

**NUCLEAR REGULATORY COMMISSION  
ISSUANCES**

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

January 1, 1996 – June 30, 1996

Volume 43  
Pages 1 – 358



240065

Prepared by the  
Office of Information Resources Management  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
(301-415-6844)

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## PREFACE

This is the forty-third volume of issuances (1 - 358) 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, 1996 to June 30, 1996.

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.

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

COMMISSIONER:

Shirley A. Jackson, Chairman<sup>1</sup>

In The Matter of

Docket No. 50-029  
(Decommissioning Plan)

YANKEE ATOMIC ELECTRIC  
COMPANY  
(Yankee Nuclear Power Station)

January 16, 1996

The Commission refers to the Atomic Safety and Licensing Board, for a ruling on standing and contentions and with guidance on several novel issues and a suggested expedited schedule, pleadings filed regarding Petitioners' intervention in a proceeding to consider approval of a plan to decommission the Yankee Nuclear Power Station ("Yankee NPS").

The matter now before the Commission follows the Commission's recent reinstatement, in light of a decision by the First Circuit Court of Appeals, of its pre-1993 policy of providing an opportunity for an adjudicatory hearing on nuclear power reactor decommissioning plans.

**RULES OF PRACTICE: INTERVENTION PETITION**

Where a petitioner has not expressly requested a hearing on its petition, but where it seems clear from the petition as a whole that a hearing is what the petitioner desires, the Commission will not dismiss that petition solely on the basis of such a technical pleading defect.

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<sup>1</sup> This Decision was made by Chairman Jackson under delegated authority, as authorized by NRC Reorganization Plan No. 1 of 1980, after consultation with Commissioner Rogers. Commissioner Rogers has stated his agreement with this Decision.



#### **RULES OF PRACTICE: STANDING TO INTERVENE**

In order to establish standing to intervene in a proceeding, a petitioner must demonstrate that (1) it has suffered a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute; (2) that the injury can fairly be traced to the challenged action; and (3) that the injury is likely to be redressed by a favorable decision.

#### **RULES OF PRACTICE: STANDING**

As the Commission has noted on other occasions, a prospective intervenor may not derive standing to participate in a proceeding from another person who is not a party to the action or is not a member of its organization.

#### **RULES OF PRACTICE: STANDING TO INTERVENE; ADMISSIBILITY OF CONTENTIONS**

Once a party demonstrates that it has standing to intervene on its own accord, that party may then raise any contention that, if proved, will afford the party relief from the injury it relies upon for standing.

#### **RULES OF PRACTICE: ADMISSIBILITY OF CONTENTIONS (LIMITATION)**

The Commission construes the provision in 10 C.F.R. § 2.714(g), in accordance with the relevant case law, i.e., that an intervenor's contentions may be limited to those that will afford it relief from the injuries asserted as a basis for standing.

#### **REGULATIONS: DECOMMISSIONING**

A fair reading of the Commission's decommissioning rules at 10 C.F.R. § 50.82 is that it is for the licensee in the first instance to choose the decommissioning option and that neither the DECON nor the SAFSTOR option can be deemed unacceptable *a priori*.

#### **REGULATIONS: DECOMMISSIONING**

The principal criterion for judging a decommissioning alternative is the proposed time required for decommissioning completion. 10 C.F.R. § 50.82(b)(1)(i). Both the SAFSTOR and the DECON alternatives would, in

general, meet the criterion in that section and in the Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities (GEIS).

#### **REGULATIONS: DECOMMISSIONING**

In addition to meeting the "time" requirement in 10 C.F.R. § 50.82(b)(1)(i), decommissioning plans must also meet other applicable NRC regulations, including the "as low as is reasonably achievable" (ALARA) requirement in 10 C.F.R. § 20.1101(b).

#### **REGULATIONS: INTERPRETATION (PART 20)**

One of the purposes of revising 10 C.F.R. Part 20 was to change the status of ALARA from the hortatory suggestion in old 10 C.F.R. § 20.1(c) to the mandatory requirement in the current 10 C.F.R. § 20.1101(b); thus, ALARA is an essential part of Federal Radiation Protection Guidance.

#### **REGULATIONS: DECOMMISSIONING**

While a licensee's choice of decommissioning options is not beyond all challenge, such a challenge to a licensee's choice of alternative decommissioning procedures cannot be based *solely* on differences in estimated collective occupational doses on the order of magnitude of the estimates in the GEIS.

#### **REGULATIONS: RADIATION PROTECTION STANDARDS; INTERPRETATION (10 C.F.R. Part 20)**

A licensee's actions do not violate the ALARA principle simply because some way can be identified to reduce radiation exposures further. The practicality and the cost of the measures required to achieve these reductions as well as "other societal and socioeconomic considerations" must also be taken into account. *See* 10 C.F.R. § 20.1003 (definition of ALARA).

#### **RULES OF PRACTICE: RADIATION PROTECTION STANDARDS**

The Commission will generally find that exposures are ALARA when further dose reductions would cost more than \$1000 or \$2000 for each person-rem reduction achieved. *See generally* "Regulatory Analyses Guidelines," NUREG/BR-0058, Rev. 2 (1995).

## REGULATIONS: DECOMMISSIONING

The essential purpose of the requirement in 10 C.F.R. § 50.82 is to provide "reasonable assurance" of adequate funding for decommissioning. Thus, to be entitled to relief, a petitioner needs to show not only that a licensee's decommissioning cost estimate is in error, but that there is not reasonable assurance that the correct amount will be paid.

## NRC: ENFORCEMENT ACTIONS

To the extent that a petitioner's contention alleges "illegal" past conduct in violation of NRC regulations, those allegations are more properly the subject of a separate enforcement action.

# MEMORANDUM AND ORDER

## I. INTRODUCTION

This matter is before the Commission on a petition by the Citizens Awareness Network ("CAN") and the New England Coalition on Nuclear Pollution ("NECNP") (collectively "Petitioners") in response to a Notice of Opportunity for a Hearing published in the *Federal Register*. See 60 Fed. Reg. 55,069 (Oct. 27, 1995). The Petitioners seek to intervene in a proceeding to consider approval of a plan to decommission the Yankee Nuclear Power Station ("Yankee NPS"), submitted by the Yankee Atomic Electric Company ("YAEC" or "Licensee"), which holds a possession-only license for Yankee NPS. The NRC Staff and YAEC have now filed answers to the petition. We have granted Petitioners' motion seeking leave to file a reply and considered their reply in issuing this Order. This Order refers the pleadings to the Atomic Safety and Licensing Board ("Licensing Board") for appropriate action with guidance on several novel issues raised in this proceeding and a suggested expedited schedule.<sup>2</sup>

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<sup>2</sup> The NRC Staff has filed a response to the Petitioners' motion for leave, in which the Staff does not oppose the motion but asks for leave to file a pleading in opposition to the "new issues" it alleges are raised in the Reply. The Licensee has filed two responsive pleadings. The first opposes the Petitioners' motion for leave; the second is a motion for leave to file a substantive pleading in opposition to the Reply if we accept the reply. These two requests to file additional responses are forwarded to the Licensing Board for its appropriate consideration.

## II. BACKGROUND

We have discussed the background of this matter before at some length. Suffice it to say that we have reinstated our pre-1993 policy of providing an opportunity for an adjudicatory hearing regarding the proposed approval of nuclear power reactor decommissioning plans in light of a decision by the U.S. Court of Appeals for the First Circuit. See generally *Citizens Awareness Network v. NRC*, 59 F.3d 284 (1st Cir. 1995); *Yankee Atomic Electric Co. (Yankee Nuclear Power Station)*, CLI-95-14, 42 NRC 130 (1995). In accord with that pre-1993 policy, we offered an opportunity for a hearing on the unfinished portion of work to be completed under the proposed Yankee NPS decommissioning plan, which had previously been approved by the NRC Staff. See 60 Fed. Reg. 55,069 (Oct. 27, 1995), *supra*.

In order to obtain such a hearing, Petitioners must satisfy the requirements of 10 C.F.R. § 2.714. Thus, Petitioners must (1) demonstrate that they have standing to intervene and (2) submit at least one valid contention. In this case, as required by the expedited procedures announced in the *Federal Register* Notice, *id.*, Petitioners submitted a supplemental petition containing five proposed contentions. The Licensee and the Staff have responded, arguing that: (1) Petitioners have not requested a hearing; and (2) all proposed contentions are inadmissible. Petitioners have, in turn, replied to Licensee's and Staff's objections and advocated the admissibility of each of the proffered contentions.

We refer the matter to the Atomic Safety and Licensing Board ("Licensing Board" or "ASLB") to rule on standing and contentions and to conduct any necessary further proceedings. In so doing, we construe the original petition as requesting a hearing and not just intervention in the proceeding in the event a hearing is requested by someone else. While Petitioners may be faulted for not *expressly* requesting a hearing in their original petition, it seems clear from the petition as a whole that this is what they desire, and their reply confirms this. Accordingly, we decline the suggestions by the Staff and the Licensee that we dismiss the petition solely on the basis of a technical pleading defect.

## III. GUIDANCE TO THE LICENSING BOARD

We expect that many of the issues raised by the Petitioners and related pleadings will be resolvable within the framework of the NRC's regulations and case law. However, in order to expedite this proceeding and to avoid future delay, we are providing guidance to the Licensing Board on several novel issues raised by the pleadings.

## A. The Nexus Between Standing and Contentions

The Licensee and the Staff challenge Petitioners' "standing" to raise contentions related to occupational dose issues. In order to establish standing to intervene in a proceeding, a petitioner must demonstrate that (1) it has suffered a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute; (2) that the injury can fairly be traced to the challenged action; and (3) that the injury is likely to be redressed by a favorable decision. See, e.g., *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92 (1993). See generally *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61, 112 S. Ct. 2130, 2136 (1992); *Dellums v. NRC*, 863 F.2d 968, 971 (D.C. Cir. 1988). And as we have noted on other occasions, a prospective intervenor may not derive standing to participate in a proceeding from another person who is not a party to the action or is not a member of its organization. See, e.g., *Florida Power and Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989).

However, once a party demonstrates that it has standing to intervene on its own accord, that party may then raise any contention that, if proved, will afford the party relief from the injury it relies upon for standing. See, e.g., *Duke Power Co. v. Carolina Environmental Study Group*, 438 U.S. 59, 78-81 (1978) (rejecting a requirement for a "nexus" between the injury claimed and the right being asserted); *Sierra Club v. Morton*, 405 U.S. 727, 740 n.15 (1972) ("The test of injury-in-fact goes only to the question of standing to obtain judicial review. Once this standing is established, the party may assert the interests of the general public in support of its claims for equitable relief."). See generally 3 K. Davis and R. Pierce, *Administrative Law Treatise* § 16.13 (1994).<sup>3</sup>

In this case, the Petitioners have asserted standing to intervene in this proceeding alleging that (1) they will suffer injuries resulting from implementation of the currently proposed Yankee NPS decommissioning plan and (2) these injuries could be redressed either by the choice of a different alternative or by modification of the plan. Assuming *arguendo* that the Licensing Board determines that Petitioners do indeed have standing to intervene in this proceeding, they will then be free to assert any contention, which, if proved, will afford them the relief they seek, i.e., the rejection or modification of the Yankee NPS decommissioning plan in a manner that will redress their asserted injuries. Of course, any contention must also satisfy the other applicable requirements for contentions. We address here only the matters of "nexus" between standing and contentions.

<sup>3</sup>Section 2.714(g) of 10 C.F.R. provides that an intervenor's participation may be limited in accordance with its interests. We construe this provision in accordance with the cited case law, i.e., that an intervenor's contentions may be limited to those that will afford it relief from the injuries asserted as a basis for standing.

## B. NRC Review of the Choice of Decommissioning Option

The Petitioners allege that the Licensee's choice of DECON as a decommissioning option violates 10 C.F.R. § 20.1101 "in that it fails to maintain occupational and public radiation doses as low as reasonably achievable ["ALARA"]." The basis Petitioners offer for this contention is that "significant dose savings" could be achieved by "cost effective measures," i.e., by postponing dismantlement of the facility for a 30-year SAFSTOR period.

We are not prepared at this time to put the Licensee's choice of a decommissioning option forever beyond all challenge. Nevertheless, a fair reading of our decommissioning rules at 10 C.F.R. § 50.82 is that it is for the Licensee in the first instance to choose the decommissioning option and that neither DECON nor SAFSTOR can be deemed unacceptable *a priori*.<sup>4</sup> A choice of DECON over SAFSTOR involves tradeoffs, e.g., earlier achievement of the decommissioning goal of unrestricted site release but at the cost of higher collective doses to plant workers performing the dismantlement.

In this case the Petitioners challenge the validity of the Licensee's evaluation of this tradeoff by asserting that the site will not be available for release for unrestricted use for many years to come because spent fuel will have to remain stored at the site. Thus, they argue, implementation of DECON will involve approximately 900 person-rem more occupational exposure than implementation of SAFSTOR<sup>5</sup> but will provide no countervailing benefit. They further argue that, contrary to YAEC's figures, the SAFSTOR alternative would actually cost somewhat less than DECON. Petitioners thus contend that Yankee's proposal for a modified DECON plan violates the ALARA requirement because radiation exposure could be lowered at reasonable cost by adopting the SAFSTOR alternative.

We assume that an ALARA challenge can properly be made against a Licensee's decommissioning alternative choice, if an adequate basis for the challenge is offered. The question presented by Petitioners' ALARA contention is whether the Petitioners' assertions regarding dose savings and cost-effectiveness

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<sup>4</sup> Under 10 C.F.R. § 50.82(b)(1), "The proposed decommissioning plan must include— (i) the choice of the alternative for decommissioning," and under 10 C.F.R. § 50.82(b)(1)(i), "[f]or an electric utility licensee [of a nuclear power reactor], an alternative is acceptable if it provides for completion of decommissioning within 60 years." Thus, the principal criterion for judging a decommissioning alternative is the proposed time required for decommissioning completion; both SAFSTOR and DECON will, in general, meet this criterion. The Generic Environmental Impact Statement ("GEIS") supporting the decommissioning rule also finds both SAFSTOR and DECON generally acceptable.

However, decommissioning plans must also meet other applicable NRC regulations, including the ALARA requirement in 10 C.F.R. § 20.1101(b). See 10 C.F.R. § 50.82(e). It must be emphasized that one of the purposes of the revised 10 C.F.R. Part 20 was to change the status of ALARA from the hortatory suggestion in old 10 C.F.R. § 20.1(c) to the mandatory requirement in new 10 C.F.R. § 20.1101(b). Thus, ALARA is an essential part of Federal Radiation Protection Guidance.

<sup>5</sup> For this figure the Petitioners cite Table 4.3-2 of NUREG-0586, "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities" ("GEIS").



provide an adequate basis. As for the asserted dose savings, we note that the 900 person-rem figure is based on estimates for decommissioning of a much larger nuclear plant than the Yankee NPS.<sup>6</sup> But different dose estimates may be expected at the Yankee NPS. Furthermore, Yankee's decommissioning plan has already been partially implemented, and the results of that implementation (which should be available for review) may reduce the anticipated occupational dose.

In any event, the 900 person-rem figure, being a generic estimate, is necessarily somewhat speculative as applied to a particular facility. The differences in occupational exposure between the DECON and SAFSTOR alternatives could in actual practice be less than 900 person-rem, or perhaps not much at all. Among the few inevitable uncertainties are the actual conditions of the facility after several decades, and the amount of institutional memory held by plant management and workers regarding the facility configuration and the extent and location of contamination. It is one thing to review a licensee's choice of alternative procedures and actions when that review can be based upon relatively certain data in the here and now; it may be quite another thing to review a licensee's choice based on estimates of doses that will occur 30 or more years in the future. Given that our rules treat DECON as a generally acceptable alternative, despite the acknowledged likelihood of reduced occupational dose under SAFSTOR, we conclude that a challenge to the Licensee's choice of the modified DECON option instead of SAFSTOR cannot be based solely on differences in estimated collective occupational dose on the order of magnitude of the estimates in the GEIS.

We believe that this position as applied in this case is entirely consistent with the ALARA concept. The Petitioners appear to recognize that a licensee's actions do not violate the ALARA principle simply because some way can be identified to reduce radiation exposures further. The practicality and the cost of the measures required to achieve these reductions as well as "other societal and socioeconomic considerations" must also be taken into account. See 10 C.F.R. § 20.1003 (definition of ALARA). As a matter of agency practice, the NRC will generally find that exposures are ALARA when further dose reductions would cost more than \$1000 or \$2000 for each person-rem reduction achieved. See generally "Regulatory Analyses Guidelines," NUREG/BR-0058, Rev. 2, announced in 60 Fed. Reg. 65,694 (Dec. 20, 1995). Applying that analysis here, the "value" of a 900 person-rem occupational dose reduction would be no more than about \$2 million.

In the case before us, all parties appear to agree that the cost estimates for both the DECON and SAFSTOR alternatives are on the order of \$200 million

<sup>6</sup>Table 4.3-2 of the GEIS presents dose analyses for decommissioning "the reference PWR," which is an 1175-MWe facility, significantly larger than the Yankee NPS.

and lie within \$10 million to \$15 million of each other. The estimates (especially Petitioners' "present value" estimates) are highly dependent on difficult-to-predict variables like interest, discount, and inflation rates and waste disposal fees. In short, it is not possible to say with great assurance whether switching from DECON to SAFSTOR might actually save money, as Petitioners contend, or whether over the next 30 years additional costs considerably in excess of \$2 million might be incurred. In these circumstances we do not believe that potential dose reductions on the order of 900 person-rem can have ALARA significance, unless there is some extraordinary aspect to the case not apparent to us from the pleadings that the Licensing Board may uncover on its own review.

### **C. Decommissioning Cost Update**

In Contention C, Petitioners allege, *inter alia*, that YAEC's "updated cost estimate," submitted under 10 C.F.R. § 50.82(b)(4), is "not reasonable." Petition at 20. The essential purpose of this requirement in section 50.82 is to provide "reasonable assurance" of adequate funding for decommissioning. Thus, a contention that a licensee's estimate is not "reasonable," standing alone, would not be sufficient in and of itself because the potential relief would be the formalistic redraft of the plan with a new estimate. The issue seems important here because the Licensee maintains that it has funds or access to funds to pay for decommissioning, even if it costs more than it currently estimates. Thus, to be entitled to relief, Petitioners will need to show not only that the estimate is in error but that there is not reasonable assurance that the amount will be paid.

### **D. Remedy for Past Conduct**

In Contention D, Petitioners challenge allegedly "illegal" past conduct of the Licensee and seek a remedy for that conduct. To the extent that the contention alleges that YAEC has violated NRC regulations, those allegations are more properly the subject of separate enforcement action. The focus of this proceeding is prospective only — the future decommissioning of the remainder of the facility under the proposed decommissioning plan.

## **IV. EXPEDITED SCHEDULE**

As we noted in CLI-95-14, we intend to expedite this proceeding. We have already expedited the proceeding by requiring the filing of contentions with the petition to intervene. In an Appendix to this Order, we provide the Licensing Board with a suggested expedited schedule for the proceeding, subject always,

of course, to the demands of basic fairness. We will not *require* the Licensing Board to adhere to the following schedule to the letter and, indeed, we expect the Licensing Board to conduct its customarily thorough inquiry using all the tools normally at its disposal and following its customary practices and procedures under 10 C.F.R. Part 2, Subpart G (although a modification of usual discovery rules is suggested in the schedule). However, we expect that the Licensing Board will, if it declines to adopt our proposed schedule, adopt an equally expedited schedule which will generate a final initial decision by, at the latest, the middle of July 1996.

#### V. SUMMARY

We hereby refer all pleadings in this matter to the Atomic Safety and Licensing Board for processing under the Licensing Board's normal practices and procedures, subject to the guidance expressed above, and with the proposed schedule provided in the Appendix below. We expect the Licensing Board to act expeditiously with the goal of issuing a final initial decision by or about the middle of July 1996.

It is so ORDERED.

For the Commission

JOHN C. HOYLE  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 16th day of January 1996.

## APPENDIX

### PROPOSED EXPEDITED SCHEDULE FOR YANKEE HEARINGS

Action	Intervening No. of Days	Date
Commission Order Referring Case to ASLB		Day 0
ASLB Rules on Contentions: During this period, the ASLB should hold its normal special prehearing conference and take whatever steps it feels necessary to narrow the issues before it, including, if necessary, additional briefing and oral argument. The ASLB should then rule on preliminary matters including the admissibility of Petitioners' proposed contentions.	28	Day 28
Discovery Completed: During this period, the ASLB should require the parties to expedite discovery. If necessary, the ASLB may adopt the mandatory discovery procedures used in Rule 26(a)(1)-(3) of the Federal Rules of Civil Procedure.	21	Day 49
Prefiled Testimony (by all parties) and All Motions for Summary Disposition: During this period, all parties should prepare and submit any prefiled testimony and motions for summary disposition.	14	Day 63
ASLB Rules on Summary Disposition Motions: During this period, the parties should complete briefing and any oral argument (if necessary) on motions for summary disposition and the ASLB should rule on the motions.	21	Day 84
ASLB Starts Hearing (if needed)	7	Day 91
ASLB Completes Hearing	14	Day 105
Proposed Findings by Intervenors/Licensee	21	Day 126
Proposed Findings by Staff	7	Day 133
ASLB Final Initial Decision	28	Day 161

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Shirley A. Jackson, Chairman  
Kenneth C. Rogers  
Greta J. Dicus

In the Matter of

Docket No. 40-2061-ML

KERR-McGEE CHEMICAL  
CORPORATION  
(West Chicago Rare Earths  
Facility)

February 21, 1996

The Commission considers a request by the Licensee to terminate this proceeding as moot and to vacate the proceeding's underlying decisions. Because this proceeding solely concerns the Licensee's request for onsite disposal of mill tailings, and all parties concur that the Licensee no longer seeks onsite disposal, the Commission terminates the proceeding as moot. The Commission chooses as a policy matter to vacate and thereby eliminate as precedent all three underlying decisions in this proceeding.

**RULES OF PRACTICE: VACATUR**

The Commission is not bound by judicial practice and need not follow judicial standards of *vacatur*.

**ORDER**

This proceeding came before the Commission in March 1991, when Kerr-McGee filed a petition for review of Atomic Safety and Licensing Appeal Board decision ALAB-944, 33 NRC 81 (1991). The proceeding concerns Kerr-McGee's application for NRC authorization to dispose of mill tailings by onsite

burial at its West Chicago Rare Earths facility. In ALAB-944, the Appeal Board reversed in part and vacated in part an Atomic Safety and Licensing Board decision that had approved onsite disposal. See LBP-89-35, 30 NRC 677 (1989). The period within which the Commission may act on Kerr-McGee's petition for review has been held in abeyance since July 3, 1991, at the joint request of Kerr-McGee, the State of Illinois (the State), and the City of West Chicago (the City), to allow for a negotiated settlement.

On December 9, 1993, Kerr-McGee moved to terminate this proceeding as moot, and to vacate the proceeding's underlying decisions: ALAB-944, and the earlier decisions of the Atomic Safety and Licensing Board, LBP-90-9, 31 NRC 150 (1990), and LBP-89-35, 30 NRC 677 (1989). Kerr-McGee indicated that it had abandoned its original plan to dispose of mill tailings on site in West Chicago and, to that effect, had contracted with Envirocare of Utah, Inc., to transfer the wastes to Utah. Kerr-McGee claimed that its commitment to pursue offsite disposal of the wastes rendered this proceeding moot.

The State and the City responded that although they did not oppose termination of the proceeding, *vacatur* of the underlying decisions was inappropriate. In particular, the State and the City questioned whether the proceeding indeed had become moot. Both parties expressed various doubts about Kerr-McGee's commitment to removing the wastes from the West Chicago site, citing such factors as the executory and conditional nature of Kerr-McGee's contract with Envirocare, and Kerr-McGee's continued related litigation in other forums.

The Commission recently requested and received updated status reports on this proceeding. All parties are now in agreement that this proceeding has become moot. Kerr-McGee states that it has begun shipping wastes from West Chicago to Utah. The State and the City are satisfied that Kerr-McGee "has clearly agreed to remove" the wastes from West Chicago. The Nuclear Regulatory Commission Staff, although not a formal party to the pending appeal, finds it "no longer realistic" to believe that the Commission will need to address a proposal for onsite disposal at the West Chicago site. Although the parties present differing theories on what factors or events rendered the proceeding moot, at bottom all agree that Kerr-McGee no longer intends to pursue onsite disposal, the subject of this proceeding. The Commission therefore agrees that the proceeding is moot.

Kerr-McGee also requests the Commission to vacate the underlying decisions in this proceeding. The NRC Staff concurs, urging the Commission to vacate "three unreviewed decisions involving highly controversial issues in the waste disposal area." The State and the City, however, oppose *vacatur*, claiming that this proceeding became moot only after Kerr-McGee in 1994 entered into a settlement agreeing to remove the mill tailings from the West Chicago site. Voluntary settlement, according to the State and City, deprives litigants of any claim to the equitable remedy of *vacatur*. Cf. *United States Bancorp Corp. v.*



*Bonner Mall Partnership*, 115 S. Ct. 386 (1994). Kerr-McGee and the NRC Staff do not agree that the 1994 settlement is what rendered the Commission proceeding moot, and instead argue that the proceeding became moot in 1990, when the Commission — over Kerr-McGee's objection — transferred regulatory jurisdiction over section 11(e)(2) byproduct material to the State of Illinois.<sup>1</sup>

In short, the parties do not agree on precisely why this long-pending case is moot, but do agree that there no longer is any point to Commission review because of Kerr-McGee's commitment to move the mill tailings off site. The Commission, in any case, is not bound by judicial practice and need not follow the *Bancorp* ruling. In these circumstances, and because these unreviewed Board decisions involve complex questions and vigorously disputed interpretations of agency provisions for disposal of byproduct material, the Commission as a policy matter chooses to vacate and thereby eliminate as precedent all three underlying decisions in this proceeding. This will permit any similar questions that may come up to be considered anew, without the binding influence of an apparently controversial Appeal Board decision that the Commission has not had the occasion to review.

By vacating the decisions, the Commission does not intimate any opinion on their soundness. Without engaging in a full inquiry into the merits — which no party any longer requests, and the Commission sees no compelling reason to undertake on its own — the Commission cannot properly evaluate the analyses of the Licensing and Appeal Boards.

This proceeding is terminated as moot, Kerr-McGee's application for on-site disposal is deemed withdrawn, and the following decisions are vacated: ALAB-944, 33 NRC 81 (1991); LBP-90-9, 31 NRC 150 (1990); LBP-89-35, 30 NRC 677 (1989).

It is so ORDERED.

For the Commission

JOHN C. HOYLE  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 21st day of February 1996.

