State of Utah (State) to admit late-filed contention Security-J, Law Enforcement. In this issue statement, the State alleges that the physical security plan (PSP) of Applicant Private Fuel Storage, L.L.C. (PFS), for its proposed Skull Valley, Utah independent spent fuel storage installation (ISFSI) is not in accord with the requirements of 10 C.F.R. Parts 72 and 73. Specifically, the State contends that PFS is unable to comply with the regulatory mandate that a "[d]ocumented liaison with a designated response force or local law enforcement agency (LLEA) must be established to permit timely response to unauthorized penetration or activities," 10 C.F.R. § 73.51(d)(6), because recently adopted Utah legislation prohibits any state or local governmental entity from entering into such an arrangement relative to the PFS facility. In responses filed on April 27, 2001, PFS and the Staff have taken different positions regarding the contention's admissibility. The former asserts the admission request should be denied while the latter interposes no objection to the late-filed contention's admission.

For the reasons set forth below, we defer any ruling on the State's request to admit contention Security-J pending resolution of ongoing federal district court litigation in which PFS contests the constitutionality of this legislation, or further order of the Board.

I. BACKGROUND

The PFS license application for authorization to construct and operate its proposed Skull Valley ISFSI, which was filed in June 1997, includes, among other things, a PSP that addresses the requirements found in 10 C.F.R. Parts 72 and 73 regarding physical protection for the facility and its contents. *See* LBP-98-7, 47 NRC 142, 157, *reconsideration granted in part and denied in part*, LBP-98-10, 47 NRC 288, *aff'd*, CLI-98-13, 48 NRC 26 (1998). As part of its challenge to the PFS application, in January 1998 the State timely filed nine contentions — labeled Security-A through Security-I — regarding the PSP, and in a June 29, 1998 ruling, the Board admitted one — contention Security-C

— for further litigation. In doing so, the Board limited contention Security-C to the State’s assertion that PFS had not described the estimated response times for the Tooele County sheriff’s office, which is the PFS-designated LLEA, to any unauthorized activities that might occur at the PFS facility as required by 10 C.F.R. Part 73, App. C. *See* LBP-98-13, 47 NRC 360, 369-70 (1998).

Thereafter, the State filed a timely motion seeking reconsideration of the Board’s rulings regarding contentions Security-A, Security-B, and Security-C. The thrust of the State’s argument concerning these contentions was that Tooele County’s cooperative law enforcement agreement (CLEA) with Intervenor Skull Valley Band of Goshute Indians (Skull Valley Band), upon whose Skull Valley reservation the PFS facility is to be located, and the United States Department of the Interior’s Bureau of Indian Affairs (BIA), to provide law enforcement services was invalid. The problem, according to the State, was that Tooele County had failed to provide its approval of the agreement by an “appropriate” county resolution that, as required by Utah law, had been put forth in writing before a vote was taken. The Board ruled that the State had put forth sufficient grounds for reconsideration of contentions Security-A, Security-B, and Security-C to the degree they involved issues of training, equipment, and staffing deficiencies that turned on whether a legitimately adopted CLEA existed with Tooele County that would permit the County sheriff’s office to provide law enforcement services as the designated LLEA.¹ *See* LBP-98-17, 48 NRC 69, 73-76 (1998).

In June 1999, PFS filed a motion seeking summary disposition of contentions Security-A and Security-B, and partial summary disposition regarding contention Security-C, based on information showing that, after the Board’s reconsideration ruling admitting these contentions, the Tooele County Board of Commissioners adopted a formal resolution approving the CLEA with the Skull Valley Band and the BIA as required under Utah law. The Board granted the PFS motion for summary disposition as it related to the issue of the legitimacy of the CLEA, leaving for litigation the initially admitted contention Security-C issue of timely response to the PFS facility by the Tooele County sheriff’s office. *See* LBP-99-31, 50 NRC 147, 152-53 (1999). Thereafter, in a February 14, 2000 filing, the State advised the Board that it no longer wished to proceed to hearing on the timely response issue portion of contention Security-C, and the Board subsequently dismissed this contention. *See* LBP-00-5, 51 NRC 64, 67-69 (2000).

As was described above, the PSP-related contention now before us, which the State labels Security-J, Law Enforcement, was submitted on April 13, 2001. *See* [State] Request for Admission of Late-Filed Contention Utah Security-J (Apr.