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<sup>1</sup> Kerr-McGee challenged the transfer of jurisdiction in a D.C. Circuit lawsuit against the NRC. Kerr-McGee later withdrew the suit, apparently because of provisions in the 1994 settlement agreement with the State and City. Kerr-McGee, though, claims that the settlement agreement neither encompasses this Commission proceeding nor resolves numerous outstanding disputes with the State and City over the removal of the material.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Shirley A. Jackson, Chairman  
Kenneth C. Rogers  
Greta J. Dicus

In the Matter of

Docket No. 40-8027-EA  
(Decontamination and  
Decommissioning Funding)

SEQUOYAH FUELS CORPORATION  
and GENERAL ATOMICS  
(Gore, Oklahoma Site)

February 27, 1996

The Commission grants the Intervenor's petition for review of the Atomic Safety and Licensing Board's Memorandum and Order approving a joint settlement agreement between the Licensee, Sequoyah Fuels Corp., and the NRC Staff. The Commission also permits the State of Oklahoma to file a brief *amicus curiae* to aid the Commission in its review of the Board's order.

**RULES OF PRACTICE: PARTICIPATION BY AN INTERESTED  
STATE OR LOCAL GOVERNMENT**

A state that does not seek party status or to participate as an "interested state" in the proceedings below is not permitted to file a petition for Commission review of a licensing board ruling. If the Commission takes review, the Commission may permit a person who is not a party, including a state, to file a brief *amicus curiae*. 10 C.F.R. § 2.715(d).

## MEMORANDUM AND ORDER

The Intervenor in this enforcement proceeding, Native Americans for a Clean Environment (NACE) and the Cherokee Nation, have filed a petition for Commission review of the Atomic Safety and Licensing Board's Memorandum and Order, LBP-95-18, 42 NRC 150 (1995). The State of Oklahoma also filed a petition for review and motion for leave to file an amendment to its original petition. The NRC Staff, the Licensee Sequoyah Fuels Corporation and its parent, General Atomics (GA), oppose Commission review. In accordance with the considerations discussed in 10 C.F.R. § 2.786(b)(4), the Commission has decided that review of LBP-95-18 is appropriate.

The record does not show, nor does the State of Oklahoma contend, that it is a party to this proceeding. It also did not participate as an "interested State" before the Licensing Board pursuant to 10 C.F.R. § 2.715(c). Therefore, it may not file its own petition for review.<sup>1</sup> Nevertheless, our regulations provide that if the Commission takes review of a Board order a person who is not a party may be permitted to file an *amicus curiae* brief, if the person requests by motion to file such a brief. 10 C.F.R. § 2.715(d). The Commission views the State's petition for review and subsequent motion as fulfilling this requirement. Accordingly, the State will be permitted, along with the parties, to provide a brief on the matters discussed below.

In LBP-95-18, a majority of the Board concluded that a joint settlement agreement between the NRC Staff and SFC is in the public interest. 42 NRC 150 (1995). Judge Bollwerk did not join the majority and in a separate statement raised several issues which in his opinion merited further inquiry before reaching a final conclusion about whether to approve the settlement agreement. 42 NRC at 156-59.

Answers to the following questions would aid the Commission in its review of this matter:

1. Does SFC lack the financial resources to provide any surety instrument to guarantee additional funds for cleanup beyond the \$750,000 letter of credit?
2. Under paragraph 5 of the agreement, what process does the NRC Staff intend to implement to ensure proper and timely review of SFC's annual audited financial statements?

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<sup>1</sup> See *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-8, 33 NRC 461, 468-69 (1991); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-583, 11 NRC 447, 448-49 (1980).

3. What prejudice, if any, will occur if the Commission were to delay final approval of a settlement with SFC until after the NRC Staff and General Atomics conclude their settlement negotiations?

Answers to these questions may address some of the inquiries raised by Judge Bollwerk in his separate statement. In their briefs, the parties and the State should also address the remaining matters raised by Judge Bollwerk.

Pursuant to 10 C.F.R. § 2.786(d), the Commission sets the following briefing schedule:

1. The Intervenors and the State (hereinafter "Petitioners") shall file their briefs within 21 days after service of this Order. Their briefs shall be no longer than 25 pages each.
2. The NRC Staff, SFC, and GA shall file their responsive briefs within 21 days after service of the Petitioners' brief. Their responses shall be no longer than 25 pages each.
3. Within 10 days after service of the responsive briefs, the Petitioners may file reply briefs. Their replies shall be no longer than 10 pages each.

Briefs in excess of 10 pages must contain a table of contents, with page references, and a table of cases (alphabetically arranged), statutes, regulations, and other authorities cited, with references to the pages of the brief where they are cited. Page limitations on briefs are exclusive of pages containing a table of contents, table of cases, and of any addendum containing statutes, rules, regulations, etc.

IT IS SO ORDERED.

For the Commission

JOHN C. HOYLE  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 27th day of February 1996.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

James P. Gleason, Chairman  
Dr. Richard F. Cole  
Dr. Peter S. Lam

In the Matter of

Docket No. 50-245-OLA  
(ASLBP No. 95-711-01-OLA)

NORTHEAST NUCLEAR ENERGY  
COMPANY  
(Millstone Nuclear Power Station,  
Unit 1)

February 7, 1996

MEMORANDUM AND ORDER  
(Ruling on Intervention Petition)

We have before us the request for a hearing and petition to intervene in this proceeding on the license amendment application filed by Northeast Nuclear Energy Company (NNECO) for its Millstone Nuclear Power Station, Unit 1, which is located in New London County, Connecticut. The petition challenging the amendment was filed by We the People, Inc. (WTP), the Seacoast Anti-Pollution League (SAPL), the New England Coalition on Nuclear Pollution (NECNP), and Mr. Donald W. Del Core. Generally, the petition asserts that the proposed license amendment would permit the routine offloading of the full reactor core to the spent fuel pool during refueling which, in turn, would present a significant increase in the risk probability and consequences of an accident involving the spent fuel pool, thereby resulting in injury to the Petitioners.

For the reasons set forth below, the petition on behalf of Mr. Del Core and WTP is granted and the petition on behalf of NECNP and SAPL is denied.



## BACKGROUND

On July 28, 1995, NNECO submitted a license amendment application seeking to add new technical specifications to its operating license for its Millstone Nuclear Power Station, Unit 1. The change would require that (1) the reactor be subcritical for at least 100 hours before the start of reactor refueling; (2) the spent fuel pool bulk temperature be maintained at less than or equal to 140°F; and (3) two trains of shutdown cooling be operable during reactor refueling operations. In a letter accompanying the application, NNECO states that these changes will permit the practice of full-core offloading as a normal end-of-cycle event.<sup>1</sup>

On August 30, 1995, the Staff published in the *Federal Register* a proposed "no significant hazards determination" pursuant to 10 C.F.R. § 50.91 and a notice of opportunity for hearing concerning the amendment request.<sup>2</sup> In response to the notice, a timely request for hearing and petition to intervene was filed on behalf of WTP, SAPL, NECNP, and Mr. Del Core.<sup>3</sup> The Applicant and Staff each filed answers opposing the petition<sup>4</sup> and the Petitioners then filed a "Corrected Request." Besides making certain spelling and typographical corrections, this filing contained a list of twelve (12) "member supporters" associated with WTP living in the neighborhood of the Millstone plant and an assertion that Mr. Del Core would face increased risk to his person and property if the license amendment were granted.<sup>5</sup> Thereafter, the Petitioners filed a Memorandum of Law in support of their petition.<sup>6</sup> We then issued an order setting a final deadline for any further amendments to the petition.<sup>7</sup> The Applicants and the Staff filed responses to the Petitioners' Memorandum<sup>8</sup> and Petitioners subsequently filed on December 4, 1995, an affidavit of a WTP member.<sup>9</sup>

After challenging most of the factual allegations set forth in the Petitioners' filings, NNECO argues that neither the organizational Petitioners nor the indi-

<sup>1</sup> See Letter from J.F. Opeka, Executive Vice President, NNECO, to NRC, July 28, 1995 (Attachment III to NNECO's Answer to Request for a Hearing and Petition to Intervene (Oct. 13, 1995)).

<sup>2</sup> 60 Fed. Reg. 45,172 (Aug. 30, 1995).

<sup>3</sup> Request for a Hearing and Petition to Intervene on Behalf of WTP, SAPL, NECNP and Donald Delcore [sic] (Sept. 28, 1995).

<sup>4</sup> Northeast Nuclear Energy Company's Answer to Request for a Hearing and Petition to Intervene (Oct. 13, 1995) [hereinafter NNECO Answer]; NRC Staff Response to Request for a Hearing and Petition to Intervene on Behalf of WTP, SAPL, NECNP and Donald Del Core (Oct. 18, 1995) [hereinafter Staff Answer].

<sup>5</sup> Corrected Request for a Hearing and Petition to Intervene on Behalf of WTP, SAPL, NECNP and Donald W. Del Core (Oct. 18, 1995) [hereinafter Corrected Request].

<sup>6</sup> Memorandum of Law in Support of the Request for a Hearing and Petition to Intervene on Behalf of WTP, SAPL, NECNP and Donald W. Del Core, Sr. (Nov. 8, 1995) [hereinafter Petitioners' Memorandum].

<sup>7</sup> Order (Nov. 7, 1995) (unpublished).

<sup>8</sup> NNECO's Response to Supplemented Intervention Petition (Nov. 21, 1995) [hereinafter NNECO Response]; NRC Staff Response to Memorandum of Law in Support of the Request for a Hearing and Petition to Intervene on Behalf of WTP, SAPL, NECNP and Donald W. Del Core, Sr. (Nov. 21, 1995) [hereinafter Staff Response].

<sup>9</sup> Affidavit of Glen Cheney.



vidual Petitioner has standing to intervene in this license amendment proceeding. For its part, the Staff generally does not address the factual merits of the Petitioners' allegations. Although the Staff argued that none of the Petitioners had standing to intervene,<sup>10</sup> the Staff changed its position with respect to Mr. Del Core. In its latest filing, the Staff states that Mr. Del Core has arguably made (although not articulated very well) a case for standing based upon his allegation of radiological harm to his health, safety, and property.<sup>11</sup> Accordingly, the Staff no longer objects to Mr. Del Core's participation in the proceeding.

It is noted that on November 9, 1995, the Staff issued License Amendment 89 to NNECO for its Millstone Nuclear Power Station, Unit 1. That amendment did not add the technical specifications to the facility license requested by NNECO. Instead, the amendment added a license condition to the facility license that permits the same activities.<sup>12</sup>

### PETITIONERS' STANDING TO INTERVENE

The recital of the requirements for standing in the Commission's most recent decisions regarding standing are all quite similar. Hence, we quote the discussion from *Georgia Tech*, CLI-95-12, its most recent discussion on this subject:

Under section 189a of the Atomic Energy Act (AEA), the Commission must grant a hearing upon the request of any person "whose interest may be affected by the proceeding." 42 U.S.C. § 2239(a). To determine whether a petitioner has alleged a sufficient interest to intervene, the Commission has long applied judicial concepts of standing. *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92 (1993) (*Perry*). For standing, the petitioner must allege a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision. See generally *Lujan v. Defenders of Wildlife*, 112 S. Ct. 2130, 2136 (1992); *Perry*, 38 NRC at 92. Injury may be actual or threatened. *Kelley v. Selin*, 42 F.3d 1501, 1508 (6th Cir. 1995); *Wilderness Society v. Griles*, 824 F.2d 4, 11 (D.C. Cir. 1987).

An organization may base its standing on either immediate or threatened injury to its organizational interests, or to the interests of identified members. *Warth v. Seldin*, 422 U.S. 490, 511 (1975); *Houston Lighting and Power Co.* (South Texas Project, Units 1 and 2), ALAB-549, 9 NRC 644, 646-47 (1979). To derive standing from a member, the organization must demonstrate that the individual member has standing to participate, and has authorized

<sup>10</sup> Staff Answer at 4-9.

<sup>11</sup> Staff Response at 9-10.

<sup>12</sup> See Letter to Judges Moore, Lam and Cole from Catherine L. Marco, Counsel for NRC Staff (Nov. 13, 1995) enclosing November 9, 1995 agency cover letter, Amendment 89, and the Staff's safety evaluation.

the organization to represent his or her interests. *Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-535, 9 NRC 377, 390-96 (1979).<sup>13</sup>

To determine whether any of the Petitioners have the requisite standing to challenge NNECO's license amendment application, we first consider the three petitioning organizations, WTP, SAPL, and NECNP before considering the petitioning individual, Mr. Del Core.

According to the Petitioners' original and corrected intervention request, WTP is a Massachusetts-based nonprofit corporation with its principal office in Rowley, Massachusetts, whose primary purpose is to support employees of nuclear licensees and the NRC who may face retaliatory action for bringing forward allegations of license violations or nuclear safety issues. WTP alleges that the organization has worked with Millstone employees on safety issues and references one employee, George Galatis, as consulting with WTP on the Licensee's fuel offloading practices. The petitions state that individuals "associated" with WTP live in the "neighborhood" of the Millstone complex and it lists by name twelve members with addresses in Connecticut towns.<sup>14</sup>

Next, the petition states that SAPL is a New Hampshire nonprofit corporation with its principal place of business in Portsmouth, New Hampshire. It claims that SAPL has members living in Massachusetts and New Hampshire within 10 miles of the Seabrook nuclear facility and that SAPL participated as an intervenor in the licensing proceedings for the Seabrook Station. The petition further alleges that the operator of Seabrook Station, like NNECO, is a subsidiary of Northeast Utilities, so it can be expected that full-core offloading during refueling also will be undertaken at the Seabrook Station, thereby increasing the risk and consequences of a spent fuel pool accident at that nuclear plant.<sup>15</sup>

Finally, the petition declares that NECNP is a nonprofit corporation with its principal place of business in Brattleboro, Vermont, and that it has been an active voice in New England on nuclear safety issues for 25 years. It states that NECNP intervened in the Vermont Yankee and Seabrook licensing proceedings and that NECNP has members residing within 50 miles of both the Seabrook and the Millstone nuclear plants.<sup>16</sup>

Although an organization may have standing in its own right to intervene in an NRC adjudicatory proceeding, none of the three organizations has sought to demonstrate an injury to its organizational interests. Nowhere in the intervention petition, corrected request, or supporting memorandum do the Petitioners

<sup>13</sup> *Georgia Institute of Technology* (Georgia Tech Research Reactor), CLI-95-12, 42 NRC 111, 115 (1995). See also *Sequoyah Fuels Corp.* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 71-72 (1994); *Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 47 (1994); *Perry*, 38 NRC at 92.

<sup>14</sup> Request for Hearing at 4; and Corrected Request at 2-3.

<sup>15</sup> *Id.* at 5-6.

<sup>16</sup> *Id.* at 4.

identify any organizational interest of WTP, SAPL, or NECNP that is harmed or threatened with injury by the license amendment at issue. Thus, none of these organizations has standing in its own right to intervene. However, WTP, SAPL, and NECNP seek to establish standing to intervene as the representative of one or more of its members. For such representational standing the petitioning organization must show that at least one of its members suffers "immediate or threatened injury as a result of the challenged action of the sort that would make out a justiciable case had the members themselves brought suit."<sup>17</sup> Further, agency case law teaches that the organization must identify at least one member by name and address and provide "some concrete indication that, in fact, the member wishes to have that [member's] interest represented in the proceeding."<sup>18</sup> Moreover, that concrete indication of representational authorization should be provided "preferably by affidavit."<sup>19</sup>

Here, two of the three petitioning organizations, SAPL and NECNP, have not complied in any respect with the requirements for establishing standing as representative of one of their members. The Corrected Request, as indicated, sets forth a list of names and addresses of twelve WTP members who purportedly live in the "neighborhood" of the Millstone plant, but the petition is silent with respect to the names and addresses of any SAPL or NECNP members. Accordingly, these Petitioners have provided no "concrete indication" from any member of their organizations that a representation of their interests has been authorized in this proceeding. This, despite the fact that their supporting memorandum recites the requisites for representational standing:

[t]o assert representational injury-in-fact, an organization must specifically identify individual members by name and address, identify how that member may be affected and show that the organization is authorized to request a hearing on behalf of the member, *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units No. 1 and 2), LBP-92-27, 36 NRC 196, 199 (1992).<sup>20</sup>

Accordingly, SAPL and NECNP have failed to demonstrate that they have standing to intervene as the representative of one of their members.<sup>21</sup>

In considering WTP's standing posture, Petitioners' Corrected Request fails to establish that the twelve (12) WTP members, with Connecticut residences,

<sup>17</sup> *Warth*, 422 U.S. at 511.

<sup>18</sup> *Allens Creek*, 9 NRC at 393-36. See *Georgia Tech*, CLI-95-12, 42 NRC at 115.

<sup>19</sup> *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-92-27, 36 NRC 196, 199 (1992).

<sup>20</sup> Petitioners' Memorandum at 5.

<sup>21</sup> In addition to its failure to provide the name and address of a SAPL member and some evidence of representational authorization, the Petitioners' intervention petition also fails to set forth any interests of SAPL that relate to the Millstone facility — the subject of this proceeding. Rather, SAPL's asserted interests all relate to the Seabrook facility and, as such, are clearly outside the scope of this proceeding as defined by the Commission's hearing notice.

authorized WTP to represent them in this proceeding. On December 4, 1995, WTP attempted to cure this deficiency by filing an affidavit of one of these members, Glen Cheney, wherein Cheney states that he and the other eleven members wished to be represented by WTP.

This filing ignores our scheduling order of November 7, 1995, wherein we stated that "the Petitioners shall have until Tuesday, November 14, 1995, to file any amended intervention petition. After that date, the Licensing Board will not entertain any further amended or corrected intervention request."<sup>22</sup> Petitioners' counsel's letter stated that

[i]n view of the position of both the NRC staff and the Licensee, that the organizational petitioners need to file an Affidavit to represent the concerns of individuals residing within the area of the plant in question, I have obtained, and file herewith, the affidavit of Glenn Cheney, stating that he, and the other individuals listed on the corrected petition do desire to have their interests represented through We The People, Inc.<sup>23</sup>

The Commission has declared in its *Statement of Policy on the Conduct of Licensing Proceedings* that "[f]airness to all involved in NRC adjudicatory procedures requires that every participant fulfill the obligations imposed by and in accordance with applicable law and Commission regulations."<sup>24</sup> Petitioners' counsel has participated in NRC adjudicatory proceedings for 20 years,<sup>25</sup> and there is no excusing this deficiency based on a lack of familiarity with agency procedures.

The presiding officer in this proceeding elected not to hold a special pre-hearing conference and, as indicated, set November 14, 1995, as the cutoff date for amending petitions.<sup>26</sup> Being out-of-time, WTP should have addressed the five lateness factors required by 10 C.F.R. § 2.714(a)(3) on December 4, 1995, when it attempted to amend its petition by filing the Cheney affidavit.<sup>27</sup> Failing that, WTP has not demonstrated standing in this proceeding as a matter of right. However, as explained subsequently, in an effort to expedite and develop the record of this proceeding, the Board has decided to exercise its discretion and grant WTP's petition for intervention. We also hold that the amended petition's attempt to authorize representation by eleven (11) other individuals listed in Petitioners' Corrected Request of October 18, 1995, has no validity. Under the

<sup>22</sup> Order (Nov. 7, 1995) at 2 (unpublished).

<sup>23</sup> Letter to Judges Moore, Lam, and Cole from Robert A. Backus, Backus, Meyer, Solomon & Rood, Manchester, NH (Dec. 4, 1995).

<sup>24</sup> CLJ-81-8, 13 NRC 452, 454 (1981).

<sup>25</sup> See, e.g., *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-949, 33 NRC 484, 485 (1991); *id.*, LBP-76-4, 3 NRC 123 (1976).

<sup>26</sup> The Board presiding over this proceeding was reconstituted January 4, 1996.

<sup>27</sup> The Board was perhaps remiss in not granting a Staff December 12, 1995 request to respond to the Cheney affidavit, but in light of our denial of the late petition and the exercise of discretion in granting standing, we conclude that our mistake was not prejudicial.



Commission's practice, averments by one member of an organization by affidavit that other members have authorized representation would not satisfy the requirement that those members have given some "concrete indication" that a representation of their interest is authorized.<sup>28</sup>

The Petitioners' Request for Hearing argues a case for standing under the Commission's proximity presumption for individuals who live within 50 miles of the Millstone plant. We turn to that argument because it forms the basis for the claim that Mr. Del Core has standing to intervene.

In construction permit and operating license proceedings, Commission case law recognizes a proximity presumption that persons who live, work, or otherwise have contact with the area around a nuclear plant have standing to intervene.<sup>29</sup> That presumption is based on an unsurprising premise, i.e., that the construction or operation of a nuclear power reactor carries with it "clear implications for the offsite environment"<sup>30</sup> so that individuals residing in reasonable proximity to the plant are likely in at least some small way to be injured in their persons or property by a plant accident, and thus such persons fall within the geographic zone of interests protected by the Atomic Energy Act.<sup>31</sup> Similarly, agency case law recognizes the same presumption in license amendment proceedings that involve "major alterations to the facility with a clear potential for offsite consequences" or other circumstances that present "such obvious potential for offsite consequences."<sup>32</sup>

According to the corrected intervention request, Mr. Del Core lives in Uncasville, Connecticut, within 20 miles of the Millstone plant, and he owns property within the Emergency Planning Zone for the facility. This clearly would be sufficient for gaining intervenor status in construction permit or operating license proceedings.

The Petitioners' case relies, in part, on the Appeal Board decision in ALAB-522.<sup>33</sup> That determination involved a license amendment to expand the capacity of the spent fuel pools at both of the North Anna nuclear power plants. In reversing the Licensing Board's ruling denying the petitioners intervention, the Appeal Board found the proximity presumption applicable. In this license amendment case, a residence near the Millstone plant also implicates the proximity presumption because the license amendment at issue, even though not involving a major alteration of the plant, may involve the potential for offsite

<sup>28</sup> *Allens Creek*, ALAB 535, 9 NRC at 296.

<sup>29</sup> See *Sequoyah Fuels*, CLI-94-12, 40 NRC at 75; *Gulf States Utilities Co.* (River Bend Station, Units 1 and 2), ALAB-183, 7 AEC 222, 226 (1974).

<sup>30</sup> *Florida Power and Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989).

<sup>31</sup> See *River Bend*, ALAB-183, 7 AEC at 223-24 & n.5.

<sup>32</sup> *St. Lucie*, CLI-89-21, 30 NRC at 329-30.

<sup>33</sup> *Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-522, 9 NRC 54 (1979).

consequences. The petition alleges that an increase in heat load in the spent fuel pool presents the potential of offsite consequences if an accident were to occur. At this stage of the proceeding without more, it cannot be concluded that the potential safety issues involved in the offloading and storage of a full core is not comparable to the safety issues associated with a spent fuel pool expansion.

As previously indicated, the Petitioners allege in their corrected intervention request and supporting memorandum that the Millstone spent fuel pool has never been analyzed or approved for a routine full-core offloading as part of refueling. According to the Petitioners, the failure of any equipment important to safety, the loss of electrical power, or an earthquake could result in the loss of pool water inventory during an offload through pipe breaks, siphon effects, or boiling that, in turn, would uncover the stored fuel and expose those living near the plant to dangerous levels of radioactivity. In countering the Petitioners' claim of injury, NNECO argues that there has been no showing of offsite consequences from the license amendment and states that "Petitioners rely instead only on a muddle of factual errors and half truths regarding the authorized full-core offload to concoct a theory of injury."<sup>34</sup>

Although the affidavits accompanying NNECO's opposition to the Petitioners' filings challenge almost all of the Petitioners' factual assertions, the most recent Commission ruling involving standing in the *Georgia Tech* case makes it evident that we are not to determine the essential validity of the asserted facts in ruling on intervention petitions.<sup>35</sup> Citing the recent decision of the United States Court of Appeals for the Sixth Circuit in *Kelly v. Selin*,<sup>36</sup> the Commission stated in *Georgia Tech* that "[t]o evaluate a petitioner's standing, we construe the petition in favor of the petitioner."<sup>37</sup>

When we do that here, we conclude that the Petitioners have alleged at least an acceptable injury. Further, the Petitioners' alleged injury is traceable to the challenged license amendment and would be alleviated by a decision denying the requested license amendment. Thus, we find that Mr. Del Core and WTP, on the basis of the Board's discretion, have standing to intervene and their intervention petition is granted subject to the filing of at least one admissible contention.

As a final matter, it is necessary to delineate our evaluation of the factors guiding the Board's decision in exercising discretion to grant standing to WTP. See *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 616 (1976). The major consideration of importance to the Board is that WTP's participation reasonably can be expected to assist in developing a sound record in the proceeding. The petition not only alleges

<sup>34</sup> NNECO Response at 10.

<sup>35</sup> *Georgia Tech*, CLI-95-12, 42 NRC at 115.

<sup>36</sup> 42 F.3d at 1508.

<sup>37</sup> CLI-95-12, 42 NRC at 115.



a previous involvement of the organization with Millstone employees on safety issues but specific consultation with employee George Galatis on offloading practices at the plant. These may involve safety issues in the proceeding and information that might not otherwise be available in the case. We have no basis for concluding that WTP's participation will broaden or delay the proceeding and, as set forth previously, a favorable ruling would redound to the benefit of WTP and its members.

### CONCLUSION

For the foregoing reasons, it is hereby ORDERED that:

1. The request for hearing and petition to intervene filed on behalf of New England Coalition on Nuclear Pollution and Seacoast Anti-Pollution League is *denied*;

2. The request for hearing and petition to intervene filed on behalf of Donald W. Del Core, Sr., and We the People is *granted*, contingent upon the filing of an admissible contention as set forth in 10 C.F.R. § 2.714; and

3. The Petitioners above shall have 30 days from the date of service of this Order to file contentions.

In accordance with the provisions of 10 C.F.R. § 2.714a, this Order may be appealed within 10 days after its service.<sup>38</sup>

#### THE ATOMIC SAFETY AND LICENSING BOARD

James P. Gleason, Chairman  
ADMINISTRATIVE JUDGE

Dr. Richard F. Cole  
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
February 7, 1996

<sup>38</sup> Copies of this Memorandum and Order have been sent this date to counsel for NNECO, WTP, SAPL, NECNP, and Donald W. Del Core by facsimile transmission and to Staff counsel by E-mail transmission through the NRC's wide-area network.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

## OFFICE OF NUCLEAR REACTOR REGULATION

William T. Russell, Director

In the Matter of

Docket No. 50-029  
(License No. DPR-3)YANKEE ATOMIC ELECTRIC  
COMPANY  
(Yankee Nuclear Power Station)

February 22, 1996

The Director of the Office of Nuclear Reactor Regulation denies in part and grants in part a petition dated January 17, 1996, submitted to the Nuclear Regulatory Commission (NRC) by Citizens Awareness Network and New England Coalition on Nuclear Pollution (Petitioners), requesting that the NRC take action with respect to five activities conducted by Yankee Atomic Electric Company (YAEC or Licensee) at the Yankee Nuclear Power Station in Rowe, Massachusetts (Yankee Rowe or the facility). The petition was also moot in part. The petition requests that the NRC comply with *Citizens Awareness Network Inc. v. United States Nuclear Regulatory Commission and Yankee Atomic Electric Co.*, 59 F.3d 284 (1st Cir. 1995) and immediately order: (A) YAEC not to undertake, and the NRC Staff not to approve, further major dismantling activities or other decommissioning activities, unless such activities are necessary to ensure the protection of occupational and public health and safety; (B) YAEC to cease any such activities; and (C) NRC Region I to reinspect Yankee Rowe to determine whether there has been compliance with the Commission's Order in CLI-95-14, 42 NRC 130 (1995), and to issue a report within 10 days of the requested order to Region I.

The Petitioners' request that shipments of low-level radioactive waste be prohibited is denied because that activity is permissible, prior to approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations. Petitioners' request that four other activities be prohibited is moot, although the activities would have been permissible, prior

to approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations. Additionally, Petitioners' request for an inspection of Yankee Rowe to determine compliance with CLI-94-14 and an inspection report was granted.

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

### I. INTRODUCTION

An "Emergency Motion for Compliance with Circuit Court Opinion" (petition), dated January 17, 1996, was submitted by Citizens Awareness Network and New England Coalition on Nuclear Pollution (Petitioners). Petitioners requested that the United States Nuclear Regulatory Commission (NRC or Commission) take action with respect to activities conducted by Yankee Atomic Electric Company (YAEC or Licensee) at the Yankee Nuclear Power Station in Rowe, Massachusetts (Yankee Rowe or the facility).

By an Order of the Commission dated January 23, 1996, the Emergency Motion was referred to the NRC Staff for treatment as a petition pursuant to 10 C.F.R. § 2.206 of the Commission's regulations. The Commission ordered the Staff to respond to the emergency aspects of the petition in 10 days and to issue a decision on the petition as a whole within 30 days.

Petitioners request that the NRC comply with *Citizens Awareness Network Inc. v. United States Nuclear Regulatory Commission and Yankee Atomic Electric Co.*, 59 F.3d 284 (1st Cir. 1995) (*CAN v. NRC*). Specifically, Petitioners request that the Commission immediately order:

- (A) YAEC not to undertake, and the NRC Staff not to approve, further major dismantling activities or other decommissioning activities, unless such activities are necessary to assure the protection of occupational and public health and safety;
- (B) YAEC to cease any such activities; and
- (C) NRC Region I to reinspect the Yankee Nuclear Power Station in Rowe, Massachusetts (Yankee Rowe) to determine whether there has been compliance with the Commission's Order of October 12, 1995 (CLI-95-14), and to issue a report within ten days of the requested order to Region I.

As the bases for their requests, Petitioners state that:

- (1) *CAN v. NRC* requires the cessation, and prohibits commencement, of decommissioning activities at Yankee Rowe, pending final approval of the licensee's decommissioning plan after opportunity for a hearing. CLI-95-14 forbids YAEC from

conducting any further major dismantling or decommissioning activities until final approval of its decommissioning plan after completion of the hearing process;

- (2) *CAN v. NRC* obliges the Commission and the Staff to provide an opportunity to interested persons for a hearing to approve a decommissioning plan;
- (3) *CAN v. NRC* requires the Commission to reinstate its pre-1993 interpretation of its decommissioning regulations, *General Requirements for Decommissioning Nuclear Facilities*, 53 FR 24,018, 24,025-26 (June 27, 1988), limiting the scope of permissible activities prior to approval of a decommissioning plan to decontamination, minor component disassembly, and shipment and storage of spent fuel, if permitted by the operating license and/or 10 C.F.R. § 50.59. Under *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-90-08, 32 NRC 201, 207, n.3 (1990), this means that the licensee may not take any action that would materially affect the methods or options available for decommissioning, or that would substantially increase the costs of decommissioning, prior to approval of a decommissioning plan. Under CLI-91-2, 33 NRC at 73, n.5, and CLI-92-2, 35 NRC at 61, n.7, other decommissioning activities, in addition to major ones, are prohibited, including offsite shipments of low-level radioactive waste produced by decommissioning activities, until after approval of a decommissioning plan;
- (4) decommissioning activities permitted by NRC Inspection Manual, Chapter 2561, § 06.06, "Modifications or Changes to the Facility", before approval of a decommissioning plan are limited to maintenance, removal of relatively small radioactive components or non-radioactive components, and characterization of the plant or site;
- (5) YAEC is conducting decommissioning activities, with the approval of the NRC technical staff, in flagrant violation of *CAN v. NRC* and of CLI-95-14, thus threatening to render the decommissioning process nugatory and to deprive Petitioners of their hearing rights under Section 189a of the Atomic Energy Act;
- (6) by letter dated October 19, 1995, YAEC described nine decommissioning activities in progress, and by letter dated October 24, 1995, interpreted permissible "major" dismantling as removal of non-radioactive material required to support safe storage of spent fuel and of those portions of the facilities which remain, or to support future dismantlement;
- (7) by letter dated November 2, 1995, the NRC staff approved the activities described by the Licensee in its letter of October 19, 1995;
- (8) five of the nine activities approved by the NRC staff's letter of November 2, 1995, are major dismantling or other decommissioning activities, in the nature of Component Removal Project activities, prohibited, until after approval of a decommissioning plan, by *CAN v. NRC* and CLI-95-14. Petitioners object to: (a) completing removal of the remainder of the Upper Neutron Shield Tank; (b) removal of Component Cooling Water System pipes and components and Spent Fuel Cooling System pipes and components; (c) Fuel Chute isolation; (d) Spent Fuel Pool electrical conduit installation; and (e) radioactive waste shipments. Petitioners do not object to Waste Tank removal, Ion Exchange Pit cleanup, removal of Emergency Diesel Generators, or the Brookhaven National Laboratory Cable Sampling Project.

- (9) Petitioners advocate the SAFSTOR decommissioning alternative because it allows levels of radioactivity and waste volumes to decrease, thus reducing occupational and public radiation exposures, and lowering decommissioning costs;
- (10) NRC Inspection Report No. 50-29/95-05 (December 16, 1995) concludes that the issue whether activities observed were in compliance with CLI-95-14 is unresolved, but approves YAEC's proposed activities, contrary to the requirements of NRC Inspection Manual, Chapter 2561, § 06.06, "Modifications or Changes to the Facility" (March 20, 1992); and
- (11) YAEC's criterion for permissible decommissioning activities, that any activity involving less than 1 percent of the on-site radioactive inventory is not "major" and may take place before approval of a decommissioning plan, violates *CAN v. NRC* because it would allow completion of decommissioning before any decommissioning plan could be approved in hearing, and constitutes unlawful segmentation under the National Environmental Policy Act.

By letter dated January 29, 1996, Yankee Atomic Electric Company responded to the petition. YAEC supplemented its response by letters dated February 15, 1996, February 21, 1996, and February 22, 1996, and by an E-mail message to the NRC Staff on January 31, 1996.

By letter dated February 2, 1996, the NRC Staff denied in part and granted in part Petitioners' requests for emergency action. The petition was also found moot in part. Petitioners' requests that the NRC take emergency action to order (A) YAEC not to undertake and the NRC Staff not to approve further major dismantling activities or other decommissioning activities, unless necessary to ensure the protection of occupational and public health and safety and (B) YAEC to cease any such activities were found moot in part and denied in part. Petitioners' request for emergency action to require NRC Region I to reinspect Yankee Rowe to determine whether YAEC has complied with the Commission's Order of October 12, 1995 (CLI-95-14), and to issue a report within 30 days after the Commission orders such an inspection, was granted.

Petitioners then requested the Commission to reverse the NRC Staff's February 2, 1996 decision on the emergency aspects of the petition. See "Citizens Awareness Network's and New England Coalition on Nuclear Pollution's Motion for Exercise of Plenary Commission Authority to Reverse NRC Staff 2.206 Decision, and Renewed Emergency Request for Compliance with Circuit Court Opinion." By Order dated February 15, 1996 (unpublished), the Commission declined to grant the emergency relief requested, as there was no showing that the Licensee would take any action before the issuance of a Director's Decision on February 22, 1996. The Commission directed the NRC Staff to address the arguments advanced by Petitioners in their February 9 motion in this Decision, with the exception of the new issues raised on page 13 of the motion, which are to be addressed in a supplementary 10 C.F.R. § 2.206 decision.



For the reasons discussed below, Petitioners' requests that the NRC prohibit YAEC from undertaking or continuing five of the nine activities evaluated by the NRC Staff's letter of November 2, 1995, are moot in part and denied in part. Of the nine activities, all with the exception of radioactive waste shipments were completed before submission of the January 17, 1996 petition. Accordingly, Petitioners' request for relief with respect to (1) completing removal of the remainder of the upper neutron shield tank, (2) removal of the component cooling water system pipes and components and spent fuel cooling system pipes and components, (3) fuel chute isolation, and (4) spent fuel pool electrical conduit installation is moot. Petitioners' request for relief with respect to radioactive waste shipments is denied. As explained below, all five contested activities were permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations, and thus are in compliance with *CAN v. NRC* and CLI-95-14. Petitioners' request that the NRC inspect Yankee Rowe to determine compliance with CLI-95-14, and issue an inspection report, was granted.

## II. BACKGROUND

On February 27, 1992, YAEC announced its intention to cease operations permanently at Yankee Rowe. On August 5, 1992, the NRC issued a license amendment to limit the license to a possession-only license. 57 Fed. Reg. 37,558, 37,579 (Aug. 19, 1992).

In late 1992, YAEC proposed to initiate a Component Removal Project (CRP). On December 20, 1993, YAEC submitted a decommissioning plan based on a phased approach, starting with DECON, then SAFSTOR, and then finally dismantlement. Notice of Receipt of Decommissioning Plan and Request for Comments was published in the *Federal Register*. (59 Fed. Reg. 14,689 (Mar. 29, 1994)).

On January 14, 1993, and on June 30, 1993, the Commission issued two Staff Requirements Memoranda which, in pertinent part, interpreted the Commission's regulations to permit many decommissioning activities prior to approval of a decommissioning plan, as long as the activities do not violate the terms of the existing license or 10 C.F.R. § 50.59 with certain additional restrictions. See "Staff Requirements — Briefing by OGC on Regulatory Issues and Options for Decommissioning Proceedings (SECY-92-382), 10:00 a.m., Tuesday, November 24, 1992, Commissioner's Conference Room, One White Flint North, Rockville, Maryland (Open to Public Attendance)" (January 14, 1993) and "SECY-92-382 — Decommissioning — Lessons Learned" (June 30, 1993).

On several occasions between late 1992 and early 1994, CAN asked the NRC to offer an opportunity for an administrative hearing regarding decommissioning



activities conducted by YAEC at Yankee Rowe. The Commission denied each such request. CAN sought judicial review and challenged the denials and the January 14, 1993 interpretation of the Commission's decommissioning regulations.

On July 20, 1995, the United States Court of Appeals held that the Commission had: (1) failed to provide an opportunity for hearing to CAN, as required by section 189 of the Atomic Energy Act, in connection with the Commission's decision to permit the CRP decommissioning activities; (2) changed its pre-1993 interpretation of its decommissioning regulations without notice to the public and in violation of the Administrative Procedure Act; and (3) impermissibly allowed the Licensee to conduct CRP decommissioning activities prior to compliance with the National Environmental Policy Act requirement to conduct an environmental analysis or environmental impact statement. *CAN v. NRC*, 59 F.3d at 291-92, 292-93, and 294-95 (1st Cir. 1995). The court remanded the matter to the Commission for proceedings consistent with the court's opinion.

In response, the Commission issued a *Federal Register* notice advising: (1) that the Commission did not intend to seek further review of *CAN v. NRC*; (2) that the Commission understood that decision to require a return to the interpretation of NRC decommissioning regulations that were in effect prior to January 14, 1993; and (3) that the Commission was requesting public comments on whether the Commission should order YAEC to cease ongoing decommissioning activities pending any required hearings and any other matters connected with that issue. See 60 Fed. Reg. 46,317 (Sept. 6, 1995).

After consideration of comments filed in response to that notice, the Commission implemented *CAN v. NRC* by issuing CLI-95-14, 42 NRC 130 (1995). In CLI-95-14, the Commission reinstated its pre-1993 interpretation of its decommissioning policy, required the issuance of a notice of opportunity for an adjudicatory hearing on the Yankee Rowe decommissioning plan, held that YAEC may not conduct further "major" decommissioning activities at Yankee Rowe until approval of a decommissioning plan after completion of any required hearing and directed YAEC to inform the Commission within 14 days of the steps it is taking to come into compliance with the reinstated interpretation of the Commission's decommissioning regulations. CLI-95-14, *supra*.

Pursuant to CLI-95-14, a proceeding is now under way to offer an opportunity for hearing on the Licensee's decommissioning plan for Yankee Rowe. Petitioners have sought intervention and a hearing.

As of July 20, 1995, when the court issued *CAN v. NRC*, YAEC had completed its Component Removal Project. In response to CLI-95-14, by letters dated October 19 and 24, 1995, YAEC identified nine ongoing activities that YAEC believed were permissible under *CAN v. NRC* and CLI-95-14.

In its letter of November 2, 1995, the NRC Staff evaluated those nine activities and found them permissible under the Commission's pre-1993 interpretation

of its decommissioning regulations, and thus under *CAN v. NRC* and CLI-95-14. The Staff also identified certain activities, although not proposed by the Licensee, which may not be conducted before reapproval of a decommissioning plan. Those activities include dismantlement of systems such as the main reactor coolant system, the lower neutron shield tank, vessels that have significant radiological contamination, pipes, pumps, and other such components, and the vapor container (containment). The Staff also identified segmentation or removal of the reactor vessel from its support structure as a major dismantlement not to be conducted until after the decommissioning plan is reapproved.

#### IV. DISCUSSION

**A. The Nine Activities Were Permissible, Prior to Approval of a Decommissioning Plan, Under the Commission's Pre-1993 Interpretation of Its Decommissioning Regulations, and Thus Are Permissible Under *CAN v. NRC* and CLI-95-14**

Petitioners contend that five of the nine activities evaluated by the NRC Staff's letter of November 2, 1995, are major dismantling or other decommissioning activities prohibited until after approval of a decommissioning plan, by *CAN v. NRC* and CLI-95-14. Specifically, Petitioners object to: (1) completing removal of the remainder of the upper neutron shield tank; (2) removal of component cooling water system pipes and components and spent fuel cooling system pipes and components; (3) fuel chute isolation; (4) spent fuel pool electrical conduit installation; and (5) radioactive waste shipments. Petitioners do not object to waste tank removal, ion-exchange pit cleanup, removal of emergency diesel generators, or the Brookhaven National Laboratory Cable Sampling Project. Petitioners acknowledge that completion of waste tank removal and ion-exchange pit cleanup are required for safety reasons. Petitioners also acknowledge that the removal of the emergency diesel generators is permissible because they are not radioactive, and that the Brookhaven National Laboratory Cable Sampling Project is a research project unrelated to decommissioning. Of the nine activities, all with the exception of radioactive waste shipments were completed before submission of the January 17, 1996 petition.

Under the Commission's pre-1993 interpretation of its decommissioning regulations, a licensee "may proceed with some activities such as decontamination, minor component disassembly, and shipment and storage of spent fuel if the activities are permitted by the operating license and/or § 50.59," prior to final approval of a licensee's decommissioning plan,<sup>1</sup> as long as the activity does not

<sup>1</sup> Statement of Consideration, "General Requirements for Decommissioning Nuclear Facilities," 53 Fed. Reg. 24,018, 24,025-26 (June 27, 1988).

involve major structural or other major changes and does not materially and demonstrably affect the methods or options available for decommissioning or substantially increase the costs of decommissioning. *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-90-8, 32 NRC 201, 207 n.3 (1990); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 73 n.5 (1991); and *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-92-2, 35 NRC 47, 61 n.7 (1992).

Under the pre-1993 interpretation of the Commission's decommissioning regulations, examples of activities that were considered permissible and that were conducted at various facilities under a possession-only license before approval of a decommissioning plan included:

*Shoreham*<sup>2</sup>

- Core borings in biological shield wall
- Core borings of the reactor pressure vessel
- Regenerative heat exchanger removal and disassembly
- Various sections of reactor water cleanup system piping cut out and removed to determine effectiveness of chemical decontamination processes being used
- Removal of approximately half of reactor pressure vessel insulation and preparation for disposal
- Removal of fuel support castings and peripheral pieces removed and shipment offsite for disposal at Barnwell, South Carolina
- Reactor water cleanup system recirculation holding pump removed and shipped to James A. FitzPatrick Nuclear Power Plant
- Control-rod drive pump shipped to Brunswick Nuclear Station
- One full set of control-rod blade guides sold to Carolina Power and Light Company
- Control-rod drives removed, cleaned, and stored in boxes for salvage
- Process initiated for segmenting and removing reactor pressure vessel cavity shield blocks
- Process initiated for removal of instrument racks, tubing, conduits, walkways, and pipe insulation presenting interferences for decommissioning activities and/or removal of salvageable equipment

*Fort St. Vrain*<sup>3</sup>

- Control-rod drive and orifice assemblies and control rods removed from

<sup>2</sup> See Letter dated December 11, 1991, from John D. Leonard, Jr., Long Island Lighting Company, to U.S. Nuclear Regulatory Commission, Docket No. 50-322.

<sup>3</sup> See Letter dated September 4, 1992, from Donald M. Warembourg, Public Service Company of Colorado, to the U.S. Nuclear Regulatory Commission, Docket No. 50-267.

core during defueling and shipped off site for processing or disposal as low-level waste

- All helium circulators removed and shipped off site for disposal
- Core region constraint devices (internals) removed and approximately one-half shipped off site for disposal
- About fifty core metal-clad reflector blocks (top layer of core) removed and stored in fuel storage wells
- Removal of remaining hexagonal graphite reflector elements, defueling elements, and metal-clad reflector blocks begun
- Prestressed concrete reactor vessel (PCRVR) top cross-head tendons and some circumferential tendons detensioned
- Some detensioned tendons removed from PCRVR
- Work initiated to cut and remove PCRVR liner cooling system piping presenting interferences to detensioning of PCRVR tendons
- Asbestos insulation completely removed from piping under PCRVR

Activities such as normal maintenance and repairs, removal of small radioactive components for storage or shipment, and removal of components similar to that for maintenance and repair also were permitted prior to approval of a decommissioning plan under the Commission's pre-1993 interpretation of the Commission's decommissioning regulations. See NRC Inspection Manual, ch. 2561, § 06.06 (Issue Date: 03/20/92).<sup>4</sup>

Of course, licensees are also permitted to complete or to conduct activities required for compliance with safety requirements before approval of a decommissioning plan. In addition, special consideration must be given to activities required to comply with other federal and state safety requirements. See Memorandum of Understanding Between the Nuclear Regulatory Commission and the Occupational Safety and Health Administration, "Worker Protection at NRC-licensed Facilities" (Oct. 21, 1988), 53 Fed. Reg. 43,950 (Oct. 31, 1988). See also NRC Inspection Manual, ch. 1007, "Interfacing Activities Between Regional Offices of NRC and OSHA." Petitioners concede that completion of activities already under way is permissible if completion is required for immediate safety purposes.

The Staff's November 2, 1995 letter evaluated the nine activities identified in YAEC's letter of October 19, 1995, based on the Commission's pre-1993

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<sup>4</sup> "Examples of modifications and activities, that are allowed during the post-operational phase [the interval between permanent shutdown and the NRC's approval of the licensee's decommissioning plan] are (1) those that could be performed under normal maintenance and repair activities, (2) removal of certain, relatively small radioactive components, such as control rod drive mechanism, control rods, and core internals for disassembly, and storage or shipment, (3) removal of non-radioactive components and structures not required for safety in the post-operational phase, (5) shipment of reactor fuel offsite, and (6) activities related to site and equipment radiation and contamination characterization."



interpretation of its decommissioning regulations,<sup>5</sup> and determined that the nine activities were permissible before approval of a decommissioning plan.

Upon review of the petition and its supplement of February 9, 1996, the Staff took a fresh look at the nine activities and again found them to be permissible before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations, and thus under *CAN v. NRC* and CLI-95-14.

#### *1. Completion of Removal of the Remaining Portions of the Upper Neutron Shield Tank*

As stated in the NRC Staff's letter of November 2, 1995, completion of this activity was necessary to avoid a significant lead hazard to plant personnel due to lead dust or powder deposits on surfaces of the structure (particularly if the plant were to go into an extended SAFSTOR configuration, as desired by Petitioners). That contamination, if disturbed during Licensee maintenance activities or NRC inspections would pose a significant health hazard to Licensee and NRC personnel.

Petitioners object that this safety rationale is unsupported by factual information regarding actual lead levels in the tank and whether the lead levels violated OSHA standards.

Dismantlement of the upper neutron shield tank required cutting sections of the tank that had lead shielding. Cutting was completed before November 2, 1995, and lead cleanup was completed by November 8, 1995. Lead dust was created by dismantlement of the tank, already under way and completed before issuance of the November 2, 1995 Staff letter. Surface lead residue measurements in those areas ranged between 13,000 micrograms ( $\mu\text{g}$ )/ft<sup>2</sup> and 390,000  $\mu\text{g}$ /ft<sup>2</sup>.

The Licensee's operating procedures require the Licensee to implement industrial hygiene control methods as specified by the Occupational Safety and Health Administration in areas where there is potential for employee exposure to lead. Procedure No. AP-0713, "Lead Control Program," Revision 1 Major, § C ("Discussion"), at 3. The target for removable lead contamination is 200  $\mu\text{g}$ /ft<sup>2</sup>. *Id.*, "Discussion," § C, "Decontamination," at 4.

Lead dust resulting from dismantlement of the upper neutron shield tank was at a concentration such that surface lead contamination exceeded the target

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<sup>5</sup> Petitioners claim that YAEC's "1 percent" criterion for determining what constitutes major structural or other major change (and thus what activities are permissible before approval of a decommissioning plan) would allow completion of decommissioning before any decommissioning plan could be approved in hearing. The Staff does not accept or approve, and has not used this criterion to determine whether any YAEC activities, including the nine activities, are permissible before approval of a decommissioning plan.

for removable lead contamination.<sup>6</sup> Licensee personnel were and are required to enter the area in order to conduct surveillances to monitor radioactive contamination and for compliance with fire protection requirements.

In view of the above, this activity was permissible for safety reasons, and, therefore, would have been allowed in a comparable situation before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.

## **2. Waste Tank Removal (Activity Decay and Dilution Tank)**

Petitioners concede that completion of this activity was required for safety reasons.

## **3. Removal of Component Cooling Water System Pipes and Components and Spent Fuel Cooling System Pipes and Components**

Contrary to Petitioners' assertions, the Staff's February 2, 1996 letter did not "abandon" the November 2, 1995 rationale for finding this activity permissible. The Staff's February 2 letter repeated the November 2 rationale and provided a more detailed explanation for the Staff's conclusion that this activity is permissible under the pre-1993 interpretation of the Commission's decommissioning regulations.

The Licensee had installed a self-contained spent fuel pool cooling system, isolated from the fluid components and installed conduit to allow future electrical isolation from other systems, in order to enhance safety and integrity of the spent fuel pool for prolonged storage of fuel. As a result, the component cooling water system pipes and components and spent fuel cooling system pipes and components were rendered redundant and were no longer useful.

Removal of the no-longer-useful pipes and components was not decommissioning, but maintenance that would have been allowed, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.<sup>7</sup> Petitioners erroneously contend that removal of

<sup>6</sup>The use of respiratory protection by workers would not have satisfied the Licensee's operating procedures. Until a determination is made that any employee working with lead will not be exposed to lead at the action level, respiratory protection is required. Procedure No. AP-0713, "Procedure," § C ("Lead Work Practices"), at 11. The action level is employee exposure, without regard to use of respirators, to an airborne concentration of lead of 30  $\mu\text{g}/\text{m}^3$  of air calculated as an 8-hour time-weighted average, and the permissible exposure limit is 50  $\mu\text{g}/\text{m}^3$  of air over an 8-hour time-weighted average, and 30  $\mu\text{g}/\text{m}^3$  of air over a 10-hour time-weighted average. *Id.*, "Definitions," at 1. Between October 5, 1995, and October 11, 1995, airborne lead concentrations in the areas affected ranged between 3  $\mu\text{g}/\text{m}^3$  and 2500  $\mu\text{g}/\text{m}^3$ . Between October 12, 1995, and October 26, 1995, airborne lead concentrations ranged between 1  $\mu\text{g}/\text{m}^3$  and 250  $\mu\text{g}/\text{m}^3$ .

<sup>7</sup>Petitioners assert that the Staff provided no factual support for its conclusion that leaving the component cooling water system and spent fuel cooling system pipes and components in place would pose a safety hazard. Upon further review, the Staff has determined that removal was not necessary to prevent a safety hazard.



this equipment is not maintenance. Removal of replaced equipment (as opposed to removal of dismantled equipment not intended to be replaced) is a normal maintenance activity.

In view of the above, this activity was permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.

#### **4. Ion-Exchange Pit Cleanup**

Petitioners concede that completion of this activity was required for safety reasons.

#### **5. Fuel Chute Isolation**

The Licensee made a commitment to NRC to complete a fuel chute isolation project, needed to enhance spent fuel pool integrity and long-term reliability, in response to NRC Bulletin 94-01, "Potential Fuel Pool Draindown Caused by Inadequate Maintenance Practices at Dresden Unit 1" (April 14, 1994). NRC Bulletin 94-01 explicitly identified potential siphon or drainage paths and freezing failures as hazards that could lead to drainage of the spent fuel pool.<sup>8</sup> NRC Bulletin 94-01 required licensees to identify which of the suggested actions that the licensees would take to prevent such hazards, or to identify an alternative course of action, if the licensees needed to take such measures to bring themselves into compliance as described in NRC Bulletin 94-01.

YAEC's fuel chute isolation project eliminated a potential freezing threat and siphon path that could lead to drainage of the spent fuel pool. The NRC Staff determined actions taken to prevent potential siphon paths and freezing hazards connected with the fuel chute to be adequate. NRC Inspection Report No. 50-029/94-80 (Dec. 9, 1994).

Petitioners erroneously maintain that isolation of the upper fuel chute is not necessary to prevent a risk of siphoning or freezing, because the upper fuel chute lies above the fuel pool and cannot serve as a siphon for liquid in the pool. The fuel chute pipe originally ran from the lower lock valve at the outside wall at the bottom of the spent fuel pit (SFP) on a diagonal path to the outer shell of the vapor container (VC), through the shell and into the VC. During former plant operations a blank flange was inserted in the pipe, outside the VC shell, in order to maintain VC leak-tight integrity.