¹ Subsequently, the State filed a motion for admission of a late-filed amendment of these security contentions to include a claim that the CLEA was invalid because the Tooele County Attorney had opined that Tooele County was not obligated to provide law enforcement assistance at the PFS facility under the CLEA. The Board, however, rejected the State’s request as failing to merit admission under a balancing of the five late-filing factors set forth in 10 C.F.R. § 2.714(a)(1). *See* LBP-99-7, 49 NRC 124, 128-29 (1999).

13, 2001) [hereinafter State Request]. With this contention, the State seeks to reintroduce the issue of the alleged lack of a valid LLEA assistance agreement. Newly proffered contention Security-J states:

The Applicant's Physical Security Plan does not comply with 10 CFR Part 73 because the Applicant does not have valid documented liaison with a designated local law enforcement authority (LLEA), and redundant communications between onsite security force members and the LLEA, to provide timely response to unauthorized penetrations at the PFS facility. *See* 10 CFR §§ 72.180; 73.51(d)(6), (8) and (12); and Part 73, Appendix C.

State Request at 4. In addition to its claims that this contention satisfies the five late-filing criteria found in 10 C.F.R. § 2.714(a)(1), the State declares that the basis for this contention is Senate Bill 81 (SB 81), entitled "Provisions Relating to High-Level Nuclear Waste," which the Governor of Utah signed into law on March 15, 2001. *See* State Request at 6 (citing *id.* Exh. 2 (SB 81 excerpts revising Utah Code Ann. §§ 17-27-102, 17-34-1, 19-3-301, 19-3-303 (2001)). According to the State, among other things, the language in this legislation prevents local officials from entering into a contract or agreement to provide "municipal-type services," which apparently would include law enforcement assistance in the event of unauthorized penetration of the PFS facility. *See* Utah Code Ann. §§ 17-27-102(2), 17-34-1(1)(c), 17-34-1(3), 19-3-303(6). As a consequence, the State declares, the Tooele County CLEA provision to provide law enforcement services to the PFS facility is now void as against public policy in Utah, meaning PFS cannot rely upon that agreement to demonstrate its compliance with the Part 73 requirements requiring a designated LLEA or other response force. *See* State Request at 7-8.

In its response to the State's late-admission request, in addition to asserting that the contention does not merit admission under a balancing of the section 2.714(a) late-filing factors, *see* [PFS] Response to [State] Request for Admission of Late-Filed Contention Utah Security-J — Law Enforcement (Apr. 27, 2001) at 8-12 [hereinafter PFS Response], PFS makes several arguments as to why contention Security-J should not be accepted into this proceeding. Initially, it declares the contention should be rejected as a policy matter because the State's motion is a disingenuous attack on the Commission's licensing procedures that seeks to undermine the existing federal regulatory process. PFS further asserts that, as a matter of law, the contention is immaterial to the proceeding, and hence should not be admitted by the Board, because various issues regarding the constitutionality of the Utah law at issue here, including the LLEA assistance prohibition provisions relied upon by the State to support contention Security-J, as well as other recent state enactments, will be resolved in a pending case, *Skull Valley Band of Goshute Indians v. Leavitt*, Case No. 2:01CV00270C (D. Utah filed Apr. 19, 2001), recently filed by the Skull Valley Band and PFS in the United

States District Court for the District of Utah.² In this regard, PFS argues that whatever ruling the federal district court makes regarding the constitutionality of these Utah laws will effectively moot the matter before the Licensing Board. According to PFS, a finding that the Utah statute's LLEA assistance prohibition provision is unconstitutional will mean PFS has complied with NRC physical security regulations so that construction and operation can proceed as planned. If, on the other hand, the federal district court upholds the Utah law, then for all intents and purposes PFS facility operation will be foreclosed because PFS cannot continue to build the facility in light of the impediments put in place by this enactment. *See* PFS Response at 3-5.

For its part, the Staff argues that a balancing of the section 2.714(a)(1) late-filing factors weighs in favor of admitting contention Security-J and that the State has provided a sufficient basis for the contention. The Staff thus declares that it does not oppose admission of this contention into the proceeding, at least in the absence of a federal court determination that the laws in question are not federally preempted or otherwise unconstitutional. *See* [Staff] Response to [State] Request for Admission of Late-Filed Contention Utah Security-J (Apr. 27, 2001) at 4-9 [hereinafter Staff Response].