<sup>8</sup> Requested action number 2 was: "Ensure that systems for essential area heating and ventilation are adequate and appropriate maintenance so that potential freezing failures that could cause loss of SFP water inventory are precluded." Requested action number 3 was: "Ensure that piping or hoses in or attached to the SFP cannot serve as siphon or drainage paths in the event of piping or hose degradation or failure or the mispositioning of system valves."

As part of the NRC Bulletin 94-01 project, one 8-foot length of this 12-inch-diameter fuel chute pipe was removed from the top of the lower lock valve and a blank flange placed over the lower lock valve so that the valve could be encased in concrete. This, in effect, made the valve part of the SFP wall. The removal of this section of pipe also eliminated a potential leak path through the pipe out of the SFP wall.

Isolation of the fuel chute, accomplished by removing the lowest flanged pipe section and sealing the lower portion of the fuel chute with concrete, eliminated a freezing and siphon hazard. Sealing the fuel chute with concrete prevents accumulation of water in the fuel chute. Accumulated water could freeze during severe winter weather and possibly damage the lower lock valve outside the spent fuel pool wall, thus opening a leak path near the bottom of the spent fuel pool.

Petitioners incorrectly maintain that the Licensee did not need to remove the upper fuel chute in order to comply with NRC Bulletin 94-01. The Licensor did not remove the upper fuel chute. The Licensee has fastened a blank flange at the wall of the VC by wedging open a flanged joint. This was a maintenance activity. This blank flange is normally in place and was removed, in the past, when fuel transfer operations took place. These transfers are now prohibited by the POL. The fuel chute isolation project was necessary to prevent potential siphon and freezing risks, was one of the actions determined to be an adequate response to NRC Bulletin 94-01, and brought the Licensee into compliance with NRC requirements.

In any event, this activity is not decommissioning, but maintenance and a safety upgrade that would have been allowed under the pre-1993 interpretation of the Commission's decommissioning regulations.

In view of the above, this activity was permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.

#### **6. Removal of Emergency Diesel Generators**

Petitioners acknowledge that removal of the emergency diesel generators is a permissible activity prior to final approval of a decommissioning plan.

#### **7. Spent Fuel Pool Electrical Conduit Installation**

This activity involved underground installation of a power cable and its protective covering and did not involve the removal of radioactive material. The modification also enhanced the integrity and long-term safe storage of spent fuel in the spent fuel pool, by isolating spent fuel pool power supplies from potential

problems that could be caused by power circuits in other systems or heavy load impacts at the plant. The activity was part of the Licensee's overall project to enhance the safety of the spent fuel pool by establishing independent systems dedicated to spent fuel pool reliability.

The conduit installation was also consistent with NRC Bulletin 94-01, specifically the first requested action, which involves ensuring the integrity of structures and systems, necessarily including electrical systems, required for containing, cooling, cleaning, level monitoring and makeup of water in the spent fuel pool. The conduit installation project enhanced integrity of the spent fuel pool by ensuring operability and adequacy of structures and systems required for spent fuel pool integrity, specifically the electrical system.

Petitioners object that the November 2, 1995 letter implies that this activity is a decommissioning activity because it will provide a separate power supply for future decommissioning activities. Petitioners contend that there is no present threat to the integrity of the spent fuel pool, and that as long as the Licensee performs no major dismantlement activities, there is no immediate need for conduit installation.

While it is true that conduit installation will isolate the spent fuel power supply from potential problems associated with future decommissioning of other systems, conduit installation also serves the larger purpose of isolating spent fuel pool power supplies from potential problems that could be caused by power circuits in other systems at the plant, wholly apart from the conduct of any decommissioning activities. This activity represents a safety enhancement.

In view of the above, this activity was permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.

#### **8. *Brookhaven National Laboratory Cable Sampling Project***

Petitioners acknowledge that this activity is a research project unrelated to decommissioning.

#### **9. *Radioactive Materials Shipments***

Under the pre-1993 interpretation of the Commission's decommissioning regulations and 10 C.F.R. § 50.59, the NRC has permitted shipment of radioactive waste and contaminated components prior to approval of a decommissioning plan, as long as it does not materially and demonstrably affect the methods or options available for decommissioning or substantially increase the cost of decommissioning, and because such shipments do not constitute a "major" activity.

NRC Staff practice prior to 1993 permitted activities such as shipment of waste or contaminated components at a permanently defueled facility pursuing decommissioning. Prior to approval of a decommissioning plan, the licensee may dismantle and dispose of nonradioactive components and structures not required for safety in the shutdown condition. After issuance of a possession-only license, the licensee also may dismantle and dispose of radioactive components not required for safety in the shutdown condition, provided that such activity does not involve major structural or other major changes and does not foreclose alternative decommissioning methods or materially affect the cost of decommissioning. *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-8, 33 NRC 461, 471 (1991), approving Staff recommendations in SECY-91-129, "Status and Developments at the Shoreham Nuclear Power Station" (May 13, 1991). See also NRC Inspection Manual, ch. 2561, §§ 06.06, 06.07 (Mar. 20, 1992); Fort St. Vrain Nuclear Generating Station Amendment No. 82 to Facility Operating License No. DPR-34 (Possession-Only License, May 21, 1991); and Rancho Seco Nuclear Generating Station Amendment No. 117 to Facility Operating License No. DPR-54 (Possession-Only License, Mar. 17, 1992).

Petitioners contend that the February 2, 1996 letter of the NRC Staff applied the post-1993 interpretation of the Commission's decommissioning regulations to determine that shipment of low-level radioactive waste is permissible,<sup>9</sup> based on the Staff's citation to SECY-92-382 and the associated June 30, 1993 SRM. The particular language Petitioners point to is:

Shipment of contaminated reactor internals needed for operation could proceed after issuance of a possession-only license because such components are not "major"; i.e., they are not needed to maintain safety in the defueled condition. See SECY-92-382, "Decommissioning — Lessons Learned" (November 10, 1992) and Staff Requirements Memorandum, "SECY-92-382 — Decommissioning — Lessons Learned" (June 30, 1993).

The Staff's February 2, 1996 letter derived this language from a discussion at pages 22-24 of SECY-92-382, "Decommissioning — Lessons Learned."

<sup>9</sup> Petitioners incorrectly contend that the Staff's conclusion, that the methods or options available for decommissioning will not be materially or demonstrably affected because the Licensee's activities involve approximately 2.3 curies of residual activity, constitutes application of the Licensee's 1% criterion. The Licensee had proposed in its letter of October 24, 1995, that decommissioning activities involving less than 1% of the total curies of nonfuel components not including greater than Class C components, are not "major" decommissioning activities and thus are permissible under the pre-1993 interpretation of the Commission's decommissioning regulations. As previously stated, the NRC Staff does not accept or approve, and did not use, this criterion in its February 2, 1996 (or its November 2, 1995) letter to determine whether activities proposed by the Licensee, including shipping, are "major" activities for purposes of permissible decommissioning before approval of a decommissioning plan. See, e.g., note 5, *supra*. The Staff in fact stated that since the Licensee's activities involve only 2.3 curies out of a total 4448 curies residual activity which must be decommissioned, shipment of low-level radioactive waste will not demonstrably affect the methods or options available for decommissioning.



The Commission had in fact permitted shipment of low-level waste prior to approval of a decommissioning plan under its pre-1993 interpretation of its decommissioning regulations, as explained above. SECY-92-382 accurately stated that the Commission had in fact permitted shipment of not only low-level radioactive waste and some components, but also some reactor internals, before approval of a decommissioning plan.<sup>10</sup> The particular reference to "major" components in SECY-92-382 was in the context of permissible *shipment of waste*; that language did not define "major" for the purpose of determining what components may be *dismantled or removed* prior to approval of a decommissioning plan. No component can be shipped unless it is first removed or dismantled, and authority to ship a component already removed or dismantled does not *ipso facto* constitute authority to remove or dismantle the component in the first place. Likewise, the citation in the NRC Staff's February 2, 1996 letter to Petitioners was not intended to define "major" for the purpose of determining what components could be dismantled or removed prior to approval of a decommissioning plan, but referred to what could be shipped. The Staff's reference to SECY-92-382 was made in the context of permissible shipments only, not permissible component dismantling or removal. Regrettably, the Staff's February 2, 1995 reference to SECY-92-382 may have been insufficiently detailed to make the purpose of the reference clear.

In the case at hand, the Licensee's proposal was to ship low-level radioactive waste.<sup>11</sup> The NRC Staff's conclusion that the Licensee's proposal to ship radioactive waste<sup>12</sup> is permissible under the pre-1993 interpretation of the Commission's decommissioning regulations was based on the understanding that the proposal was to ship low-level radioactive waste, and was not intended to be and was not a determination that the removal or dismantling of major components was permissible under the pre-1993 interpretation of the Commission's decommissioning regulations,<sup>13</sup> under *CAN v. NRC*, or under CLI-94-14.

<sup>10</sup> See *Shoreham*, CLI-91-8, 33 NRC at 471. See also SECY-91-129, "Status and Developments at the Shoreham Nuclear Power Station (SNPS)," at 3 (May 13, 1991) (contaminated fuel support castings and peripheral pieces).

<sup>11</sup> Petitioners contend that there is no basis to determine the accuracy of the Licensee's estimate that it will make 54 shipments of low-level radioactive waste between October 1995 and July 1996. Petitioners, however, fail to set forth any facts or rationale that raise a question as to the reasonableness of the Licensee's estimate of the number of shipments.

<sup>12</sup> Petitioners state that neither YAEC nor the NRC Staff provided any information about the radioactivity levels in the 54 shipments that YAEC estimates it shipped and will ship between October 1995 and July 1996, and that the Licensee's January 29, 1996 estimate of 2.3 curies involved in activities already completed does not provide information about radioactivity levels of the 54 shipments that YAEC estimates it will have shipped before the end of July 1996. The Licensee has now provided that information and estimates the total radioactivity involved in the packaging and shipment of low-level radioactive waste between November 1, 1995, and July 1996, to be 1817 curies. See Letter dated February 21, 1996, from K.J. Heider, YAEC, to Morton B. Fairlie, NRC. The four contested activities, other than shipping, amounted to only approximately 8,200 curies of residual radioactivity.

<sup>13</sup> Petitioners assert that the NRC Staff's February 2, 1996 letter states that the shipment of low-level radioactive waste is permitted under the pre-1993 criteria because the radioactivity of the shipments amounts to 2.3 curies

(Continued)

The Commission's decisions in *Shoreham*, CLI-91-2, 33 NRC at 73 n.5, and *Rancho Seco*, CLI-92-2, 35 NRC at 61 n.7, do not, as Petitioners contend, prohibit shipment of low-level radioactive waste. No issue concerning such shipments was addressed in those decisions. The language cited by Petitioners paraphrases the general guideline, that "major dismantling and other activities that constitute decommissioning under the NRC's regulations must await NRC approval of a decommissioning plan," and is derived from the 1988 Statement of Consideration, "General Requirements for Decommissioning Nuclear Facilities," *supra*. As explained above, it was agency practice before 1993 to permit shipment of low-level radioactive waste and contaminated components before approval of a decommissioning plan.

Rather than store low-level radioactive waste on site for extended periods, it has long been agency policy that such waste should be shipped to disposal sites if the ability to dispose of waste at a licensed disposal site exists. Shipping of waste at the earliest practicable time minimizes the need for eventual waste reprocessing due to possibly changing burial ground requirements and reduces occupational and non-occupational exposures and potential accident consequences. NRC Generic Letter 81-38, "Storage of Low-Level Radioactive Wastes at Power Reactor Sites" (Nov. 10, 1981).

Petitioners contend that YAEC may not ship low-level radioactive waste because the Yankee Rowe possession-only license does not permit it.<sup>14</sup> Although Petitioners are correct that no language in the Yankee Rowe POL explicitly states that shipment of low-level radioactive waste is authorized, the Yankee Rowe POL does authorize that activity. Section I.H of the POL, issued August 5, 1992, authorizes Yankee Rowe to receive, possess, and use byproduct, source, and special nuclear materials in accordance with the Commission's regulations in 10 C.F.R. Parts 30, 40, and 70. Authority to ship low-level radioactive waste is conferred upon all byproduct material, source material, and special nuclear material licensees by NRC regulations in 10 C.F.R. Parts 30, 40, and 70. Byproduct materials licensees, source materials licensees, and special nuclear

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or less out of the remaining 4448 curies of residual radioactivity to be decommissioned in the form of Class C or less waste. What the Staff said was that because the Licensee's activities involve approximately 2.3 curies of the remaining 4448 curies of residual radioactivity to be decommissioned in the form of Class C or less waste, shipment of low-level radioactive waste produced by the activities evaluated in the Staff's November 2, 1995 letter will not materially or demonstrably affect the methods or options available for decommissioning the Yankee Rowe site.

<sup>14</sup> Petitioners claim that the Commission's decommissioning regulations prohibit low-level radioactive waste shipments that are not authorized by YAEC's license, citing the 1988 Statement of Consideration. See "General Requirements for Decommissioning Nuclear Facilities," 53 Fed. Reg. 24,025-26 (June 27, 1988). The Statement of Consideration makes no mention of shipment of low-level radioactive waste. The language cited gives examples of activities that licensees may conduct before approval of a decommissioning plan, but does not state or imply that the list is inclusive: "Although the Commission must approve the decommissioning alternative and major structural changes to radioactive components of the facility or other major changes, the licensee may proceed with some activities such as decontamination, minor component disassembly, and shipment and storage of spent fuel if these activities are permitted by the operating license and/or § 50.59." (Emphasis added.)



materials licensees, including Yankee Rowe, are authorized to transfer such material, as long as the recipient is authorized, see 10 C.F.R. §§ 30.41, 40.51, and 70.42, and as long as preparation for shipment and transport is in accordance with the requirements of 10 C.F.R. Part 71. See 10 C.F.R. §§ 30.34(c), 40.41(c), 70.41(a). In particular, § 2.C of the Yankee Rowe POL states that the POL is deemed to contain and is subject to 10 C.F.R. §§ 30.34 and 40.41. Accordingly, the POL authorizes the transport of low-level radioactive waste from Yankee Rowe.

Petitioners state that the "cardinal consideration" that determines whether a decommissioning activity is "major" should be the radiation dose it yields, not the radioactivity of the component involved,<sup>15</sup> and thus the NRC Staff's February 2, 1996 letter erroneously relied upon the number of curies shipped rather than the radioactive doses involved in shipping low-level waste to determine whether the activity is permissible.<sup>16</sup>

The criteria for determining whether shipments of low-level radioactive waste will demonstrably affect the methods or options available for decommissioning have not been well defined. During review of the petition and its supplement, the NRC Staff has continued to examine the question of whether the Licensee's shipments of low-level radioactive waste will demonstrably affect the methods or options available for decommissioning. In this case, the Staff has now also compared the radiation dose involved in the packaging and shipping of the low-level radioactive waste with the radiation dose estimated for decommissioning of the Licensee's facility. This is because, under Petitioners' theory regarding the choice of the decommissioning option, as we understand it, it seems that adoption of a different decommissioning option would most likely be required to reduce dose. The Licensee estimates that the radiation dose involved in the packaging and shipment of low-level radioactive waste between November 1, 1995, and July 1996 to be 17 person-rem.<sup>17</sup> The estimated total radiation

<sup>15</sup> The Commission has not articulated as a criterion for determining what constitutes a "major" decommissioning activity, the radiation dose yielded by the activity, and Petitioners cite no authority for this argument. Nor has the Commission articulated the radioactivity involved as a criterion for determining what constitutes "major" decommissioning activity.

<sup>16</sup> The Staff mistakenly understood the Licensee's letter of January 29, 1996, to mean that the activities evaluated by the Staff's November 2, 1995 letter involved 2.3 curies. The radioactivity involved in the four contested activities, other than shipping of low-level radioactive waste, amounted to approximately 8,200 curies of residual radioactivity. (Removal of the upper neutron shield tank involved less than 5 curies, and removal of the component cooling water system pipes and components and spent fuel cooling system pipes and components involved 1,200 curies. See Letter dated October 19, 1995, from Russell A. Mellor, YAEC, to Morton B. Fairlie, NRC. Fuel chute isolation involved 2 curies, and spent fuel pool electrical conduit installation involved no curies. See Letter dated February 21, 1996, from K.J. Heider, YAEC, to Morton B. Fairlie, NRC.) In addition, the Licensee estimated that since completion of the activities described in the NRC letter, activities have been authorized by the Licensee's Manager of Operations that remove components containing a total of 2.3 curies of radioactive material. See Letter dated January 29, 1996, from Andrew C. Kadak, YAEC, to William T. Russell, NRC.

<sup>17</sup> See Letter dated February 21, 1996, from K.J. Heider, YAEC, to Morton B. Fairlie, NRC.

exposure for decommissioning the facility is 755 person-rem.<sup>18</sup> The estimated dose from packaging and shipping is approximately 2% of the total dose from decommissioning. As can be seen, most of the dose will be incurred in activities other than shipment of low-level radioactive waste. As the Commission has previously held in this case, even potential dose reductions on the order of 900 person-rem, unless there is some extraordinary aspect to the case not apparent, cannot have ALARA significance such that one decommissioning option would be preferable to another.<sup>19</sup> Accordingly, the Staff concludes that the Licensee's shipment of low-level radioactive waste will not demonstrably affect the methods and options available for decommissioning.

In view of the above, the shipments of low-level radioactive waste between October 1995 and July 1996, before approval of a decommissioning plan, is permissible under the pre-1993 interpretation of the Commission's decommissioning regulations.

#### **B. The Five Contested Activities Will Neither Individually Nor Collectively Substantially Increase the Costs of Decommissioning**

YAEC estimates the cost of shipment and disposal of all low-level radioactive waste between the October 1995 issuance of CLI-95-14 and the scheduled date of completion of the hearing in mid-July 1996, to be \$6.5 million, or approximately 1.75% of the estimated \$368.8 million total decommissioning cost. It would be speculative to conclude that the decommissioning method proposed by Petitioners, SAFSTOR, would be less expensive. There is no evidence that the Licensee's shipments will increase decommissioning costs or that continued storage of the waste will decrease the ultimate costs. Thus, the Staff concludes that YAEC's shipment of low-level radioactive waste will not substantially increase the costs of decommissioning.

Petitioners erroneously contend that the cost of shipments of low-level radioactive waste could be reduced by postponing the packaging and shipment of low-level waste, presumably because some waste may decay to levels such that the volume of waste that will require shipment would decrease. Delay will not significantly reduce the volume of waste shipped because the waste is not segregated by the radioactive isotope involved, and some of the radioactive isotopes involved have very long half-lives, i.e., nickel-63 has a half-life of 100 years. Cobalt-60, which has a half-life of 5.27 years, was the isotope selected by the Petitioners to postulate a reduction in waste volume. Moreover, delay could

<sup>18</sup> Order Approving the Decommissioning Plan and Authorizing Decommissioning of Facility (Yankee Nuclear Power Station), "Environmental Assessment by the U.S. Nuclear Regulatory Commission Related to the Request to Authorize Facility Decommissioning," at 22.

<sup>19</sup> CLI-96-1, 43 NRC 1 (1996).

possibly increase decommissioning costs because shipping and burial costs may increase.

The Licensee estimates costs for the five activities contested by Petitioners to be \$6.5 million for shipments of low-level waste between October 1995 and July 1996 and \$2.4 million for the four other contested activities,<sup>20</sup> for a total of \$8.9 million, or 2.1% of the \$368.8 million estimated total decommissioning costs. There is no evidence that these activities will give rise to consequences that will increase the total cost of decommissioning. Accordingly, the five contested activities will not substantially increase decommissioning costs, either individually or collectively.

### **C. Petitioners' Request for an Inspection and Inspection Report Was Granted**

Petitioners' request for reinspection of Yankee Rowe to determine compliance with CLI-95-14 and for issuance of an inspection report was granted. NRC Region I inspected the Yankee Rowe facility for a second time on December 5-18, 1995, to determine compliance with CLI-95-14. NRC Inspection Report No. 50-029/95-07 was issued January 31, 1996. The Inspection Report concludes that the Licensee's activities were conducted in accord with the specifications of the Staff's November 2, 1995 letter. The first inspection was conducted in October 1995, before the provision of technical guidance or criteria to assist the Region in determining compliance with CLI-95-14. Subsequently, the NRC Staff issued its letter of November 2, 1995, evaluating the nine activities, all of which are permitted by *CAN v. NRC* and CLI-95-14, as explained above.

Petitioners claim that the January 31, 1996 Inspection Report merely repeats the Staff's erroneous interpretation of the Commission's decommissioning standards, and thus constitutes no relief. The inspection report explicitly states that the nine activities evaluated by the Staff's November 2, 1995 letter were inspected and that the Licensee limited the scope of its work to those activities. Petitioners' disagreement with the Staff's conclusion that the nine activities are in compliance with *CAN v. NRC* and CLI-95-14 does not constitute denial of Petitioners' request for an inspection and an inspection report to determine compliance with *CAN v. NRC* and CLI-95-14.

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<sup>20</sup> The Licensee spent \$610,000 on the four activities in the fourth quarter of 1995, which is approximately 25% of the estimated total cost for these four activities. See Letter dated February 15, 1996, from Russell A. Mellor to Morton B. Fairlie.

#### IV. CONCLUSION

For the reasons given above, Petitioner's request that shipments of low-level radioactive waste be prohibited is denied, and Petitioners' request that four other activities be prohibited is moot.<sup>21</sup> Additionally, Petitioners' request for an inspection of Yankee Rowe to determine compliance with CLI-95-14 and an inspection report was granted.

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

FOR THE NUCLEAR  
REGULATORY COMMISSION

William. T. Russell, Director  
Office of Nuclear Reactor  
Regulation

Dated at Rockville, Maryland,  
this 22d day of February 1996.

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<sup>21</sup> Petitioners claim that the NRC erroneously found on February 2, 1996, that the request for emergency relief was moot in part. Petitioners assert that the Licensee continues to unlawfully ship low-level radioactive waste and that on January 29, 1996, the Licensee stated that it is considering whether to conduct seven activities, in addition to the nine evaluated by the Staff's November 2, 1995 letter. The February 2, 1996 letter of the Staff and this Decision explicitly denied Petitioners' request to prohibit shipment of low-level radioactive waste, and made no finding that this request is moot. The February 2, 1996 letter and this Decision explicitly state that Petitioners' request for emergency relief regarding the remaining four contested activities was moot because those activities had been completed before the submission of the petition. Nonetheless, both the February 2, 1996 letter and this Decision found that those four activities were permissible, prior to approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations. Neither the Staff's February 2, 1996 letter nor this decision address the seven activities that the Licensee states it is now considering. The Staff will address those activities in a supplemental Director's Decision, as required by the Commission's order of February 15, 1996.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Shirley A. Jackson, Chairman  
Kenneth C. Rogers  
Greta J. Dicus

In the Matter of

Docket No. 50-440-OLA-3

CLEVELAND ELECTRIC ILLUMINATING  
COMPANY, *et al.*

(Perry Nuclear Power Plant,  
Unit 1)

March 7, 1996

The Commission grants the Cleveland Electric Illuminating Company's petition for review of the Atomic Safety and Licensing Board order, LBP-95-17, 42 NRC 137 (1995). The Board's order granted the Intervenor's motion for summary disposition and terminated the proceeding.

ORDER

Pursuant to 10 C.F.R. § 2.786(b), the Cleveland Electric Illuminating Company (Cleveland Electric) has petitioned the Commission for review of Atomic Safety and Licensing Board order LBP-95-17, 42 NRC 137 (1995). The Licensing Board's order granted the motion for summary disposition submitted by Intervenor Ohio Citizens for Responsible Energy, Inc. (OCRE), and Ms. Susan L. Hiatt, and terminated this proceeding. The Intervenor's position is that LBP-95-17 misinterprets NRC regulatory requirements and exceeds the scope of the proceeding.

The Commission has decided to grant review of LBP-95-17. The parties to the review proceeding shall be Cleveland Electric, the Intervenor, and the NRC Staff.



1. Within 30 days after service of this Order, Cleveland Electric and the NRC Staff may file their briefs, which shall be limited to 25 pages each.
2. Within 30 days after service of Cleveland Electric's and the NRC Staff's briefs, the Intervenors shall file their responsive brief, which shall be limited to 35 pages.
3. Within 15 days after service of the responsive brief, Cleveland Electric and the NRC Staff may file a reply brief, which shall be limited to 10 pages each.

In addition to the arguments the parties choose to present, the Commission directs all parties to address the significance for this case of 5 U.S.C. § 551(8) and (9) (defining "license" and "licensing").

Any brief in excess of 10 pages must contain a table of contents, with page references, and a table of cases (alphabetically arranged), statutes, regulations, and other authorities cited, with references to the pages of the brief where they are cited. Page limitations on briefs are exclusive of pages containing a table of contents, table of cases, and of any addendum containing statutes, rules, regulations, etc.

It is so ORDERED.

For the Commission

JOHN C. HOYLE  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 7th day of March 1996.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

Shirley A. Jackson, Chairman  
Kenneth C. Rogers  
Greta J. Dicus

In the Matter of

Docket No. 50-029-DCOM  
(Decommissioning Plan)

YANKEE ATOMIC ELECTRIC  
COMPANY  
(Yankee Nuclear Power Station)

March 7, 1996

The Commission declines to disqualify two Commissioners or the NRC Staff from participating in the case; indicates that it plans to review the Licensing Board's March 1 decision (LBP-96-2, 43 NRC 61 (1996)); suggests appropriate areas of inquiry for the parties' briefs; and keeps in place the current stay of the Board decision, pending Commission review of LBP-96-2.

**RULES OF PRACTICE: MOTIONS FOR RECUSAL (OR  
DISQUALIFICATION)**

It is Commission practice that the Commissioners who are subject to a recusal motion will decide that motion themselves, and may do so by issuing a joint decision.

**RULES OF PRACTICE: MOTIONS FOR RECUSAL (OR  
DISQUALIFICATION)**

A prohibited communication is not a concern if it does not reach the ultimate decision maker.

#### **RULES OF PRACTICE: MOTIONS FOR RECUSAL (OR DISQUALIFICATION)**

Where a prohibited communication is not incorporated into advice to the Commission, never reaches the Commission, and has no impact on the Commission's decision, it provides no grounds for the recusal of Commissioners.

#### **RULES OF PRACTICE: MOTIONS FOR RECUSAL (OR DISQUALIFICATION)**

Commission guidance does not constitute factual prejudice where the guidance is based on regulatory interpretations, policy judgments, and tentative observations about dose estimates that are derived from the public record.

#### **RULES OF PRACTICE: MOTIONS FOR RECUSAL (OR DISQUALIFICATION); DISQUALIFICATION**

Where there are no facts from which the Commission can reasonably conclude that a prohibited communication was made with any corrupt motive or was other than a simple mistake, and where a Report of the Office of the Inspector General confirms that an innocent mistake was made and that the Staff was not guilty of any actual wrongdoing, and where the mistake did not ultimately affect the proceeding, the Commission will not dismiss the Staff from the proceeding as a sanction for having made the prohibited communication.

#### **RULES OF PRACTICE: STAY OF ORDER**

Where the Commission issues a stay wholly as a matter of its own discretion, it does not need to address the factors listed in 10 C.F.R. § 2.788.

### **MEMORANDUM AND ORDER**

#### **I. INTRODUCTION**

The Petitioners in this expedited proceeding, the Citizens Awareness Network ("CAN") and the New England Coalition on Nuclear Pollution ("NECNP") (collectively "Petitioners"), challenge the adequacy of the decommissioning plan prepared by the Yankee Atomic Electric Company ("YAEC") for its shutdown nuclear power reactor near Rowe, Massachusetts ("Yankee NPS"). On March 1, 1996, the Atomic Safety and Licensing Board ("Licensing Board") issued a

58-page decision dismissing Petitioners' request for a hearing on the ground that Petitioners had failed to proffer a litigable contention. See LBP-96-2, 43 NRC 61 (1996) ("LBP-96-2").

Currently before the Commission are two motions filed by Petitioners: one seeking clarification and modification of a February 27 stay order issued by the Commission<sup>1</sup> and one seeking reconsideration and rescission of the Commission's January 16 decision referring Petitioners' five proposed contentions to the Licensing Board and providing guidance on certain legal and policy questions. See CLI-96-1, 43 NRC 1 (1996) ("CLI-96-1"). The latter motion also seeks recusal of two Commissioners and disqualification of the NRC Staff from further participation in the case.

In the instant Memorandum and Order, the Commission: (1) declines to disqualify two Commissioners or the NRC Staff from participating in the case; (2) indicates that it plans to review the Licensing Board's March 1 decision and suggests appropriate areas of inquiry for the parties' briefs; and (3) keeps in place the current stay of the Board decision, pending Commission review of the Board decision.

## II. BACKGROUND OF CLI-96-1

On January 16, we issued CLI-96-1, in which we referred Petitioners' petition to intervene and related pleadings to the Licensing Board with: (1) instructions to treat the petition as a request for a hearing; (2) guidance on selected issues including Petitioners' proposed Contention A; and (3) a proposed expedited schedule. At the same time, the Secretary issued a separate document, entitled "Notice of Appointment of Adjudicatory Employee and of Communication Covered by 10 C.F.R. § 2.781(c)" ("Notice"), which advised the parties: (1) that a member of the NRC Staff had been appointed as an adjudicatory employee, and (2) that there had been a communication in violation of the separation of functions restrictions contained in 10 C.F.R. § 2.781(a) and that this communication was being placed on the record in accordance with 10 C.F.R. § 2.781(c).

The Notice informed the parties that the communication had occurred between a member of the NRC Staff and a member of the Office of the General Counsel ("OGC"), which was advising the Commission on the preparation of CLI-96-1. In addition, the Notice advised the parties that the communication related to Petitioners' proposed Contention A and attached a memorandum describing the

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<sup>1</sup> On February 21 the Board had announced from the bench its intent to issue an order dismissing the proceeding in its entirety by about March 1. On February 27 the Commission issued an anticipatory order staying the effectiveness of the Board's impending decision.

communication. Finally, the Notice stated that the communication did not affect the advice OGC rendered to the Commission, did not result in a change to the language in any proposed draft of CLI-96-1, and was itself not communicated to the Commissioners or any of their personal staffs before the Commission issued CLI-96-1.

On January 26, 1996, Petitioners filed their motion for reconsideration and rescission of CLI-96-1. First, Petitioners challenge the guidance we provided to the Licensing Board on proposed Contention A, arguing that we "prejudge[d] contested facts," Motion for Reconsideration at 1, based "on *ex parte* communications and other factual information which petitioners have not had the opportunity to controvert." *Id.* at 2. As a result, Petitioners contend, the Commission has "grievously prejudiced [their] opportunity for a full and fair hearing . . . ." *Id.* See generally *id.* at 7-15. Moreover, argue Petitioners, because the guidance was based upon "an *ex parte* communication,"<sup>2</sup> the Commission should rescind that guidance. *Id.* at 15-18.

Second, Petitioners argue that, based upon the facts as stated in the Notice, the Commission should issue an Order directing the Staff to show cause why it should not be dismissed as a party from the proceeding as a sanction for the conduct identified in the Notice. See generally *id.* at 18-19. Third, the Petitioners argue that Chairman Jackson and Commissioner Rogers should recuse themselves from any further consideration of this case because the guidance on proposed Contention A prejudged factual issues and rested on an improper communication (despite the Notice's statement to the contrary). See generally *id.* at 20-21.

### III. ANALYSIS

#### A. Commission Recusal

We begin with an analysis and discussion of the third issue, whether Chairman Jackson and Commissioner Rogers should recuse themselves from further proceedings in this matter.<sup>3</sup>

<sup>2</sup> The communication at issue took place in violation of the Commission's Rules on "separation of functions," not its rules against "*ex parte* communications," as the Petitioners mistakenly state. The Notice identified a communication between (1) an NRC employee who was participating in an adjudicatory proceeding on behalf of the Staff and (2) an NRC employee who was advising the Commission regarding its adjudicatory functions. Accordingly, the communication violated the "separation of functions" restrictions of 10 C.F.R. § 2.781(a), not the *ex parte* restrictions of 10 C.F.R. § 2.780(a)-(c). The latter provision applies to communications from outside the NRC; the former applies to communications from within the NRC.

<sup>3</sup> Commissioner Dicus took office on February 15, 1996, well after the events that serve as grounds for Petitioners' request for recusal transpired. Commissioner Dicus took no part in those events, did not participate in CLI-96-1, and, accordingly, presumes that Petitioners' motion for recusal is not addressed to her. Therefore, Commissioner Dicus did not participate in Part A of this discussion.

(Continued)



## 1. Separation of Functions Violation

We first address the separation of functions violation as an asserted ground for recusal. Petitioners offer no facts supporting their motion to recuse because of the separation of functions violation other than those apparent from the Notice. For the reasons stated below, the facts as stated by the Notice do not warrant recusal by the Commissioners from this proceeding.

On January 16, the same day that CLI-96-1 and the Notice were issued, the Commission's Office of the General Counsel ("OGC") forwarded the Notice to the Acting Inspector General of the Commission for any appropriate action. OGC also provided a copy of the Petitioners' motion to the Office of the Inspector General ("OIG"). The Commission's OIG has the duty and obligation to conduct independent audits and investigations under the Inspector General Act of 1978, as amended, Pub. L. 95-452, 5 U.S.C. App. See generally 10 C.F.R. § 1.12(d). The OIG promptly initiated an investigation into the circumstances of the communication at issue and completed that investigation on February 23, 1996.

The OIG's Report of Investigation provides a complete record as to how and why that communication occurred.<sup>4</sup> As is clear from the Notice and confirmed by the Report, the communication was not provided — either directly or indirectly — to Chairman Jackson or Commissioner Rogers, or to any of their personal staffs, prior to the decision to issue CLI-96-1. See generally OIG Report at 12, 13. Thus, there is no factual support for Petitioners' assertion that the communication was "implicitly relied on." Motion for Reconsideration at 16. A prohibited communication "is not a concern if it does not reach the ultimate decision maker." *Press Broadcasting Co., Inc. v. FCC*, 59 F.3d 1365, 1369 (D.C. Cir. 1995), citing *ATX, Inc. v. U.S. Department of Transportation*, 41 F.3d 1522, 1527 (D.C. Cir. 1994), and *Peter Kiewit Sons' Co. v. U.S. Army Corps of Engineers*, 714 F.2d 163, 170-71 (D.C. Cir. 1983).

Moreover, we would also observe that an essential thrust of the NRC Staff communication — that the ALARA doctrine should not be applied in reviewing a licensee's choice of decommissioning option — is inconsistent with the Commission's assumption in CLI-96-1 that an ALARA challenge to a licensee's decommissioning option choice *can* properly be made if an adequate basis is provided. See CLI-96-1, 43 NRC at 7.

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<sup>4</sup> In accordance with Commission practice, Chairman Jackson and Commissioner Rogers decided the recusal motion for themselves. Therefore, Part A is the joint decision of Chairman Jackson and Commissioner Rogers. See *Joseph J. Macktal*, CLI-89-18, 30 NRC 167, 169-70 (1989) (following an identical practice responding to a request for recusal). Parts B and C represent a collegial Commission decision.

<sup>4</sup> A copy of the Report of Investigation has now been released to the public and has been provided to the parties with this Memorandum and Order.

In sum, because the communication was made only to the General Counsel and had no apparent influence on either OGC's advice to the Commission or on the Commission's decision, it provides no grounds for the recusal of Chairman Jackson or Commissioner Rogers.

## *2. Alleged Prejudgment of Contested Facts*

Petitioners also argue that Chairman Jackson and Commissioner Rogers should be disqualified because they have improperly prejudged contested facts, particularly on the question whether the SAFSTOR decommissioning option results in significant dose savings. As explained below, this argument is premised on a misreading of CLI-96-1 and, because no prejudgment of contested facts took place, does not call for recusal. One will search CLI-96-1 in vain, for example, for any "factual" finding regarding the projected SAFSTOR dose savings for the Yankee facility.

It is clear and uncontestable from the rulemaking record supporting the Commission's decommissioning rule, and from the GEIS<sup>5</sup> in particular, that the dose estimates in the rulemaking record associated with DECON and SAFSTOR are based on generic estimates for plants larger than Yankee Rowe that have undergone no prior decommissioning. It is no prejudgment for the Commission merely to observe in CLI-96-1 that different dose estimates "may" be expected for Yankee Rowe, and that the dose differences between SAFSTOR and DECON are "likely" to be lower and "could" be less than 900 person-rem — or "perhaps" not much at all given Yankee Rowe's smaller size and the fact that Yankee Rowe has already been partially decommissioned. It is also no prejudgment for the Commission to note the obvious uncertainties attending these estimates.

The Commission also offered guidance in CLI-96-1 that a challenge to the Licensee's choice of the modified DECON option cannot be based solely on differences in estimated collective occupational doses on the order of magnitude of the estimates in the rulemaking GEIS. This is not a finding of fact; it is an interpretation of the NRC's decommissioning and ALARA regulations and rests on an analysis of the regulatory policies underlying those regulations. As CLI-96-1 notes, those regulations treat DECON as a generally acceptable alternative despite the acknowledged likelihood of reduced occupational dose under SAFSTOR, and call for a weighing of various factors in addition to the magnitude of estimated exposure in deciding ALARA.

Although not necessary for the decision, the Commission also noted that its guidance was consistent with its current policy judgment that exposures are considered ALARA when further dose reduction would cost more than \$1000

<sup>5</sup> The Generic Environmental Impact Statement, or "GEIS," is NUREG-0586, issued in August 1988 in conjunction with the promulgation of 10 C.F.R. §§ 50.75 and 50.82. See generally 57 Fed. Reg. 24,051 (June 27, 1988).

or \$2000 for each person-rem reduction achieved. Such policy judgments do not prejudice contested facts. Further, the use of cost estimates appearing in Petitioners' own pleadings merely constitutes an analysis of the basis proffered for a contention and does not constitute a merits conclusion on the validity of those estimates.

Finally, the Commission stated in CLI-96-1 that its guidance regarding regulatory significance of a dose reduction on the order of 900 person-rem associated with switching to SAFSTOR was not applicable if "there is some extraordinary aspect to the case not apparent to us from the pleadings that the Licensing Board may uncover on its own review." CLI-96-1, 43 NRC at 9. This statement alone puts to rest any concern about prejudgment since it left sufficient leeway for the Licensing Board to reach its own initial conclusion if the record so warranted.

In sum, regulatory interpretations and policy judgments, and tentative observations about dose estimates that are derived from the public record, are not factual prejudgments. Furthermore, the Commission provided the Licensing Board with sufficient flexibility to consider the matters in dispute consistent with the Commission's rules. Thus, Petitioners' allegations of prejudgment constitute no basis for recusal of Chairman Jackson or Commissioner Rogers.<sup>6</sup>

#### **B. Dismissal of Staff as a Party**

Petitioners offer no facts beyond the "Notice" to support their argument that the Staff should be dismissed from the proceeding. But there are no facts in the Notice from which we could reasonably conclude that the communication was made with any corrupt motive or was other than a simple mistake. Moreover, the OIG Report confirms that an innocent mistake was made and that the Staff is not guilty of any actual wrongdoing. *See generally* OIG Report at 7-12, 13. We are unwilling to order a dismissal of Staff from the proceeding on the basis of a mistake that ultimately did not affect the proceeding. Thus Petitioners' request for the Commission to order Staff to show cause why it should not be dismissed as a party to the proceeding is denied.

#### **C. Commission Appellate Review of LBP-96-2 and the February 27th Stay Order**

Under 10 C.F.R. § 2.714a(a), Petitioners have the right to appeal the Licensing Board's March 1 decision to dismiss their contentions, LBP-96-2, and we

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<sup>6</sup> As explained below, however, as part of its review of LBP-96-2, the Commission will consider Petitioners' arguments that its guidance was unsound on its merits. *See, e.g.,* Motion for Reconsideration and Rescission at 9-15.

anticipate that they will do so. On appeal, the parties' briefs may address all issues bearing on the Licensing Board's decision, including the applicability of the Commission's guidance in CLI-96-1 and any issues related to reconsidering that guidance not decided in today's order. See note 6, *supra*.

Because of the complex and novel decommissioning issues involved in this case, we issued an anticipatory stay of LBP-96-2 on February 27th and now have decided, wholly as a matter of discretion,<sup>7</sup> to keep that stay in effect pending completion of Commission review of the Licensing Board's decision. See *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-93-3, 37 NRC 135, 152 (1993). In addition, if the Commission affirms LBP-96-2, it will follow its customary practice of issuing a short housekeeping stay to facilitate orderly judicial review. See, e.g., *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-92-2, 35 NRC 47, 61 (1992).

#### IV. CONCLUSION

For the foregoing reasons, Petitioners' Motion for Reconsideration and Partial Rescission is denied insofar as it seeks Commission recusal and Staff disqualification. The Commission will review LBP-96-2 after appeal and briefing under 10 C.F.R. § 2.714a. The effectiveness of LBP-96-2 is hereby stayed pending that review.

It is so ORDERED.

For the Commission

JOHN C. HOYLE  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 7th day of March 1996.

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<sup>7</sup>YAEK argues that the traditional stay factors under 10 C.F.R. § 2.788 do not support a stay in this case. See Licensee's Response to NECNP/CAN's "Motion for Clarification and Modification of Commission's February 27, 1996 Stay Order," filed March 1, 1996. As we do not act under section 2.788, we intimate no view on this question.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bellwerk, III, Chairman  
Dr. Jerry R. Kline  
Dr. Thomas S. Elleman

In the Matter of

Docket No. 50-029-DCOM  
(ASLBP No. 96-713-01-DCOM)

YANKEE ATOMIC ELECTRIC  
COMPANY  
(Yankee Nuclear Power Station)

March 1, 1996

In this proceeding concerning challenges to various aspects of the decommissioning plan for the Yankee Nuclear Power Station, based on guidance furnished by the Commission in CLI-96-1, 43 NRC 1 (1996), the Licensing Board concludes that the citizen groups petitioning to intervene have established their standing but have failed to present a litigable contention, which requires that the proceeding be dismissed.

**RULES OF PRACTICE: STANDING TO INTERVENE (INJURY IN FACT; ZONE OF INTERESTS)**

To comply with the basic standing requirements, a petitioner must demonstrate that (1) it has suffered or will suffer a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute; (2) the injury is fairly traceable to the challenged action; and (3) the injury is likely to be redressed by a favorable decision. See CLI-96-1, 43 NRC at 6.



**RULES OF PRACTICE: STANDING (REPRESENTATIONAL);  
STANDING TO INTERVENE (AUTHORIZATION)**

When an organization seeks to intervene on behalf of its members, that entity must show that it has an individual member who can fulfill the necessary elements to establish standing and who has authorized the organization to represent his or her interests. See CLI-96-1, 43 NRC at 6.

**RULES OF PRACTICE: STANDING TO INTERVENE (NUCLEAR  
POWER REACTOR DECOMMISSIONING)**

Intervenor organizations established their standing to intervene and seek relief regarding alleged health and safety or environmental injuries that may be visited upon their members who reside and engage in various activities in the area within 10 miles of a nuclear facility to be decommissioned. Because some, even if minor, public exposures can be anticipated from the decommissioning process, the Licensing Board is not "in a position at this threshold stage to rule out as a matter of certainty the existence of a reasonable possibility" that decommissioning might have an adverse impact to those, such as petitioners' members, who live or recreate in such close proximity to the facility, or use local waste transportation routes. *Virginia Electric and Power Co.* (North Anna Nuclear Power Station, Units 1 and 2), ALAB-522, 9 NRC 54, 56 (1979).

**RULES OF PRACTICE: STANDING TO INTERVENE  
(ADMISSIBILITY OF CONTENTIONS)**

Petitioners who have established their standing to present a contention that seeks modification or rejection of a nuclear facility decommissioning plan so as to avoid health and safety or environmental injury to the public also can pursue any contention alleging such modification/rejection relief based on circumstances such as purported occupational exposure to facility workers from decommissioning activities. See CLI-96-1, 43 NRC at 6.

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)**

Under 10 C.F.R. § 2.714(b)(2)(ii)-(iii), to be admissible a contention must contain a specific statement of an issue of fact or law raised or controverted in a proceeding that is supported by a "basis" of alleged facts or expert opinions, together with references to specific sources and documents that establish those facts or opinions. The basis must be sufficient to show that a genuine dispute exists with the applicant on a material issue of fact or law. Moreover, while the intervenor need not prove its case at the contention stage or present factual

support in affidavit or evidentiary form sufficient to withstand a summary disposition motion, it nonetheless must make a minimal showing that material facts are in dispute such that a further inquiry is appropriate. And, of course, any contention must fall within the scope of the issues set forth in the notice of opportunity for hearing on the proposed licensing action. See *Georgia Institute of Technology* (Georgia Tech Research Reactor), CLI-95-12, 42 NRC 111, 117-18 (1995).

#### **RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)**

##### **DECOMMISSIONING: CONTENTIONS (ADMISSIBILITY)**

In challenging the contents of a decommissioning plan fashioned pursuant to 10 C.F.R. § 50.82(b)(1), (2), a contention not only must allege some content deficiency in the decommissioning plan, but that this purported deficiency has some health and safety significance for the decommissioning process as a whole. Put another way, to craft a litigable contention faulting a decommissioning plan for a deficiency in content, besides providing a basis sufficient to question the plan's accuracy, there must also be a showing that a genuine disputed material issue of fact or law exists about whether the purported shortcoming has some tangible negative impact on the overall ability of the decommissioning process outlined in the plan to protect the public health and safety. Cf. *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-942, 32 NRC 395, 414 (1990) (contention that purported emergency planning exercise deficiency precludes a finding of reasonable assurance that protective measures can and will be taken must show that exercise revealed more than minor or isolated flaw in plan and that plan flaw can only be remedied through significant plan revision).

##### **DECOMMISSIONING: FINANCIAL ASSURANCE (ADMISSIBILITY OF CONTENTIONS)**

A litigable contention asserting that a reactor decommissioning plan does not comply with the funding requirements of 10 C.F.R. § 50.82(b)(4) and (c), must show not only that one or more of a plan's cost estimate provisions are in error, "but that there is not reasonable assurance that the amount will be paid." CLI-96-1, 43 NRC at 9. A petitioner must establish that some reasonable ground exists for concluding that the licensee will not have sufficient funds to cover decommissioning costs for the facility.

#### **RULES OF PRACTICE: CONTENTIONS (RESPONSE TO OBJECTION TO ADMISSION)**

A petitioner should be permitted to respond to challenges to a contention before the contention is dismissed. See *Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-565, 10 NRC 521, 525 (1979).

#### **NEPA: RULE OF REASON**

The "rule of reason" governing National Environmental Policy Act (NEPA) interpretation provides that an agency need not consider "remote and speculative risks." *Limerick Ecology Action v. NRC*, 869 F.2d 719, 739 (3d Cir. 1989).

#### **RULES OF PRACTICE: CHALLENGE TO COMMISSION REGULATIONS; CONTENTIONS (CHALLENGE OF COMMISSION RULE)**

A contention basis concerning a transportation cask accident that relies on a report postulating an accident scenario with conditions that fall within the parameters of 10 C.F.R. § 71.73(c) governing cask accident test conditions is not subject to dismissal under 10 C.F.R. § 2.758 as improperly challenging that accident test condition regulation.

#### **RULES OF PRACTICE: CONTENTIONS (SUPPORTING DOCUMENTATION)**

A document put forth by an intervenor as supporting the basis for a contention is subject to scrutiny both for what it does and does not show. When a report is the central support for a contention's basis, the contents of that report are what are before the Board and, as such, is subject to Board scrutiny, both as to those portions of the report that support an intervenor's assertions and those portions that do not.

#### **NEPA: REMOTE AND SPECULATIVE EVENT**

Because only accident scenarios that are not "remote and speculative" need be the subject of a NEPA analysis, if the information in any intervenor-proffered document regarding such a scenario fails to indicate that this threshold has been crossed, then a contention challenging NEPA compliance based on a failure to analyze that scenario need not be admitted. See *Vermont Yankee Nuclear Power*

Corp. (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 44-47 (1989), *remanded for additional findings*, CLI-90-4, 31 NRC 333 (1990).

## MEMORANDUM AND ORDER

(Denying Petition to Intervene)

By a petition to intervene and supplemental intervention petition dated November 30, 1996, the Citizens Awareness Network, Inc. (CAN), and the New England Coalition on Nuclear Pollution (NECNP) ask that the agency convene an adjudicatory hearing. As their intervention petition makes clear, in that hearing Petitioners wish to challenge the validity of various health and safety and environmental aspects of the decommissioning plan proposed by Licensee Yankee Atomic Electric Company (YAEC) for the Yankee Nuclear Power Station (YNPS or Yankee Rowe) located in Franklin County, Massachusetts, near the town of Rowe. The Commission referred their intervention petition to the Atomic Safety and Licensing Board in a January 16, 1996 memorandum and order. *See* CLI-96-1, 43 NRC 1 (1996). In doing so, the Commission directed that the Board rule on CAN's and NECNP's standing to intervene and the admissibility of the five contentions they have proffered and then conduct any further proceedings.

In response to the Commission's referral, on February 21, 1996, we conducted a prehearing conference regarding Petitioners' standing and their contentions. *See* Tr. at 1-234. At the conference, counsel for Petitioners, YAEC, and the NRC Staff made oral presentations and answered Board questions regarding various aspects of these matters.<sup>1</sup> At the conclusion of these presentations, we advised the participants that the Board intended to issue a finding that CAN and NECNP have standing to intervene in this proceeding but that they have failed to present any litigable contentions. Below, we set forth our formal rulings on the issues of standing and the admissibility of their contentions.

### I. BACKGROUND

The CAN/NECNP petition that is now before us was filed in response to an October 26, 1995 Commission notice of consideration of issuance of an order and opportunity for hearing regarding the YAEC plan for decommissioning the

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<sup>1</sup>The Commonwealth of Massachusetts, which notified the Commission of its intent to participate in this proceeding as an interested governmental entity pursuant to 10 C.F.R. § 2.715(c), decided not to take part in the prehearing conference. *See* Letter from Leslie Greer, Assistant Attorney Gen., Commonwealth of Massachusetts, to the Licensing Board (Feb. 22, 1996).

Yankee Rowe facility. See 60 Fed. Reg. 55,069 (1995). As is detailed in that notice and prior Commission notices and issuances regarding the plan, see 60 Fed. Reg. 46,317 (1995); CLI-95-14, 42 NRC 130 (1995), the October 26 notice was a direct response to a July 1995 directive from the United States Court of Appeals for the First Circuit requiring that a hearing opportunity be afforded to CAN and other interested persons prior to agency approval of the YAEC decommissioning plan.

As is outlined in the circuit court's opinion, *Citizens Awareness Network, Inc. v. NRC*, 59 F.3d 284, 288-90 (1st Cir. 1995), after a February 1992 declaration of its intent permanently to cease operation of Yankee Rowe, YAEC obtained a possession-only license that revoked its authority to operate the facility. See 57 Fed. Reg. 37,558 (1992). In October 1992, prior to the submission of a facility decommissioning plan or decommissioning environmental report, YAEC proposed that the agency approve an "early component removal project" (CRP). Under the terms of the CRP, the utility would be permitted to dismantle and remove various reactor components that would account for some 90% of the nonfuel, residual radioactivity at the facility. YAEC proposed shipping some of these items to the low-level radioactive waste (LLRW) disposal facility in Barnwell, South Carolina, for permanent disposal and storing others in the facility Spent Fuel Pit. Although CAN disputed the propriety of this request and asked for an adjudicatory hearing, in January 1993 the Commission, through the vehicle of a Staff Requirements Memorandum, adopted a new policy on decommissioning that sanctioned the CRP. YAEC then began to dismantle the facility and make shipments to the Barnwell LLRW facility in accordance with the CRP.

CAN continued to assert that it was entitled to a hearing on the CRP and facility decommissioning and ultimately initiated the circuit court litigation referenced above. Meanwhile, in December 1993 YAEC submitted a decommissioning plan and environmental report concerning Yankee Rowe. See Yankee Atomic Electric Company, Yankee Nuclear Power Station Decommissioning Plan (rev. 0.0 Dec. 1993); Yankee Atomic Electric Company, Decommissioning Environmental Report (Dec. 1993) [hereinafter Environmental Report]. In its plan, YAEC proposed to implement a modified version of the so-called DECON decommissioning option, under which it would seek to complete decommissioning on a more expedited basis than is the case under the other available decommissioning alternative, the longer duration SAFSTOR option.<sup>2</sup> After

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<sup>2</sup> In the final generic environmental impact statement on nuclear facility decommissioning, the Staff outlined four decommissioning alternatives: no action, DECON, SAFSTOR, and ENTOMB. DECON is the alternative in which site radioactive contaminants are removed or decontaminated to a level that permits the property to be released for unrestricted use shortly after operations cease. Under SAFSTOR, a facility is placed and maintained in a condition that allows the facility to be stored safely and subsequently decontaminated to levels that permit

(Continued)



conducting a review of these documents and supplemental materials submitted by YAEC, in February 1995 the Staff issued an order — accompanied by a safety evaluation report and an environmental assessment — that approved the YAEC decommissioning plan. See 60 Fed. Reg. 9870 (1995); see also Safety Evaluation Report by the [NRC] Related to the Request to Authorize Facility Decommissioning, Yankee Nuclear Power Station, Yankee Atomic Electric Company, Docket No. 50-29 (Feb. 14, 1995) [hereinafter SER]; Environmental Assessment by the [NRC] Related to the Request to Authorize Facility Decommissioning, Yankee Nuclear Power Station, Yankee Atomic Electric Company, Docket No. 50-29 (Dec. 14, 1994) [hereinafter EA]. The decommissioning plan subsequently was adopted as two volumes of the facility's Final Safety Analysis Report. See Yankee Atomic Electric Company, 1-2 Final Safety Analysis Report, Yankee Nuclear Power Station, Rowe, Massachusetts (rev. June 1995) [hereinafter FSAR].