²In addition to SB 81, in their district court litigation PFS and the Skull Valley Band challenge five other pieces of Utah legislation, including Senate Bill 196 (SB 196), the High Level Nuclear Waste Disposal Act, enacted in 1998, *see* Utah Code Ann. §§ 19-3-302 to 19-3-317, which places various restrictions on the transportation and storage of nuclear waste in Utah. According to the PFS/Skull Valley Band complaint, the statute requires the Governor's approval for the transfer of spent nuclear fuel (SNF) in Utah; declares the transfer of SNF in Utah to be an ultra-hazardous activity (subjecting the transporter to strict liability); and requires State licensing for SNF storage or transfer. In addition, SB 196 requires an ISFSI applicant to post a 2 billion dollar cash bond to receive a state license; subjects all individuals participating in the project to unlimited strict liability; and requires the ISFSI applicant to pay a 5 million dollar fee over and above the actual cost for considering the application. *See* PFS Response, Exh. 1, at 17 (Complaint in *Skull Valley Band of Goshute Indians v. Leavitt*, Case No. 2:01CV00270C (D. Utah filed Apr. 19, 2001) [hereinafter Complaint]). Also, as described in that complaint, provisions of another of these Utah enactments, Senate Bill 177, the High Level Nuclear Waste Act, *see* Utah Code Ann. §§ 19-3-315, 19-3-318, 54-4-15, 78-34-6 (1999), purport to subject each utility and every shareholder of every utility affiliated with the PFS application to joint and several and strict liability for any mishaps that might occur, as well as require State approval before SNF shipments can be made, impose shipment fees, and prohibit the grant of easements to cross lands within the State for SNF transportation. *See* Complaint at 19-20.

Additionally, at issue in the pending federal district court lawsuit are laws passed by the Utah legislature that PFS and the Skull Valley Band assert restrict road and rail travel relating to the PFS operation. Among these is (1) a 1998 enactment, Senate Bill 78, Master Road — State Highway List, *see* Utah Code Ann. §§ 72-4-106, 72-4-119, 72-4-122, 72-4-125, 72-4-135, that the PFS/Skull Valley Band complaint indicates removes control of State Road 196, the only road with access to the Skull Valley Band reservation, from Tooele County and places it with the State; and (2) 1999 legislation, Senate Bill 164, State Roads Designated, *see* Utah Code Ann. § 72-3-301, that PFS and the Skull Valley Band assert empowers the State to control gravel and dirt roads near the Skull Valley Band reservation, thus enabling the State to deny all rail or truck access to the reservation. *See* Complaint at 16-17, 18. Furthermore, according to the PFS/Skull Valley Band complaint, under Senate Bill 66, Statewide Highway Criteria, *see* Utah Code Ann. §§ 72-1-303, 72-4-102, 72-7-513, also enacted in 1999, the State may designate rural roads as state highways if it determines that there is a public safety interest. *See* Complaint at 19.

II. ANALYSIS

To justify a presiding officer's consideration of the "merits" of a late-filed contention, i.e., whether the contention fulfills the admissibility standards articulated in the Commission's rules of practice, a party first must demonstrate that a balancing of the five factors set forth in section 2.714(a)(1)(i)-(v) of 10 C.F.R. Part 2 supports accepting the petition. And in that regard, it is well established that (1) the first and foremost factor is whether good cause exists that will excuse the late-filing of the contention; and (2) lacking good cause, a balancing of the other four factors — in which factors three (assistance in developing a sound record) and five (broadening the issues/delaying the proceeding) are given more weight than factors two (availability of other means to protect the petitioner's interests) and four (extent of representation of those interests by other parties) — must provide a compelling showing in favor of admission. *See Commonwealth Edison Co.* (Braidwood Nuclear Power Station, Units 1 and 2), CLI-86-8, 23 NRC 241, 244-45 (1986).

In this instance, weighing these factors could well lead to a determination that admission of contention Security-J is warranted. Although PFS argues in connection with factor one that "[t]he State should not be permitted to use its sovereign powers to artificially create 'good cause' for late-filed contentions" and that the Board "should summarily reject the State's use of its sovereign power to orchestrate a perversion of the Commission's licensing process as 'good cause,'" PFS Response at 9, the State and the Staff seem to have the better argument in their assertion that the new legislation afforded an appropriate trigger for contention Security-J and that the State fulfilled the good cause requirement by filing its contention within 30 days after passage of the legislation. *See* State Request at 8-9; Staff Response at 4. The same is true with regard to the State's and the Staff's overall assessments that, when balanced, the other four factors weigh in favor of admission as well.³ *See* State Request at 1; Staff Response at 4-5. Moreover, as the State and Staff contend, in its reliance upon the recently enacted legislation, the State does appear to have provided an admissible basis for the contention. *See* State Request at 6-8; Staff Response at 6-9.