With CAN's circuit court litigation victory in July 1995, the Commission instituted a reassessment of CAN's hearing requests and the Staff's approval of the YAEC decommissioning plan. This resulted in the reinstatement of the Commission's prior policy prohibiting "major" decommissioning activities prior to approval of a decommissioning plan and the issuance of the October 26, 1995 notice of opportunity for hearing referenced above. See CLI-95-14, 42 NRC at 136. CAN and NECNP responded to the notice with the November 30, 1995 intervention petition now before the Board.

Rather than referring the petition immediately to a Licensing Board, the Commission decided to consider the petition and any answers thereto. After receiving responses to the petition from YAEC and the Staff and a reply to those responses from Petitioners, the Commission issued its January 16, 1996 memorandum and order, CLI-96-1. In addition to referring the petition to the Board, that issuance provides the Board with guidance concerning CAN's and NECNP's standing to intervene and the admissibility of their Contentions A, C, and D, and directs that this adjudicatory proceeding be expedited.

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release for unrestricted use. ENTOMB is the alternative in which facility radioactive contaminants are encased in a structurally long-lived material, such as concrete, and the facility then is maintained in this state, under surveillance, until radioactivity decays to a level permitting release of the property for unrestricted use. See Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Comm'n, Final Generic Environmental Impact Statement on decommissioning of nuclear facilities, NUREG-0586, at 2-5 to -6 (Aug. 1988).

As is noted in the Staff's environmental assessment, the ENTOMB and "no action" options are not considered viable alternatives for Yankee Rowe. See Environmental Assessment by the [NRC] Related to the Request to Authorize Facility Decommissioning, Yankee Nuclear Power Station, Yankee Atomic Electric Company, Docket No. 50-29, at 4-5 (Dec. 14, 1994) [hereinafter EA]. Instead, as outlined in the YAEC decommissioning plan, the facility would initially be placed in a safe storage condition to allow access to a low-level radioactive waste facility, to be followed by implementation of the DECON alternative. See Yankee Atomic Electric Company, 1 Final Safety Analysis Report, Yankee Nuclear Power Station, Rowe, Massachusetts at 2-3 (rev. June 1995). Although YAEC has labeled this as a modified SAFSTOR option, the Staff refers to it as a modified DECON alternative. Compare *id.* at 3 with EA at 2-3. We use the Staff's designation in this Memorandum and Order.

In connection with our determination regarding Petitioners' standing and contentions, in addition to the Commission's guidance issuance, *see* CLI-96-1, 43 NRC at 5-9, the Board now has before it the following pleadings:<sup>3</sup>

1. [CAN/NECNF] Petition to Intervene and Supplemental Petition to Intervene (Nov. 30, 1995) [hereinafter Intervention Petition].
2. Licensee's Answer to [CAN/NECNF] Petition to Intervene and Supplemental Petition to Intervene (Dec. 15, 1995) [hereinafter YAEC Response].
3. NRC Staff's Response to Petition to Intervene and Supplemental Petition to Intervene Filed by [CAN/NECNF] (Dec. 20, 1995) [hereinafter Staff Response].
4. [CAN/NECNF] Reply to Licensee's and NRC Staff's Responses to Their Petition to Intervene and Supplemental Petition to Intervene (Dec. 24, 1995) [hereinafter CAN/NECNF Reply].
5. Further Reply of [YAEC] to [CAN/NECNF] Reply to Licensee's and NRC Staff's Responses to Their Petition to Intervene and Supplemental Petition to Intervene (Jan. 25, 1996) [hereinafter YAEC Reply].
6. NRC Staff's Reply to [CAN/NECNF] Reply to Licensee's and NRC Staff's Answers to Their Petition to Intervene (Jan. 25, 1996) [hereinafter Staff Reply].

In ruling on Petitioners' intervention petition and contentions, we first address the question of their standing to intervene, and then deal with their contentions *seriatim*.

## II. STANDING

As the Commission noted in CLI-96-1, 43 NRC at 6, to comply with the basic standing requirements a petitioner must demonstrate that (1) it has suffered or will suffer a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute; (2) the injury is fairly traceable to the challenged action; and (3) the injury is likely to be redressed by a favorable decision. Moreover, when, as here, an organization such as CAN or NECNP seeks to intervene on behalf of its members, *see* Intervention Petition at 2, that entity must show that it has an individual member who can fulfill these necessary elements and who has authorized the organization to represent his or her interests. *See* CLI-96-1, 43 NRC at 6.

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<sup>3</sup> Items 1 through 4 were before the Commission when it issued CLI-96-1. In CLI-96-1, the Commission also directed the Board to consider pending YAEC and Staff requests for leave to file a reply to item 4. *See* 43 NRC at 4 n.2. Items 5 and 6 are the filings that were submitted after the Board granted those requests. *See* Board Order (Initial Prehearing Order) (Jan. 22, 1996) at 1.

In this instance, to meet these requirements Petitioners have supplied the affidavits of CAN and NECNP members who reside within ten miles of and recreate along local waterways that receive effluent discharges from Yankee Rowe. See Intervention Petition, attachs. 1-5. Several of those members further assert that they regularly use area roads that may be employed by trucks carrying waste away from the Yankee Rowe facility. See *id.*, attachs. 1-2, 4-5. These organization members also express concern in their affidavits about the impacts of Yankee Rowe decommissioning activities and mishaps upon their health and safety and upon the local environment and they authorize CAN and/or NECNP to represent their interests in this proceeding. See *id.*, attachs. 1-5.

The Staff and, at least in its initial response, the Licensee did not contest these organizations' standing to intervene in this proceeding to raise public health and safety or environmental challenges to the YAEC decommissioning plan. Both YAEC and the Staff did, however, contest Petitioners' standing to pursue several of their contentions that challenge the YAEC decommissioning plan based upon purported health and safety impacts, such as occupational doses, to Yankee Rowe workers. See Staff Response at 6 & n.5; YAEC Response at 2-3.

Taking note of this challenge to the scope of Petitioners' standing, in CLI-96-1 the Commission stated that "once a party demonstrates that it has standing to intervene on its own accord, that party may then raise any contention that, if proved, will afford the party relief from the injury it relies upon for standing." 43 NRC at 6 (citations omitted). And, with regard to this proceeding, the Commission went on to observe:

Assuming *arguendo* that the Licensing Board determines that Petitioners do indeed have standing to intervene in this proceeding, they will then be free to assert any contention, which, if proved, will afford them the relief they seek, i.e., the rejection or modification of the [YNPS] decommissioning plan in a manner that will redress their asserted injuries.

*Id.*

In its reply pleading filed after the Commission issued CLI-96-1, YAEC asserts that, in light of the Commission's guidance in CLI-96-1 regarding decommissioning dose exposures, Petitioners' reliance on public exposure doses that were substantially less than occupational doses should be considered insufficient to give them standing to intervene as to any aspect of their contentions, including facility worker impacts. See YAEC Reply at 4-6. The Staff, on the other hand, suggests that on the basis of the guidance in CLI-96-1, Petitioners have standing to pursue all aspects of their contentions, including those relating to occupational impacts. See Staff Reply at 4.

We conclude CAN and NECNP have established their standing to intervene and seek relief with respect to alleged health and safety or environmental injuries that will be visited upon their members who reside and engage in

various activities in the area near to, but outside of, the Yankee Rowe facility. Given that some, even if minor, public exposures can be anticipated from the decommissioning activity, see Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Final Generic Environmental Impact Statement on decommissioning of nuclear power facilities, NUREG-0586 (Aug. 1988) at 4-7 to -8 [hereinafter *Final Generic EIS*], at 22-24, we do not find ourselves "in a position at this threshold stage to rule out as a matter of certainty the existence of a reasonable possibility" that decommissioning might have an adverse impact to those, such as Petitioners' members, who live or recreate in such close proximity to the facility, or use local waste transportation routes. *Virginia Electric and Power Co.* (North Anna Nuclear Power Station, Units 1 and 2), ALAB-522, 9 NRC 54, 56 (1979). As such, Petitioners have standing to present any contention that seeks modification or rejection of the YAEC decommissioning plan so as to avoid health and safety or environmental injury to the public.<sup>4</sup> And, as the Commission's guidance in CLI-96-1 indicates, 43 NRC at 6, they also can pursue any contention alleging such modification/rejection relief based on circumstances such as purported occupational exposure to Yankee Rowe workers from decommissioning activities.<sup>5</sup>

With Petitioners' standing thus established, we consider the five CAN/NECNP contentions.

### III. CONTENTIONS

Under 10 C.F.R. § 2.714(b)(2)(ii)-(iii), to be admissible a contention must contain a specific statement of an issue of fact or law raised or controverted in a proceeding that is supported by a "basis" of alleged facts or expert opinions, together with references to specific sources and documents that establish those facts or opinions. The basis must be sufficient to show that a genuine dispute exists with the applicant on a material issue of fact or law. Moreover, while the intervenor need not prove its case at the contention stage or present factual

<sup>4</sup> Although Petitioners also have asserted they have standing to litigate worker occupational exposure, see CAN/NECNP Reply at 3-4, based on the record before us, their assertions of public exposure through contact with YAEC workers and possible employment of organization members at the Yankee Rowe facility are too speculative to support such standing.

<sup>5</sup> As the Commission's guidance suggests, if an organization representing a member of the public is able to gain standing in a decommissioning proceeding based on a showing of injury to that individual relating, for example, to the choice of a decommissioning option, the organization would not be barred on standing grounds from litigating a contention that a change in the decommissioning option is appropriate because of the occupational exposure to workers at the facility. Although such an intervenor cannot use purported injury to facility workers as basis for its standing, once its own standing has been established it can use purported injury to others as a basis for obtaining the relief it seeks, i.e., a change in the choice of decommissioning option.

We would add that, viewing the bases for Petitioners' contentions that relate to worker occupational exposures in light of the Commission's guidance, we see no need to rule on Petitioners' alternative request that they be granted discretionary standing relative to those portions of their contentions.

support in affidavit or evidentiary form sufficient to withstand a summary disposition motion, it nonetheless must make a minimal showing that material facts are in dispute such that a further inquiry is appropriate. See *Georgia Institute of Technology* (Georgia Tech Research Reactor), CLI-95-12, 42 NRC 111, 117-18 (1995). And, of course, any contention must fall within the scope of the issues set forth in the notice of opportunity for hearing on the proposed licensing action, see *id.*, which in this instance is "whether an order approving the [YAEC Yankee Rowe] decommissioning plan should be issued," 60 Fed. Reg. at 55,070. We assess Petitioners' contentions under these standards.

#### A. CAN/NECNP Contention A

Petitioners' first contention reads as follows:

**CONTENTION A:** YAEC's proposed decommissioning plan violates 10 C.F.R. § 20.1101 in that it fails to maintain occupational and public radiation doses as low as reasonably achievable.

Intervention Petition at 7 (emphasis in original). Petitioners provide two "bases," with accompanying "subbases," for this contention, which can be summarized as follows:

- (1) YAEC's choice of the DECON decommissioning option does not meet the standard of "as low as reasonably achievable" (ALARA) because it fails to account for the significant dose savings to the public and facility workers that accrue under the SAFSTOR option through onsite storage for thirty years, particularly taking into account:
  - (a) delays in the availability of a federal disposal facility for high-level radioactive waste (HLRW) that will postpone release of the site for unrestricted use, thereby negating one of YAEC's expressed bases for choosing DECON with its higher occupational exposures;
  - (b) the higher cost of DECON based on (i) the present value of the cost of decommissioning, (ii) proposed cost savings related to waste volume reduction during SAFSTOR, and (iii) improved decommissioning knowledge and understanding gained from other decommissioning efforts during the extended storage period favor the adoption of SAFSTOR; and
  - (c) the likelihood of significant near-term personnel turnovers that undermine YAEC's assumption that DECON increases the potential for taking advantage of experienced plant personnel.
- (2) Likely unavailability of a United States Department of Energy (DOE)-developed multi-purpose canister for the onsite storage, transportation, and offsite disposal of HLRW and greater than Class C waste means that if YAEC closes its Spent Fuel Pit in 1999 and goes to dry cask storage, it is left with waste transfer options



between onsite storage casks and transportation casks that will raise occupational exposures significantly beyond those outlined in its decommissioning plan.

*See id.* at 9-14; *see also* CAN/NECNP Reply at 9-19. Both YAEC and the Staff oppose the admission of this contention on a variety of grounds. *See* YAEC Response at 6-16; Staff Response at 10-18; *see also* YAEC Reply at 7-8.

In this instance, we need not linger long over the arguments of the parties regarding the admissibility of this contention. In CLI-96-1, while declaring that it was "not prepared at this time to put the Licensee's choice of a decommissioning option forever beyond all challenge," the Commission nonetheless declared that, given Petitioners' reliance on dose reductions from using SAFSTOR rather than YAEC's chosen DECON option that were within the boundaries set forth in comparing the DECON and SAFSTOR options in the agency's FGEIS, there appeared to be no basis for concluding that the alleged dose reductions "can have ALARA significance." 43 NRC at 7, 9. The Commission indicated, however, that its conclusion in this regard was subject to the qualification that there might be "some extraordinary aspect to the case not apparent to us from the pleadings that the Licensing Board may uncover on its own review." *Id.* at 9.

During the prehearing conference, Petitioners detailed what they asserted were three "extraordinary circumstances" relative to Contention A: (1) the Commission's use in CLI-96-1 of a guidance document rather than a regulation to quantify the value of avoided radiation doses in comparing the DECON and SAFSTOR options; (2) Commission misapprehension in CLI-96-1 about the degree to which Petitioners agree with YAEC regarding the estimated costs of decommissioning; and (3) the Commission's conclusions regarding the difference for occupational doses likely to occur from using the DECON and SAFSTOR options. *See* Tr. at 33-36. As the Board noted during the prehearing conference, these are identical to some of the bases Petitioners put forth in support of a pending motion for reconsideration of the Commission guidance provided in CLI-96-1. *See id.* at 36; *see also* [CAN/NECNP] Motion for Reconsideration and Partial Rescission of CLI-96-01, Request for an Order to Show Cause Why the NRC Staff Should Not Be Dismissed from This Proceeding, and Request for Recusal of Commissioners (Jan. 26, 1996) at 9-12, 13-15.

Because these are matters pending with the Commission that contest the validity of a Commission decision, we find them inappropriate for Board consideration. Further, based upon our own review of the parties' pleadings and their oral presentations at the prehearing conference, we have not identified any other "extraordinary aspect" of the case that vitiates the Commission's conclusion about the ALARA significance of the purported SAFSTOR dose

reductions.<sup>6</sup> We thus find that Petitioners have failed to provide support for their Contention A sufficient to establish a disputed material factual or legal issue meriting further inquiry.<sup>7</sup> Accordingly, we dismiss this contention.

## B. CAN/NECNP Contention B

Petitioners' second contention provides:

**CONTENTION B:** The proposed decommissioning plan for [Yankee Rowe] does not adequately describe YAEC's planned decommissioning activities or its controls and limits on procedures and equipment, in violation of 10 C.F.R. § 50.82(b)(1) and (2).

Intervention Petition at 14 (emphasis in original). Petitioners again provide several bases, with subbases, in support of this contention. As bases for this contention, Petitioners assert that the plan is inadequate because it is unreasonable in its assumptions that:

- (1) An LLRW repository will be available in Massachusetts by 2003.
- (2) The spent nuclear fuel now stored in the onsite Spent Fuel Pit will be transferred to onsite dry cask storage by 1999 and then shipped to a DOE HLRW repository by 2018.

See *id.* at 15-16.

With regard to the first assumption, citing purported difficulties in Massachusetts and elsewhere with siting an LLRW repository and a recent gubernatorial proposal to eliminate the Commonwealth's LLRW repository siting board and negotiate contracts for out-of-state disposal, Petitioners maintain that the plan must be revised to accommodate (a) a lengthy delay in in-state site availability, and (b) the possibility of out-of-state shipment to a distant repository

<sup>6</sup> In reviewing this and the other proposed contentions, we think it is important to bear in mind several points regarding commercial nuclear reactor decommissioning. One is that, in contrast to the construction permit and operating licensing actions that brought Yankee Rowe into existence, there is not a "no action" alternative in connection with facility decommissioning. It clearly is Commission policy that all commercial nuclear facilities will be decommissioned. See 10 C.F.R. § 50.82(f) (facility license will be terminated only if facility has been decommissioned in accordance with decommissioning plan or agency order authorizing decommissioning). Moreover, as the Commission made clear in CLI-96-1, 43 NRC at 8, both the DECON or SAFSTOR alternatives generally are acceptable means of decommissioning, at least so long as the alternative chosen can be accomplished within 60 years. See 10 C.F.R. § 50.82(b)(1)(i). Also, because the choice between these alternatives involves a balancing of various factors, the possibility of occupational and public radiation exposures — while an important concern — is not necessarily the controlling element. See CLI-96-1, 43 NRC at 7.

<sup>7</sup> Basis 2 for Contention A expresses a concern about the possible need to transfer spent fuel from the Spent Fuel Pit to dry cask storage and the occupational doses that will result. See Intervention Petition at 13-14. To the extent this basis might be read to present concerns about the application of ALARA outside of the general issue of the choice between the SAFSTOR and DECON decommissioning options, as our discussion with regard to Contention B, Basis 2(b)-(c) indicates, it would not provide for a litigable contention. See *infra* pp. 79-80.

site. *See id.* at 15-16; *see also* CAN/NECNP Reply at 19-22. Concerning the second assumption, Petitioners describe a series of alleged problems that require plan supplementation:

(a) The plan's cost estimates and its HLRW storage duration assumption that a repository will be available and all Yankee Rowe waste will be interred by 2018 should be revised in light of (i) DOE repository loading figures indicating that in 2033 half the Yankee Rowe fuel assemblies would still be onsite awaiting transfer for disposal; and (ii) 1993 General Accounting Office (GAO) congressional testimony regarding a 1993 GAO report that estimates a DOE HLRW repository opening will not occur until between 2015 and 2023. *See* Intervention Petition at 16-17; *see also* CAN/NECNP Reply at 22-24.

(b) The plan does not provide sufficient information regarding the nature of YAEC's proposed onsite spent fuel dry storage facility, including a failure to commit to a particular type of dry storage cask. *See* Intervention Petition at 17; *see also* CAN/NECNP Reply at 24-26.

(c) The plan does not address how, given the apparent lack of a multi-purpose canister, spent fuel and greater than Class C waste can be safely transferred from dry cask storage to transportation casks after the Spent Fuel Pit is closed after 1999. *See* Intervention Petition at 17-18; *see also* CAN/NECNP Reply at 24-26.

(d) Because existing facility Technical Specification 3.2 limits cask usage over the Spent Fuel Pit to a shipping cask weighing less than thirty-five tons and the multi-purpose canister or other possible storage/transportation casks will weigh in excess of seventy-five tons, the plan is incomplete until it incorporates a discussion of a technical specification change that includes an analysis of potential cask drop accidents using the heavier casks. *See* Intervention Petition at 18-19; *see also* CAN/NECNP Reply at 26.

Once again, both YAEC and the Staff challenge all the Petitioners' grounds for seeking admission of this contention. *See* YAEC Response at 16-19; Staff Response at 18-21; YAEC Reply at 8-9.

Section 50.82(b)(1), (2) of 10 C.F.R. states in pertinent part that a proposed decommissioning plan must include "[t]he choice of the alternative for decommissioning with a description of the activities involved," and "[a] description of controls and limits on procedures and equipment to protect occupational and public health and safety." This broad language, it would seem, leaves considerable discretion to the Licensee and the agency in terms of what a plan must contain.

Indeed, various commenters during the rulemaking that culminated in the adoption of this language expressed a concern about its lack of specific requirements, particularly in connection with the discretion afforded licensees to develop a plan. *See* 53 Fed. Reg. 24,018, 24,024-25 (1988). In adopting a final rule, the Commission declared that the existing requirements of NRC regulations that would be applicable to decommissioning (including the provisions of 10 C.F.R. Parts 20, 50, 61, 70, 71, and 73), in conjunction with a regulatory guide and a standard review plan (SRP) being developed to provide guidance on

information that would have to be submitted in a reactor decommissioning plan, should provide sufficient criteria to determine what is an acceptable plan. *See id.* at 24,025. Unfortunately, in the intervening 8 years neither the regulatory guide nor an SRP has been developed for a reactor decommissioning plan, *see* Tr. at 83-84, 97, which leaves us without specific guidance when it comes to determining exactly what a decommissioning plan must contain to fulfill the requirements of section 50.82(b)(1)-(2).

Nonetheless, in providing guidance to the Board on Petitioners' Contention C, which concerns the adequacy of the cost estimate provisions in the decommissioning plan pursuant to 10 C.F.R. § 50.82(b)(4), the Commission has furnished a set of interpretative principles that appear equally applicable to the plan's other provisions. In its January 16 memorandum and order, the Commission indicated that a contention challenging the "reasonableness" of a plan's cost estimate provisions would not be sufficient because the potential relief would be no more than "the formalistic redraft of the plan." Rather, the Commission declared, the petitioner must show not only that one or more of a plan's cost estimate provisions are in error, "but that there is not reasonable assurance that the amount will be paid." CLI-96-1, 43 NRC at 9.

What the Commission appears to be saying with this guidance is that, notwithstanding a licensee's general obligation to provide the agency with complete and accurate information, an allegation that some portion of a decommissioning plan's cost estimate provisions must say something different or something more is not, in and of itself, an acceptable basis for a contention challenging the adequacy of the estimate. Rather, in the context of an adjudicatory challenge to a decommissioning plan's cost estimate provisions, an allegation about the plan's completeness or accuracy is worthy of further inquiry only if it is coupled with a showing that the alleged deficiency has some independent health and safety significance (e.g., that the additional amount attributable to inaccurate cost estimates cannot be covered by the Licensee's funding proposal).

Nothing in the Commission's memorandum and order indicates that the application of this guidance is limited to the cost estimate provisions of a decommissioning plan. In the context of our inquiry under Contention B, this guidance translates into a requirement that a contention must not only allege some content deficiency in a decommissioning plan, but that this purported deficiency has some health and safety significance for the decommissioning process as a whole.<sup>8</sup> Put another way, to craft a litigable contention faulting a decommissioning plan for a deficiency in content, besides providing a basis

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<sup>8</sup> Citing the need for public understanding and accountability relative to a decommissioning plan, Petitioners have asserted that an allegation that a plan is not accurate in some material respect is sufficient to provide an admissible contention. *See* Tr. at 75. Although such an argument appears equally applicable to the question of the accuracy of cost estimates, the Commission's Contention C guidance suggests that this is not a controlling consideration relative to the litigability of a contention alleging plan inaccuracies.



sufficient to question the plan's accuracy, there must also be a showing that a genuine disputed material issue of fact or law exists about whether the purported shortcoming has some tangible negative impact on the overall ability of the decommissioning process outlined in the plan to protect the public health and safety. Cf. *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-942, 32 NRC 395, 414 (1990) (contention that purported emergency planning exercise deficiency precludes a finding of reasonable assurance that protective measures can and will be taken must show that exercise revealed more than minor or isolated flaw in plan and that plan flaw can only be remedied through significant plan revision).

We turn then to considering each of the bases put forth by Petitioners under this standard. Regarding the Basis 1 allegation that YAEC's reliance on the availability of an LLRW repository in Massachusetts makes the plan deficient, we need not address at this juncture the question of the "reasonableness" of the Licensee's reliance on earlier statements by the Commonwealth about an LLRW repository because it is apparent that the necessary showing regarding the health and safety impact of such reliance has not been made by Petitioners.

Besides raising the issue of costs, which we address in our discussion of Petitioners' other cost concerns under Contention C, Petitioners contend that YAEC's reliance on an in-state LLRW repository has a negative impact on the plan because it does not account for waste and facility maintenance over a potentially lengthy period of delay. Yet, as the Staff points out, the discussion of safe storage in the plan does not bear this out. See Staff Response at 19. There is nothing in the plan's description of the maintenance program during the safe storage period to indicate that it is necessarily limited to short-term storage or that it could not or would not be adequate for long-term storage if such a need arose.<sup>9</sup> See 1 FSAR at 9, 200-2 to -3. Petitioners point to no substantive deficiencies in the plan that would preclude long-term storage, but rely instead on the assertion that such a deficiency must exist because under the Licensee's proposed schedule such storage is not needed. See CAN/NECNP Reply at 22. Consistent with the Commission's guidance, however, we are not willing to accept the proposition that a scheduling inaccuracy or revision necessarily results in a litigable deficiency in planning, at least without some showing as to how the purported schedule change would have a substantive impact on public health and safety.

The same is true of Petitioners' assertion that the YAEC plan is deficient because it does not contain a discussion of the possibility of out-of-state shipment to a distant repository. Both the YAEC plan and its environmental report include a discussion about requirements governing, and offsite radiological

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<sup>9</sup> In fact, as Licensee pointed out at the prehearing conference, YAEC has characterized its plan as utilizing the SAFSTOR option. See Tr. at 92; see also *supra* note 2.



impacts resulting from, the shipment of radioactive materials. See 1 FSAR at 402-1; 2 *id.* at 514-6 to -7; Environmental Report at 5-4 to -5. In fact, the YAEC environmental report declares that "[s]ince the total shipment-miles for transportation of radioactive waste from decommissioning [Yankee Rowe] is significantly less than those assumed by the [F]GEIS, the risk to the health and safety of the public from decommissioning [Yankee Rowe] is bounded and determined to be acceptable by the [F]GEIS." Environmental Report at 5-5; see also *id.* at 4-15 to -16. Nothing Petitioners have provided suggests that the shipment of low-level waste to distant states, such as Texas or California, encompasses health and safety considerations beyond those covered in the decommissioning plan or the environmental report.<sup>10</sup> As such, this transportation concern affords no basis for admitting Contention B.

Turning next to their noncost bases regarding onsite and offsite HLRW storage,<sup>11</sup> we note that some question exists regarding Petitioners' ability to raise health and safety and environmental matters relating to spent fuel. Statements in the regulations and the FGEIS indicate that decommissioning is not to be deemed to include the operational activities of "the removal and disposal of spent fuel." See 10 C.F.R. § 50.75(c) n.1; FGEIS at 2-5. Assuming, however, that their present bases are not excluded by reason of this apparent limitation, with the seeming admissions of both the Licensee and the Staff that any estimate of when an HLRW repository will be open has a high degree of uncertainty, see YAEC Response at 17, Staff Response at 19, the 1993 GAO testimony and the 1992 DOE capacity report arguably do present at least a genuine factual dispute about when all Yankee Rowe spent fuel will be interred in a repository. See Intervention Petition at 16-17 & nn.35-36. In its response, the Staff makes the point that in reviewing the plan's provisions relating to storage of spent fuel, it concluded that, consistent with the provisions of 10 C.F.R. § 51.23(a),<sup>12</sup> the acceptable period during which the Licensee could use any combination of wet or dry spent fuel safe storage methods runs through 2030. See Staff Response

<sup>10</sup> Although Petitioners also make reference to the need for a discussion of the "logistics" of distant transport, see CAN/NECNP Reply at 22, they fail to show how this would require any discussion different from what the plan now has with regard to offsite transfer of radioactive materials, which clearly is contemplated. See, e.g., 1 FSAR at 402-1.

<sup>11</sup> To the degree they rely on HLRW cost factors to support this contention, we deal with those claims in the context of Contention C.

<sup>12</sup> Section 51.23(a) of 10 C.F.R. provides:

The 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. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.

at 19 (citing SER at 22-23). While this bounding date is well in excess of the Licensee's estimate of 2018, it is not in excess of Petitioners' DOE/GAO-based estimate of 2033 or beyond. This suggests that there is a litigable contention, at least as to this basis.

The strictures of 10 C.F.R. § 2.714(d)(2)(ii) lead us to conclude this is not the case, however. Under that section, we must refuse to admit a contention that, even if proven, "would be of no consequence in the proceeding because it would not entitle petitioner to relief." In this instance, relief for Petitioners would come in the form of a further plan analysis of whether the spent fuel can be stored safely for a period beyond 2030. Yet, even assuming Petitioners are correct that the schedule for the HLRW repository would result in spent fuel remaining on site at Yankee Rowe beyond 2030, the Commission has already made a generic judgment that seemingly bounds their concern.

Section 51.23(a) of 10 C.F.R. states the Commission's conclusion that spent fuel can be stored on site "safely and without significant environmental impacts for at least 30 years beyond the [reactor's] licensed life for operation." In the statement of considerations accompanying the final rule that adopted this provision, the Commission also provided its judgment that "[o]n the basis of experience with wet and dry spent fuel storage and related rulemaking and licensing actions, the Commission concludes that spent fuel can be safely stored without significant environmental impact for at least 100 years, if necessary." 55 Fed. Reg. 38,474, 38,513 (1990). In the case of Yankee Rowe, this would encompass HLRW onsite storage through a date far beyond any that Petitioners have suggested should be considered. Given this Commission view, the supposed difference in HLRW storage dates relied on by Petitioners, even if proven, would not afford them any meaningful relief.<sup>13</sup>

Concerning subbases (b)-(d) of Basis 2 that challenge the manner and means of onsite storage of spent fuel, even assuming such assertions are not precluded by the previously-described limitation that decommissioning is not to be considered to include the removal and disposal of spent fuel, Petitioners once again have failed to make any showing regarding the health and safety significance of the supposed deficiencies in the plan. The plan indicates that onsite dry cask storage is an option that is being explored and may well be used, but that uncertainty about matters such as availability of a multi-purpose canister has caused YAEC to defer making any decisions about how this will be implemented. See 1 FSAR at 6-7. Petitioners' concerns about YAEC's lack of specificity in describing its choice of onsite storage options if the spent

<sup>13</sup> In their reply pleading, Petitioners assert that the Staff's (and presumably the Commission's) analysis regarding the safety of long-term onsite storage is not sufficient in this case because the YAEC decommissioning plan would need to contain much more specific information about such storage plans. See CAN/NECN Reply at 24 n.59. Without a more detailed explanation regarding the health and safety impacts of not including this information, we find this assertion insufficient to establish a disputed material issue of fact concerning the content of the plan.

Fuel Pit is closed and how YAEC will accomplish the transfer of HLRW if dry cask storage is used — including the possibility of using a dry transfer method and the need for a change in existing facility Technical Specification 3.2 limits on cask usage over the Spent Fuel Pit — all are based on the premise that the lack of any detailed description establishes a substantive deficiency in the decommissioning plan that can be litigated in this proceeding.

We are unable to agree. The agency's decommissioning plan regulations provide that if there is a delay in a major dismantlement activity because of a decision to place a facility in storage, planning for such activities may be less detailed, with the caveat that updated detailed plans must be submitted later and approved prior to the start of the activities. See 10 C.F.R. § 50.82(d). A similar principle appears relevant in this instance.

As the Staff points out, YAEC's use of dry cask storage is subject to the requirements of 10 C.F.R. Part 72. See Staff Response at 15. This would include the provisions of 10 C.F.R. § 72.40 as they relate to the licensing of an independent spent fuel storage installation (ISFSI). See Tr. at 108-10. Thus, when and if YAEC chooses to close its Spent Fuel Pit and move to dry cask storage, that choice must undergo an agency approval process that provides for, among other things, consideration of whether there is compliance with ALARA objectives and a public hearing opportunity regarding the ISFSI application. See 10 C.F.R. §§ 72.44(d), 72.46; see also *Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station)*, LBP-93-23, 38 NRC 200, 246 (1993) (given pendency of separate proceeding regarding ISFSI, contention asserting decommissioning plan environmental assessment inadequate because of lack of analysis for ISFSI emissions not admissible).

In addition, an agency approval process exists relative to YAEC's choice of a storage cask. Prior to being utilized, a cask design undergoes certification through the agency approval process in 10 C.F.R. Part 72, Subpart L. Then, under the general licensing provisions governing the use of certified casks, prior to employing the cask YAEC would be required to make a written determination that, among other things, operational restrictions have been established to meet ALARA objectives and YAEC's activities do not involve any unreviewed safety issues or technical specification changes that would require a license amendment (and be subject to an adjudicatory hearing). See 10 C.F.R. §§ 72.104, 72.212(b)(2), (4).

In connection with Petitioners' concern about the lack of a multi-purpose canister and YAEC's possible use of a dry method to transfer spent fuel and other HLRW from a nontransportation cask to a transportation cask, its own description of this possibility portends the need for an agency approval process. The dry transfer method highlighted by Petitioners is still in the development stage by DOE and another utility and apparently has not been reviewed by the NRC. See Intervention Petition at 18; CAN/NECNP Reply at 25 n.63; Tr.

at 112-13. As such, at least as presented by Petitioners, this transfer method constitutes an activity involving an unreviewed safety issue that, whether as part of the ISFSI licensing process or otherwise, would need agency approval (and be subject to an adjudicatory hearing). See 10 C.F.R. §§ 72.40(a)(5), (13), 72.46, 72.48(c), 72.212(b)(4).

And as with the use of dry cask storage, an agency approval process also is involved prior to the transfer of spent fuel from the Spent Fuel Pit into the storage casks. As all the parties agree, with the limitations it imposes, Technical Specification 3.2 must be changed before this can be accomplished. See Intervention Petition at 18, YAEC Response at 19, Staff Response at 20. This, in turn, would require a license amendment that, under existing agency regulations, would be subject to challenge in an adjudicatory hearing by any intervenor with standing and litigable contentions. See 10 C.F.R. § 50.59(c).

Thus, with regard to YAEC's choice to utilize dry cask storage, YAEC's choice of a cask type, YAEC's choice to employ a dry transfer method, and YAEC's choice to change Technical Specification 3.2, there is another agency approval process that must be followed prior to undertaking any of these activities. Given these later approval mechanisms, all of which may provide for an adjudicatory hearing, we are unable to conclude that the alleged lack of detailed discussion in the decommissioning plan regarding these possible activities establishes there is a disputed material issue of fact or law regarding a significant health and safety deficiency in some aspect of the decommissioning process such that litigation on Contention B should go forward.<sup>14</sup> This, combined with Petitioners' failure to make the requisite showing regarding any of the other bases put forth in support of Contention B, requires that we dismiss this contention as well.

### C. CAN/NECNP Contention C

The third CAN/NECNP contention is stated as follows:

**CONTENTION C:** The proposed decommissioning plan for [Yankee Rowe] does not comply with the decommissioning funding requirements of 10 C.F.R. § 50.82(b)(4) or (c).

Intervention Petition at 19 (emphasis in original). Further, Petitioners provide four separate bases (and some subbases) for this contention, which can be synopsized as follows:

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<sup>14</sup> We note that in putting forth these bases for Contention B, Petitioners have not suggested there is any technical or legal reason YAEC will be unable to obtain the additional agency approvals required.



- (1) The YAEC decommissioning cost estimate for Yankee Rowe required by 10 C.F.R. § 50.82(b)(4) is inadequate because:
  - (a) it is based on the unreasonable assumption that an LLRW site will be available in Massachusetts by the year 2003;
  - (b) if its assumption that DOE-supplied multi-purpose canisters will be available for dry storage is incorrect, which is likely, YAEC will have to purchase casks that will add as much as \$8.5 million to decommissioning costs;
  - (c) it is based on the unreasonable assumption that an HLRW repository will be available in time to complete spent fuel shipments by 2018;
  - (d) the 12.3 percent contingency factor used to cover unforeseen future developments is grossly inadequate; and
  - (e) it does not include the costs of lead, mercury, and asbestos abatement.
- (2) The decommissioning cost estimate does not provide a comparison of the cost estimate and the amount of funds presently available for decommissioning.
- (3) The decommissioning plan fails to provide sufficient information to demonstrate that any of the three funding sources mentioned — contributions made under the provisions of the existing Power Contracts between YAEC and its former power customers, contribution investments earnings, and tax loss carrybacks — will assure the availability of the funds needed to meet all decommissioning expenses.
- (4) The decommissioning plan does not provide an adequate description of the trust account created to hold the Power Contract revenues.

See Intervention Petition at 20-27; see also CAN/NECNP Reply at 26-32.<sup>15</sup> YAEC and the Staff once more contest the adequacy of each of these bases. See YAEC Response at 19-23; Staff Response at 21-22; YAEC Reply at 9-11; Staff Reply at 5-7.

As we noted in connection with Contention B, *see supra* p. 75, the Commission has provided us with certain guidelines regarding the admissibility of this contention. In its January 16 memorandum and order, the Commission stated that, in and of itself, a contention challenging the "reasonableness" of a decommissioning plan's cost estimate provisions was not litigable "because the potential relief would be the formalistic redraft of the plan with a new estimate." CLI-96-1, 43 NRC at 9. Rather, the Commission declared, the Petitioners must show not only that one or more of a plan's cost estimate provisions are in error, "but that there is not reasonable assurance that the amount will be paid." *Id.* Thus, under these Commission guidelines, Petitioners must establish that some

<sup>15</sup> In their intervention request, Petitioners give the second, third, fourth, and fifth subbases of Basis 1 numerical designations and the second, third, and fourth bases for Contention C alphabetical designations. See Intervention Petition at 21-22, 25, 27. To be consistent with the designations given to the bases for Petitioners' other contentions, we refer to the second, third, and fourth bases by number and to the subbases of Basis 1 by letter.



reasonable ground exists for concluding that YAEC will not have sufficient funds to cover decommissioning costs for the Yankee Rowe facility.

Acting on this Commission guidance, we look first to Petitioners' third basis contending that the plan does not adequately assure the availability of funds to cover all decommissioning costs. Although Petitioners challenge some aspect of each of the three sources for funding outlined in the decommissioning plan, relative to the Commission's guidance one funding source appears to be of preeminent concern. This is an agreement — referred to as the Power Contracts — between YAEC and the ten New England utilities to which YAEC formerly supplied the electrical output of Yankee Rowe.

As described in the plan, the Power Contracts obligate these former power purchasers to pay the full costs of decommissioning Yankee Rowe, including spent fuel. *See* 2 FSAR at 501-2. As the plan makes clear, based on this agreement the Federal Energy Regulatory Commission (FERC) has approved a series of orders that permit YAEC through the year 2000 to make collections from its former power purchasers to fund decommissioning work. *See id.* Moreover, both YAEC and the Staff assert that under the terms of this agreement those purchasers have a continuing obligation to pay the cost of Yankee Rowe decommissioning in full.<sup>16</sup> *See* YAEC Response at 22; Staff Response at 21-22.

Petitioners' challenge to the adequacy of the Power Contracts as a decommissioning funding source rests on the ground that "the mere existence of a contract does not conclusively establish the ability and willingness of the [former power purchasers] to pay all costs, regardless of how high or reasonable." CAN/NECNP Reply at 31 (footnote omitted). As evidence there are material factual disputes in this regard, they point to several factors, including (1) statements made by YAEC in a 1988 FERC ratemaking case suggesting that some of the power purchasers have financial problems that will prevent them from meeting their contractual obligations; (2) the possibility that if YAEC were to mismanage its other two fund sources — investments from contributions and tax loss carrybacks — power purchasers could challenge their obligation to pay

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<sup>16</sup> As set forth in YAEC's December 15, 1995 pleading, the critical language of the Power Contracts is as follows:

*This contract shall continue in full force and effect until the expiration of any license as issued by the Nuclear Regulatory Commission, or any successor agency, with respect to the plant under applicable provisions of the Atomic Energy Act of 1954, as amended from time to time, provided, however, that if the stockholders of Yankee [i.e., the ten power purchasers], by vote of not less than 75% in interest of the outstanding stock having general voting rights, shall at any time vote to discontinue the operation of the plant or to liquidate Yankee and wind up its affairs, the obligations of the parties hereunder shall thereupon terminate. Notwithstanding the foregoing, the applicable provisions of this contract shall continue in effect after any termination hereof to the extent necessary (i) to complete the billings and payments required hereunder with respect to the Customer's obligation to pay its power percentage of the full cost of decommissioning the plant in accordance herewith.*

YAEC Response at 22 n.67 (emphasis supplied in pleading). YAEC also declares that this provision, which apparently was not quoted or otherwise set forth in the YAEC decommissioning plan, was included with a publicly available July 25, 1990 letter that was submitted to the Staff as part of the decommissioning review process. *See id.*; Tr. at 121.

the full cost of decommissioning; and (3) the possibility that power purchasers may contest their obligation to pay the full cost of decommissioning because they did not have the full benefit of revenues from Yankee Rowe operation due to its premature shutdown. *See id.* at 31-32 & n.81.

None of these purported deficiencies is sufficient to create a material factual dispute concerning the ability of the power purchasers to honor their existing contractual obligation to fund Yankee Rowe decommissioning fully.<sup>17</sup> In connection with the 1988 FERC ratemaking case, Petitioners note that YAEC sought to turn aside an FERC staff attempt to lower its rate of return by establishing, among other things, that various risks associated with the operation of those utilities that were its power purchasers merited YAEC's then existing higher return rate. The case, however, is not sufficient to support Petitioners' assertion given that the FERC categorically rejected YAEC's risk arguments relative to the purchasers, a determination the Commission subsequently reiterated.<sup>18</sup> *See Yankee Atomic Electric Co.*, 40 FERC ¶61,372, 1987 WL 118208, at \*19-\*20 (FERC 1987); *Yankee Atomic Electric Co.*, 67 FERC ¶61,318, 1994 WL 270437, at \*17-\*18 (FERC 1994). Petitioners' assertions that the power purchasers might default on their obligations in the event of YAEC fund mismanagement or because they did not receive the benefit of full lifetime operation of Yankee Rowe also are insufficient because those claims lack any factual support relating to the power purchasers. Petitioners have failed to place these allegations outside the realm of mere speculation so as to warrant further inquiry.

Petitioners thus have not established there is any disputed material factual or legal issue regarding the ability of the power purchasers to meet their existing contractual obligation to pay all the costs of Yankee Rowe decommissioning.

<sup>17</sup> YAEC and the Staff maintain that because these specific assertions were made in Petitioners' reply filing rather than in their intervention petition, these claims can be considered only if they meet the additional admission requirements in 10 C.F.R. § 2.714(a) governing late-filed contentions. *See* YAEC Reply at 10; Staff Reply at 5-6. We conclude Petitioners' assertions fall within the realm of a response to the YAEC and Staff challenges to their contentions, which should be permitted prior to dismissing a contention, *see Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-565, 10 NRC 521, 525 (1979), rather than constituting a formal amendment of their supplemental petition to intervene that, under the terms of the Commission's notice of opportunity for hearing, *see* 60 Fed. Reg. at 55,078, would require an assessment of the late-filed factors in section 2.714(a).

<sup>18</sup> In response to a Board inquiry during the prehearing conference about specific evidence of a power purchaser's inability to meet its obligation that was discussed in the 1987 FERC decision, Petitioners identified only the risk of the bankruptcy of power purchaser Public Service Company of New Hampshire (PSNH), owner of the Seabrook Station nuclear facility. *See Tr.* at 141. We find this is not a sufficient basis for Petitioners' contention given the fact that, as was noted in the FERC's 1994 decision on YAEC funding, such status had no effect on PSNH's continued ability to make payments to YAEC. *See Yankee Atomic Electric Co.*, 67 FERC ¶61,318, 1994 WL 270437, at \*17 (FERC 1994).

During the prehearing conference, the Board also asked a number of questions regarding the FERC ratemaking process relative to the power purchasers' obligations under the Power Contracts. Although Petitioners suggested during the conference that some of the responses created material factual disputes regarding the sufficiency of the Power Contracts as a funding source, *see Tr.* at 142, 145-46, we do not consider anything we heard on this subject during the prehearing conference sufficient to create a material factual dispute relative to the sufficiency of the Power Contracts as a decommissioning funding source.

Because Petitioners have failed to mount an adequately-supported challenge to this full-funding obligation — the centerpiece of YAEC's reasonable assurance showing — we conclude that, consistent with the Commission's guidance in CLI-96-1, we need give no further consideration to Petitioners' additional assertions about particular deficiencies in the YAEC cost estimates or its description of various aspects of its financial plan.<sup>19</sup> Even if proven, each ultimately would result in nothing more than redrafting the plan,<sup>20</sup> which the Commission indicated in its guidance in CLI-96-1 is insufficient to provide a basis for a litigable contention. We therefore dismiss Contention C too.

#### D. CAN/NECNP Contention D

Petitioners' fourth contention is framed as follows:

**CONTENTION D: YAEC's decommissioning plan fails to include measures necessary to ensure that workers and the public are adequately protected from health damage caused by the excessive radiation doses they received during the unlawful Component Removal Program.**

Intervention Petition at 27 (emphasis in original). As the basis for this contention, Petitioners assert that as a result of the agency's unlawful approval of the CRP, Yankee Rowe workers and the public were exposed to radiation doses above reasonably achievable levels. This, in turn, raises the probability of cancer and other adverse health and genetic effects. To protect the public health, YAEC should be directed to commission an independent effluent pathway cancer incidence and mortality study and establish a fund for treating cancers caused by CRP exposures. *See id.* at 27-29. Again, both Licensee and the Staff assert that this contention should be dismissed. *See* YAEC Response at 23-24; Staff Response at 22-23.

In CLI-96-1, the Commission provided explicit guidance regarding this contention. It declared:

<sup>19</sup> Although Petitioners make the point that showing there is a gross discrepancy in a decommissioning cost estimate might be sufficient to provide a litigable issue even in the face of a full decommissioning funding obligation such as that in the Power Contracts. *see* Tr. at 128, nothing presented by Petitioners suggests that there is such a discrepancy in the YAEC cost estimate. *See* CLI-96-1, 43 NRC at 8-9.

<sup>20</sup> In this regard, although Petitioners' Bases 2 and 4 concern the lack of an adequate plan description of the trust arrangement for the segregation of decommissioning funds rather than cost estimates per se, we do not believe they fare any better under the Commission's Contention C guidance. During the prehearing conference, YAEC declared that a copy of the agreement attached to a supposedly publicly available document, a July 25, 1990 letter submitted to the agency pursuant to 10 C.F.R. § 50.75(b), would address these matters. *See* Tr. at 121-23. Petitioners asserted, however, that they should not be required to compensate for the Licensee's failure to include or provide an adequate citation to or description of this document in the plan and thus these bases provided sufficient grounds for admission of its financial assurance contention. *See* Tr. at 128-30. While we do not gainsay Petitioners' frustration in this regard, the Commission's guidance would seem to preclude this type of basis as well.

To the extent that the contention alleges that YAEC has violated NRC regulations, those allegations are more properly the subject of separate enforcement actions. The focus of this proceeding is prospective only — the future decommissioning of the remainder of the facility under the proposed decommissioning plan.

43 NRC at 9. The Commission thus appears to believe that if Petitioners desire to pursue the relief they seek in this contention, a petition under 10 C.F.R. § 2.206 requesting Staff enforcement action is the appropriate mechanism. We heard nothing during oral argument at the prehearing conference that would call into question the Commission's guidance in this regard. Accordingly, we dismiss this contention also.

#### **E. CAN/NECP Contention E**

Petitioners' last contention states as follows:

**CONTENTION E: The NRC staff violated the National Environmental Policy Act by failing to prepare a supplemental Environmental Impact Statement for the decommissioning of [Yankee Rowe].**

Intervention Petition at 30 (emphasis in original). As regulatory support for this contention relating to agency compliance with the National Environmental Policy Act of 1969 (NEPA), Petitioners rely on 10 C.F.R. § 51.92(a)(2), noting that under its terms the Staff must prepare a supplemental environmental impact statement (SEIS) for a proposed action whenever there are "significant new circumstances or information relevant to environmental concerns and bearing on the proposed actions or its impacts."

As the basis for Contention E, Petitioners assert that the Staff erred in its conclusion that, because the impacts associated with decommissioning are bounded by the conditions evaluated in the FGEIS or other regulatory standards, an environmental assessment rather than a site-specific environmental impact statement is necessary in connection with the Yankee Rowe decommissioning plan. According to Petitioners, a number of environmental impacts specific to Yankee Rowe that were not considered in the FGEIS for nuclear facility decommissioning mandate the preparation of an SEIS, including those impacts regarding:

- (1) Potentially inadequate decommissioning financing for prematurely shutdown reactors like Yankee Rowe.
- (2) Projected occupational dose estimates that exceed the doses anticipated for Yankee Rowe decommissioning in the FGEIS.
- (3) The potential for an unanalyzed cask drop accident resulting from the use of dry cask storage for spent fuel.

- (4) An unanalyzed transportation accident involving a radioactive release from resins as a result of a long duration, high temperature fire.
- (5) Delay in the disposal of HLRW, particularly as it affects the balance between beneficial and adverse environmental impacts relative to the DECON and SAFSTOR decommissioning alternatives as analyzed in the FGEIS.

See Intervention Petition at 30-35; see also CAN/NECNP Reply at 35-42. As before, the Staff and YAEC oppose this contention in toto. See YAEC Response at 24-28; Staff Response at 23-26; YAEC Reply at 11-12.

Looking to Petitioners' first basis, we note that the FGEIS does include a discussion of the problem of inadequate funding for any nuclear facility and its potential impacts on the decommissioning process. See FGEIS at 2-14 to -20. The FGEIS concludes that there must be reasonable assurance that adequate funds will be available for performing decommissioning. See *id.* at 2-20. In putting forth Basis 1 for Contention E, Petitioners' challenge to this conclusion appears based on their assertions, as set forth in Contention C, that such reasonable assurance does not exist for Yankee Rowe decommissioning. As we noted previously with regard to Contention C, however, Petitioners have not provided a sufficient basis for a litigable contention regarding the adequacy of funding for Yankee Rowe decommissioning. With this failure, Petitioners also have not provided any material factual or legal dispute regarding the need for additional discussion on this topic in an SEIS for Yankee Rowe.

The first noncost basis for this contention, Basis 2, is Petitioners' assertion that an SEIS is required because occupational dose estimates exceed values anticipated in the FGEIS. Petitioners have characterized this basis generally as a concern about improper Staff "scaling" of the occupational impacts of decommissioning the 185 megawatt electric (MWe) Yankee Rowe facility in comparison to a 1000 MWe pressurized water reactor used as the referenced facility in the FGEIS. In fact, it rests on two subcomponents:

- (a) a purported discrepancy in YAEC's occupational dose estimates regarding the CRP that would result in a total dose estimate substantially in excess of the 755 person-rem figure used in the plan; and
- (b) a failure by the staff to evaluate properly the radiological impacts of decommissioning given that the smaller size of the Yankee Rowe facility should, but does not, result in comparatively lower doses than are being projected by YAEC.

See Intervention Petition at 32-33.

Regarding the claimed occupational dose discrepancy, as the Staff points out, see Staff Response at 25, the total occupational exposure estimate for the CRP of 350 to 400 person-rem first given by YAEC in June 1993 was superseded by a revised figure of 160 person-rem in the decommissioning plan that accounted for



CRP implementation experience. See 2 FSAR at 507-4, -15. Having presented nothing that would suggest that the more recent figure is incorrect (as opposed to simply different from the earlier figure), Petitioners have failed to establish a disputed material issue of fact that warrants further litigation.

On the question of scaling, Petitioners maintain that the FGEIS occupational exposure figure of 1215 person-rem used is not an appropriate bounding figure for the Yankee Rowe facility, given its smaller size. They suggest that a figure of 513 person-rem should be used for Yankee Rowe, as is set forth in the August 1979 addendum to the June 1978 report that was used in the FGEIS to derive the 1215 person-rem occupational exposure figure for the 1000 MWe reference plant. See R.I. Smith and L.M. Polentz, Technology, Safety and Costs of Decommissioning a Reference Pressurized Water Reactor Power Station, NUREG/CR-0130, at 2-4 (addendum Aug. 1979) (Table 2.1 2). And, using this 1979 figure in comparison to the YAEC estimate of 755 person-rem, see EA at 22, Petitioners maintain that there is a difference in occupational exposure of at least 200 person-rem, the radiological impact of which has not been accounted for in the FGEIS or the Staff's EA. See Intervention Petition at 32-33.

For their part, both the Staff and the Licensee assert that such a comparison is irrelevant, because the FGEIS determination relating to occupational exposures was footed not on the relative size of the estimated exposures from different capacity plants but on a comparison of the estimated occupational exposures from decommissioning with those exposures arising from facility operation. See Staff Response at 24, YAEC Response at 25. And, according to YAEC, the comparison cited favorably in the FGEIS in connection with the 1000 MWe reference reactor is on a par with that for the Yankee Rowe DECON option.<sup>21</sup> See YAEC Response at 25. Petitioners respond by declaring that the FGEIS does not incorporate such an assessment relative to the occupational doses arising from the DECON alternative, but makes a judgment only that both the DECON or SAFSTOR options are acceptable. See CAN/NECNP Reply at 37.

It is apparent that the FGEIS assessment of the impacts of occupational exposure does rest on a comparison of the impacts of exposure during the decommissioning process with those arising during facility operation and makes a judgment that such impacts are acceptable.<sup>22</sup> That this should be so is not

<sup>21</sup> For the 1000 MWe reference facility, the FGEIS describes an annual average DECON decommissioning dose of 279 person-rem per year versus a figure of between 550 and 1101 person-rem per year for pressurized water reactor operation, maintenance, and refueling. See FGEIS at 4-7. YAEC maintains that this clearly is on a par with those for the Yankee Rowe DECON option, which yields a 75.5 person-rem per year average occupational exposure versus a 197 person-rem per year average for facility operation over Yankee Rowe's nearly 30-year life. See YAEC Response at 25.