This being said, we nevertheless decline to rule on the admissibility of this contention at this time. Our determination in this regard reflects our concern about ensuring the efficient use of Board and party resources in this proceeding. From

³With regard to the other four section 2.714(a)(1) late-filing elements, the State takes the position that factors two, three, four, and five favor admission; PFS asserts that all four factors do not support admission; and the Staff declares that factors three and four favor admission, while factors two and five do not, but concludes that a balance of these four, in conjunction with the State's showing regarding factor one, supports admission. *See* State Request at 9-10; PFS Response at 9-12; Staff Response at 4-5. We consider somewhat problematic the PFS and Staff arguments regarding factor two as an element weighing against admissibility given that the identified "other means" available to protect the State's interest, i.e., the federal district court proceeding, is one the State did not invoke and in which it may have no choice but to participate.

the case complaint attached as exhibit one to the PFS response, it is clear that the legal issue of the validity of the March 2001 Utah legislation (including the LLEA assistance agreement prohibition provision that is the focus of contention Security-J) relative to the Constitution's Supremacy, Commerce and Contracts Clauses, among others, will be a central issue before the federal district court. It is equally clear, however, that this legal issue will be the central — and likely dispositive — matter before the Board in any litigation regarding contention Security-J.⁴ At this juncture, it seems an injudicious use of the Board's and the parties' time and resources to engage in litigating an issue that is pending in, and could well be resolved by, a superior judicial forum.

We thus defer ruling on the admissibility of this contention pending further developments in the federal district court proceeding. We will, however, monitor this proceeding to determine whether there are any developments, such as Commission intervention or scheduling considerations, that would warrant further Board action on the contention pending a court ruling on the constitutionality of the Utah legislation. Accordingly, during this deferral period, the Board requests that the parties to the federal district court litigation that are also before us, i.e., PFS, the Skull Valley Band, and the State, file periodic joint reports on the status of that lawsuit. The first of these reports should be filed on or before *Friday, June 29, 2001*, with additional reports to follow at 45-day intervals thereafter.

III. CONCLUSION

Although the State's late-filed contention Security-J may well meet the standards for admissibility under 10 C.F.R. § 2.714, the Licensing Board will defer ruling on the admission of this contention given that the central legal issue that would be before the Board — the constitutionality of the LLEA assistance agreements prohibition provision of recently enacted Utah Senate Bill 81 — also is a central legal issue in pending federal district court litigation to which PFS, the Skull Valley Band, and the State are all parties.

For the foregoing reasons, it is, this fourteenth day of June 2001, ORDERED that:

⁴The Staff has suggested that, even if the constitutionality of the March 2001 Utah statute's LLEA assistance agreement prohibition provision is upheld, there are other avenues by which PFS might be able to fulfill the requirements of Part 73, including the designation of another "response force" or the invocation of the Commission-recognized "realism" doctrine whereby the best efforts of state and local government officials in an emergency situation are assumed. See Staff Response at 9-10 (citing 10 C.F.R. § 50.47(c)(1)(iii)); see also PFS Response at 6-8 (arguing realism doctrine supports rejection of contention Security-J as immaterial). PFS has made it clear, however, that it considers the various legislative restrictions imposed by the State of Utah, including the bar to LLEA assistance agreements at issue here, to be so severe and pervasive that PFS will be forced to abandon the project if this legislation is not struck down as unconstitutional. See PFS Response at 5.

1. A Board ruling on the April 13, 2001 State request for admission of late-filed contention Security-J, Law Enforcement, is *deferred* pending further order of the Board.

2. PFS, the Skull Valley Band, and the State shall file joint reports regarding the status of the pending federal district court litigation, *Skull Valley Band of Goshute Indians v. Leavitt*, Case No. 2:01CV00270C (D. Utah filed Apr. 19, 2001), in accordance with the schedule established in section II above.

THE ATOMIC SAFETY AND
LICENSING BOARD⁵

G. Paul Bollwerk, III
ADMINISTRATIVE JUDGE

Dr. Jerry Kline
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam
ADMINISTRATIVE JUDGE

Rockville, Maryland
June 14, 2001

⁵Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to counsel for (1) Applicant PFS; (2) Intervenors Skull Valley Band, Ohngo Gaudadeh Devia, Confederated Tribes of the Goshute Reservation, Southern Utah Wilderness Alliance, and the State; and (3) the Staff.

DD-01-3 was inadvertently omitted from the
June 2001 Issuances, and therefore,
this Director's Decision can be found at 54 NRC 305.

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