<sup>22</sup> See FGEIS at 4-15 ("It is noted for perspective that in the cases of DECON and SAFSTOR, the environmental effects of greatest concern (i.e., radiation dose and radioactivity released to the environment) are substantially less than the same effects resulting from reactor operation and maintenance"; see also EA at 5 ("Although the DECON alternative for YNPS provides a larger occupational dose than SAFSTOR, it is well below the routine annual dose from plant operations").

surprising because, as we recognized earlier, *see supra* notes 2, 6, the "no action" alternative simply is not available relative to decommissioning. Petitioners have not challenged the substance of the FGEIS conclusion in this regard,<sup>23</sup> nor have they sought to demonstrate that for Yankee Rowe a comparison of the DECON alternative with reactor operation yields a different result relative to occupational doses. This basis for Contention E thus fails to provide a disputed material issue of fact or law that warrants further litigation.<sup>24</sup>

Regarding Petitioners' concern, as expressed in its third basis, about the need for an SEIS discussion of a spent fuel cask drop accident, as we noted regarding Contention B, this is a matter that is most directly relevant to a future regulatory action, i.e., a change in Technical Specification 3.2. As we noted above, that license limitation currently precludes the movement over the Spent Fuel Pit of any cask weighing more than 35 tons, which effectively prohibits the movement of larger multi-purpose canisters over the pool, and any agency action authorizing such a change would have to be accompanied by an appropriate safety and environmental analysis, which would be subject to challenge in an adjudicatory hearing. *See supra* p. 80. Particularly given Petitioners' failure to make any showing that providing such an analysis now rather than at the time agency action regarding a technical specification change actually is sought has any relevant impact on the approval of YAEC's decommissioning plan — the agency action currently at issue — we are unable to conclude that there has been any sufficient showing of a violation of the agency's NEPA responsibilities.<sup>25</sup>

In considering Petitioners' fourth basis concerning a transportation-related resin fire accident unanalyzed in the FGEIS, we again find that, as set forth in their pleadings, this concern fails to provide a disputed material issue of fact or law concerning whether, in accordance with 10 C.F.R. § 51.92(a)(2), there are "significant new circumstances or information relevant to environmental concerns and bearing on the proposed actions or its impacts." Our determination in this regard is based upon the contents of the document referenced by

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<sup>23</sup> Petitioners do suggest that the use of an "annual" dose is a scientifically invalid method of assessing environmental impacts. *See* CAN/NECNP Reply at 36 n.98. In the context of this decommissioning plan, however, whether viewed in terms of annual dose or total dose, the occupational exposures that will arise during decommissioning apparently are far less than those that would accrue during facility operation.

<sup>24</sup> In their reply, Petitioners also contend that the difference between the 513 person-rem figure in the 1979 study and the 755 person-rem figure used by YAEC is a gap that merits further environmental assessment. *See* CAN/NECNP Reply at 37. Although couched in NEPA terms, we perceive this as really nothing more than another aspect of their ALARA-based challenge to the YAEC choice of decommissioning alternatives, which we (acting in accordance with the Commission's guidance) have already rejected.

<sup>25</sup> During the prehearing conference, Petitioners declared that because of the interrelationship between this technical specification change and the choice of whether to go to dry cask storage as part of the decommissioning process, a failure to consider the environmental impacts of the technical specification change would constitute improper "segmentation" of the NEPA process. *See* Tr. at 188-92. It is not apparent, however, how postponing the NEPA analysis for this change forecloses any option, including the "no action" option, with respect to the choice of whether to use dry cask storage.

Petitioners as support for this basis, which we conclude on its face does not set forth an accident scenario that requires NEPA consideration.

The "rule of reason" governing NEPA interpretation provides that an agency need not consider "remote and speculative risks." *Limerick Ecology Action v. NRC*, 869 F.2d 719, 739 (3d Cir. 1989). In Basis 4, Petitioners assert that the FGEIS evaluation of transportation impacts did not include any analysis of a 1988 Sandia National Laboratories (SNL) report on the consequences and risks of highway accidents involving transported low specific activity (LSA) waste.<sup>26</sup> That report describes a hypothetical "worst case" traffic accident scenario involving a transportation cask containing reactor spent ion-exchange resins,<sup>27</sup> which generally have the highest specific activity levels of all LSA materials, in amounts that are at the regulatory maximum for shipping. As outlined in the report, a hypothetical traffic accident results in the transportation cask coming open. Once the cask is open, all the resins spill, and then are ignited by a fuel spill fire. See Robert M. Ostmeier et al., *The Potential Consequences and Risks of Highway Accidents Involving Gamma-Emitting Low Specific Activity (LSA) Waste*, SAND87-2808, at 1, 15-16, 49 (Aug. 1988) [hereinafter SNL Accident Report].<sup>28</sup>

Although seemingly based upon cask breach conditions that fall within the boundaries established by the agency's transportation regulations for testing transportation casks,<sup>29</sup> the report nonetheless declares that "an accident resulting in a spill of resin is considered to have a very low probability." SNL Accident Report at 17. Further, the report states that the critical circumstance of the presence of a fire to ignite the resins — the condition that causes a radioactive

<sup>26</sup> The SNL report apparently has never been included in an agency NEPA analysis, whether as part of a rulemaking or otherwise. See Tr. at 209-10.

<sup>27</sup> YAEAC has asserted that a NEPA analysis of resin transportation relative to facility decommissioning is unnecessary because the use and decontamination of resins and their subsequent transportation falls within the scope of its existing authorization under 10 C.F.R. Part 50. See YAEAC Response at 26, Tr. at 197-98. It is not apparent, however, that the removal and disposal of resins is not a decommissioning matter. See 1 FSAR at 207-1.

<sup>28</sup> The SNL report was prepared at the request of the United States Department of Transportation to assess whether, for a postulated "worst case" accident, the existing regulatory requirements governing the shipment of LSA materials, i.e., resins, are sufficient to assure that public health and safety is protected. See SNL Accident Report at 1. The report reaches the conclusion that no regulatory change is needed. See *id.* at 51.

<sup>29</sup> The Staff asserts that Petitioners' Basis 4 should be rejected in accordance with 10 C.F.R. § 2.758 because it constitutes an improper attack upon 10 C.F.R. § 71.73(c) as it establishes the test perimeters for transportation casks. See Staff Response at 25-26. Under section 71.73(c), the hypothetical accident conditions against which a transportation cask must be tested include a 9 meter (30 foot) free drop onto a flat, essentially unyielding horizontal surface in a position for which maximum damage is expected and a thermal exposure of not less than 800° centigrade (1475° Fahrenheit) for not less than 30 minutes.

While the SNL report was intended to determine whether the regulatory limits governing LSA shipments are appropriate, it apparently does so using an accident scenario that seemingly falls within the regulatory provisions governing transportation cask testing. The hypothetical "worst case" accident in the SNL report includes a center of gravity over corner drop from 9 meters and an accompanying sustained duration fuel fire with temperatures of as much as 1000° centigrade. See SNL Accident Report at 15-16. Section 2.758 thus does not appear to bar Petitioners' basis for Contention E.

release — would appear in “[o]nly a small fraction of the transport accidents that lead to a spill of spent ion-exchange resin.” *Id.* at 18.

A document put forth by an intervenor as the basis for a contention is subject to scrutiny both for what it does and does not show.<sup>30</sup> Because only accident scenarios that are not “remote and speculative” need be the subject of a NEPA analysis, if the information in any intervenor-proffered document regarding such a scenario fails to indicate that this threshold has been crossed, then a contention challenging NEPA compliance based on a failure to analyze that scenario need not be admitted. See *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 44-47 (1989), *remanded for additional findings*, CLI-90-4, 31 NRC 333 (1990). The description of the hypothetical accident in the SNL report, which incorporates a chain of events including a low probability cask breach accident followed by a fire of similarly remote probability, does not exceed this level.<sup>31</sup> Accordingly, as presented by Petitioners, the SNL report does not provide an admissible basis for Contention C.

Finally, the requirement of 10 C.F.R. § 51.92(a)(2) that there be “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts” once again is not fulfilled by Petitioners’ Basis 5 assertion that an SEIS is needed to discuss the impact of the purported delay in the availability of an HLRW repository upon the balance between the DECON and SAFSTOR alternatives. The FGEIS already contains an analysis of the environmental impacts of the SAFSTOR option in the event it became necessary to incorporate a longer period of onsite HLRW storage.

<sup>30</sup> During the prehearing conference, Petitioners objected to various statements by the Licensee regarding the contents of the SNL report, asserting that they did not have their expert present to counter those assertions. See Tr. at 200-02. Having used the SNL report as the central support for this basis for Contention F, see Intervention Petition at 33-34; CAN/NECNP Reply at 38-39, the contents of that report are what are before the Board and, as such, are subject to Board scrutiny, both as to those portions of the report that support their assertions and those portions that do not.

The only other material cited by Petitioners in support of this basis is a 1977 final environmental statement (FES) regarding a rulemaking relating to the transportation of radioactive material. Petitioners declare the FES shows that the agency previously has analyzed similar low probability accidents (albeit without any explanation as to why that is so). See CAN/NECNP Reply at 39 n.108. Although that FES does analyze a “worst case” motor vehicle transportation accident, see 1 Office of Standards Development, U.S. Nuclear Regulatory Comm’n, Final Environmental Statement on the Transportation of Radioactive Material by Air and Other Modes, NUREG-0170, at 5-38 to -49 (Dec. 1977), we are unable to conclude that it supports the need for such an analysis in this instance given that the parameters as to both accident probability and consequences used in the FES appear markedly different from those involved in the SNL study.

<sup>31</sup> The unusual nature of the hypothetical accident scenario is further highlighted by other aspects of the report’s description. For instance, the report states that because of the “water of hydration” contained in the resins, to achieve a maximum hydrated resin mass loss involving the maximum radioactive release “would require [an] extraordinary coincidence of fuel and resin in a specific geometric arrangement.” SNL Accident Report at 17. In addition, the report notes in connection with resin radionuclide aerosolization — the process through which resin radionuclides would be carried away with the combustion gases from the fire, thereby resulting potentially in the most exposure to the public — that because the partition between the resin combustion residue and the combustion gases is unknown, it is assumed that 100% of the radionuclides within the burned resin are aerosolized. See *id.*

While the FGEIS notes that "[t]he active phase of maintaining the spent fuel in the pool is not considered to be part of the regulatory requirements for decommissioning," it nonetheless goes on to observe:

Consideration was given to the situation where, at the end of the reactor operation life, it is not possible to dispose of waste offsite for a limited period of time, but not exceeding 100 years. Such a constraint needs to be accounted for in the decommissioning alternatives. Based on an analysis by [Battelle Pacific Northwest Laboratories] of the technology, safety and cost considerations on selection of decommissioning alternatives, it is concluded that SAFSTOR is an acceptably viable alternative. While DECON and conversion of the spent fuel pool to an independent spent fuel storage pool is certainly a possibility for the case where all other radioactive wastes can be removed offsite, there does not appear to be any significant safety difference between this alternative and SAFSTOR and the choice should be a Licensee decision.

FGEIS at 4-20 (citation and footnote omitted). With this environmental analysis already in the FGEIS, nothing presented by Petitioners establishes there is a material factual or legal dispute about whether an SEIS containing additional information is necessary to conform with the requirements of section 51.92(a)(2).

It also seems apparent that, while couched in terms of NEPA compliance arising from a need to rebalance an altered alternative, what Petitioners really posit with this basis is another challenge to the Licensee's choice of the DECON rather than the SAFSTOR decommissioning option. In line with the Commission's guidance in CLI-96-1, 43 NRC at 8, absent a showing grounded in dose estimates or other information that is outside the analytical boundaries of the FGEIS, such an objection does not produce a litigable issue under NEPA either.

There thus being no litigable basis for Contention E, we dismiss it as well.

#### IV. CONCLUSION

Based on Petitioners' showing that (1) several of their members live and recreate close to the Yankee Rowe facility and utilize local waste shipment routes; (2) there is some reasonable basis for believing that their proximity to the facility and use of local waste routes can result in an injury to their health and safety or environmental interests as those interests are protected under the Atomic Energy Act and NEPA; and (3) those affected members have authorized representation of their interests, Petitioners CAN and NECNP have established their standing to intervene in this proceeding. As to each of their five contentions, however, utilizing the guidance provided by the Commission in CLI-96-1, we find that Petitioners have failed to establish either that "a genuine dispute exists with [YAEC] on a material issue of law or fact" or that the contention, if proved, would entitle them to any relief. See 10 C.F.R. § 2.714(b)(2)(iii), (d)(2)(i)-



(ii). Consequently, we must deny their intervention request and terminate this proceeding.

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For the foregoing reasons, it is, this first day of March 1996, ORDERED that:

1. The November 30, 1996 petition to intervene and supplemental petition to intervene of Petitioners CAN and NECNP is *denied* and this proceeding is *dismissed*.

2. In accordance with the provisions of 10 C.F.R. § 2.714a(a), as it rules upon an intervention petition, this Memorandum and order may be appealed to the Commission within 10 days after it is served.

THE ATOMIC SAFETY  
AND LICENSING BOARD

G. Paul Bollwerk, III, Chairman  
ADMINISTRATIVE JUDGE

Jerry R. Kline  
ADMINISTRATIVE JUDGE

Thomas S. Elleman  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
March 1, 1996

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman  
Dr. George C. Anderson  
Dr. A. Dixon Callihan

In the Matter of

Docket No. 030-31765-CivP  
(ASLBP No. 95-708-01-CivP)  
(EA 94-006)  
(Byproduct Materials  
License No. 37-28540-01)

ONCOLOGY SERVICES  
CORPORATION  
(Harrisburg, Pennsylvania)

March 28, 1996

MEMORANDUM AND ORDER

(Approving Settlement Agreement and Dismissing Proceeding)

On April 24, 1995, the NRC Staff issued an order imposing a civil penalty in the amount of \$280,000 on Oncology Services Corporation (OSC) for alleged regulatory violations relating to activities under Byproduct Materials License No. 37-28540-01, 60 Fed. Reg. 21,560 (1995). That license authorized OSC to possess and use certain byproduct materials under specified conditions at six facilities in Pennsylvania.<sup>1</sup> The violations at issue were identified during a December 3-18, 1992 NRC inspection in connection with a November 1992

<sup>1</sup> License No. 37-28540-01 was due to expire on August 31, 1995. On December 13, 1993, OSC requested that license be terminated and replaced with individual licenses issued to the facilities named as locations of use on that license. On August 24, 1994, License No. 37-28540-01 was terminated and the agency subsequently issued separate licenses for the six facilities. See 60 Fed. Reg. at 21,560.

radiation misadministration incident at OSC's Indiana (Pennsylvania) Regional Cancer Center (IRCC), and December 8, 1995 inspections of OSC facilities in Exton and Lehigh, Pennsylvania. This proceeding was convened in response to OSC's May 18, 1995 request for a hearing regarding the civil penalty order.

By filing dated February 12, 1996, OSC and the Staff ask that we approve a settlement agreement they have provided and dismiss this proceeding. Their request is part of a motion filed jointly by the parties in this proceeding and the pending *Radiation Oncology Center at Marlton* (ROCM) adjudication, Docket No. 030-032493-CivP. In the *Radiation Oncology Center* proceeding, Licensee Radiation Oncology Center at Marlton (ROCM) challenges an April 24, 1995 Staff order imposing a civil penalty in the amount of \$80,000 for alleged regulatory violations regarding radiation safety activities identified during a February 1993 inspection of ROCM's Marlton, New Jersey facility. See 60 Fed. Reg. 21,570 (1995). Although the alleged regulatory violations involved in the two proceedings are different, OSC and ROCM share common ownership and the Staff's inspection and enforcement activities that resulted in the separate April 1995 civil penalty orders against OSC and ROCM had their genesis in the November 1992 IRCC misadministration incident.

Based on a review of the proposed joint settlement agreement by all Board members in both cases, on February 20, 1996, the Board Chairmen for the two proceedings held a telephone conference with all the parties to discuss the terms of paragraph 12 of the joint agreement regarding changes to the agreement as well as various minor typographical revisions. As a result of that conference, on February 27, 1996, the parties submitted a revised joint settlement agreement.

Under the terms of the revised settlement agreement, which is applicable to both the *Oncology Services Corporation* and *Radiation Oncology Center* proceedings, OSC and ROCM agree to pay a single civil penalty totaling \$140,000. The agreement also sets forth a schedule for paying this penalty in twelve equal monthly installments, with interest and administrative charges. In consideration of payment of the civil penalty, the Staff agrees not to take any further enforcement action against either OSC or ROCM based on any of the facts or violations related to various specified investigations and inspections that provided the basis for the Staff's April 1995 civil penalty orders.

Pursuant to section 81 and subsections (b) and (c) of section 161 of the Atomic Energy Act of 1954, 42 U.S.C. §§ 2111, 2201(b), 2201(c), and 10 C.F.R. § 2.203, we have reviewed the parties' revised joint settlement accord to determine whether approval of the revised agreement and termination of this proceeding is in the public interest. Based on that review, and according due weight to the position of the Staff, we have concluded that both actions are consonant with the public interest. Accordingly, we grant the parties'

joint motion to approve the settlement agreement, as revised, and dismiss this proceeding.<sup>2</sup>

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For the foregoing reasons, it is, this twenty-eighth day of March 1996, ORDERED that:

1. The February 12, 1996 joint motion of the parties is *granted* and we *approve* their February 27, 1996 "Joint Settlement Agreement," which is attached to and incorporated by reference in this Memorandum and Order.
2. This proceeding is *dismissed*.

THE ATOMIC SAFETY AND  
LICENSING BOARD

G. Paul Bollwerk, III, Chairman  
ADMINISTRATIVE JUDGE

George C. Anderson  
ADMINISTRATIVE JUDGE

A. Dixon Callihan  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
March 28, 1996

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<sup>2</sup> A memorandum and order approving the joint settlement agreement and terminating the proceeding was entered this date in the *Radiation Oncology Center* case. See *Radiation Oncology Center at Marlton* (Marlton, New Jersey), LBP-96-4, 43 NRC 101 (1996).

## ATTACHMENT 1

### UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

In the Matter of

Docket No. 030-31765-CivP  
(ASLBP No. 95-708-01-CivP)  
(EA 94-006)  
(Byproduct Material  
License No. 37-28540-01)

ONCOLOGY SERVICES CORPORATION

In the Matter of

Docket No. 030-32493-CivP  
(ASLBP No. 95-709-02-CivP)  
(EA 93-072)  
(Byproduct Material  
License No. 29-28685-01)

RADIATION ONCOLOGY CENTER AT  
MARLTON

## JOINT SETTLEMENT AGREEMENT

On May 31, 1994, the staff of the Nuclear Regulatory Commission (Staff) issued a Notice of Violation and Proposed Imposition of Civil Penalties (OSC-NOV) to Oncology Services Corporation (OSC). Also on May 31, 1994, the Staff issued to the Radiation Oncology Center at Marlton (ROCM) a Notice of Violation and Proposed Imposition of Civil Penalty (ROCM-NOV). Both OSC and ROCM share common ownership. On August 31, 1994, both OSC and ROCM filed responses to the respective NOVs, admitting some of the violations and denying others. "Response of Oncology Services Corporation to Notice of Violation and Proposed Imposition of Civil Penalties and Answer to a Notice of Violation," "Response of Radiation Oncology Center at Marlton to Notice of Violation and Proposed Imposition of Civil Penalty and Answer to a Notice of Violation," August 31, 1994. Both OSC and ROCM supplemented their responses on October 4, 1994, and on December 1, 1994, ROCM provided additional documentation to the NRC relative to the alleged violations.

After consideration of OSC's and ROCM's responses, the Staff, on April 24, 1995, issued an "Order Imposing Civil Monetary Penalties — \$280,000"



(OSC Order) to OSC and "An Order Imposing a Civil Monetary Penalty — \$80,000" (ROCM Order) to ROCM. *Oncology Services Corp., Harrisburg, PA; Order Imposing Civil Monetary Penalties*, 60 Fed. Reg. 21,560 (May 2, 1995); *Radiation Oncology Center at Marlton, Marlton, New Jersey; Order Imposing a Civil Monetary Penalty*, 60 Fed. Reg. 21,570 (May 2, 1995).

Both ROCM and OSC requested hearings on May 18, 1995. On May 30, 1995, separate Atomic Safety and Licensing Boards were designated. *Oncology Services Corporation, Harrisburg, Pennsylvania; Establishment of Atomic Safety and Licensing Board*, 60 Fed. Reg. 29,901 (June 6, 1995); *Radiation Oncology Center at Marlton, Marlton, New Jersey; Establishment of Atomic Safety and Licensing Board*, 60 Fed. Reg. 29,901 (June 6, 1995).

The Staff, OSC, and ROCM, agree that it is in their respective interests and in the public interest to settle these enforcement actions and agree to the following terms and conditions:

1. OSC and ROCM withdraw their respective requests for hearings.

2. OSC and ROCM agree to pay a single civil penalty in the amount of \$140,000.00 in twelve (12) equal monthly installments in accordance with paragraph 6 of this Settlement Agreement. In the event that payment is not received by the fifteenth of the month, in accordance with paragraph 6, the Staff will provide written notice of such fact via facsimile transmission to the attention of Marcy L. Colkitt, General Counsel, at (412) 463-3569, with a conforming copy sent via express mail to the Offices of Marcy L. Colkitt, 176 Timbersprings Lane, Indiana, Pennsylvania 15701 and Iles Cooper, Williamson, Friedberg & Jones, One Norwegian Plaza, Pottsville, Pennsylvania 17901. A printed facsimile transmission report from an NRC facsimile machine is proof of the provision of such notice. In the event of a change of facsimile number, OSC and ROCM agree to promptly inform the Staff in writing of any such change and provide the new facsimile number. Any notice sent via facsimile prior to the Staff's receipt of such notification of a change of facsimile number will be deemed to be in compliance with the notice requirements of this paragraph.

3. If any installment remains unpaid for a period of thirty (30) days or more, provided the Staff has given the requisite notice to OSC and ROCM in accordance with the procedures described in paragraph 2, the Staff may, in its discretion, consider this Settlement Agreement as materially breached. In the event of a material breach of this Settlement Agreement, the full amount of the civil penalties imposed on OSC, \$280,000.00 (plus interest and administrative charges, less any payments already made hereunder), will become due. In this event, OSC agrees to waive any right to contest or seek review of the imposition of the civil penalties before the NRC or in any court. Also, in the event of a material breach of this Settlement Agreement, the full amount of the civil penalty imposed on ROCM, \$80,000.00 (plus interest and administrative charges, less any payments already made hereunder), will become due. In this event, ROCM

further agrees to waive any right to contest or seek review of the imposition of the civil penalty before the NRC or in any court.

4. In consideration of the payment of a civil penalty as set forth in paragraph 2 of this Settlement Agreement and in light of the fact that OSC no longer holds License No. 37-28540-01 and the corrective actions taken at the facilities formerly named on License No. 37-28540-01, the Staff agrees not to take any further enforcement action against OSC and all former and present shareholders, directors, officers, and agents (all of whom are referred to by, and included in the definition of, the term "OSC" as used throughout this Agreement) based on the facts or violations cited in the NOV-OSC, any matter within the scope of the Incident Investigation Team's (IIT) investigation, as documented in the IIT report, NUREG-1480, and any matter within the scope of the Office of Investigations' (OI) investigation, as documented in Investigation Report No. 1-92-060R, dated May 25, 1994, including any document within the scope of the subpoenas issued by OI in connection with its investigation.

5. In addition, in consideration of the payment of a civil penalty as set forth in paragraph 2 of this Settlement Agreement and in light of the corrective actions taken by ROCM, the Staff agrees not to take any further enforcement action against ROCM and all former and present shareholders, directors, officers, and agents (all of whom are referred to by, and included in the definition of, the term "ROCM" as used throughout this Agreement) based upon the facts or violations cited in the NOV-ROCM, any matter within the scope of the inspection conducted from February 2-March 11, 1993, documented in Inspection Report No. 030-32493/93-001, and any matter within the scope of OI's investigation, as documented in Investigation Report No. 1-93-030, dated September 3, 1993.

6. OSC and ROCM agree to make payments in twelve (12) equal monthly installments. The first payment is to be received thirty days after this Settlement Agreement has become final agency action (unless such day falls on a Saturday, Sunday or federal holiday, in which case payment is to be received by the next business day), plus interest on the unpaid principal balance accruing at the rate of 5 percent per year, as well as an administrative charge of \$10.00 per month. Subsequent payments shall be received by the fifteenth day of each month thereafter. Payments shall be made payable to the United States Treasury and received at the address below continuing until the principal sum and all interest and other charges assessed under the provisions of this Settlement Agreement have been fully paid. Payments will be mailed to the following address:

U.S. Nuclear Regulatory Commission  
Office of Enforcement  
ATTN: James Lieberman  
Mail Stop - O7H5  
Washington, D.C. 20555

The following is a schedule of monthly installments:

Payment Number	Payment Date	Total Payment	Interest Amount	Admin. Amount	Principal Amount	Remaining Balance
Beginning balance						140,000.00
1		12,000.00	583.33	10.00	11,406.67	128,593.33
2		12,000.00	535.81	10.00	11,454.19	117,139.14
3		12,000.00	488.08	10.00	11,501.92	105,637.22
4		12,000.00	440.16	10.00	11,549.84	94,087.37
5		12,000.00	392.03	10.00	11,597.97	82,489.40
6		12,000.00	343.71	10.00	11,646.29	70,843.11
7		12,000.00	295.18	10.00	11,694.82	59,148.29
8		12,000.00	246.45	10.00	11,743.55	47,404.74
9		12,000.00	197.52	10.00	11,792.48	35,612.26
10		12,000.00	148.38	10.00	11,841.62	23,770.65
11		12,000.00	99.04	10.00	11,890.96	11,879.69
12		11,939.19	49.50	10.00	11,879.69	0.00
TOTAL		143,939.19	3,819.19	120.00	140,000.00	

7. In the event of a material breach of this Settlement Agreement, OSC and ROCM agree to pay all reasonable collection costs, court costs, and attorney's fees incurred by the Nuclear Regulatory Commission and/or the United States for any appropriate collection actions taken by the Nuclear Regulatory Commission and/or the United States. However, in no event will these costs exceed 5% (\$18,000) of the total civil penalties imposed by the Staff's April 24, 1995 Orders.

8. Failure or failures by the Staff to exercise any right in this Settlement Agreement with respect to a material breach shall not be construed as a waiver of its right to exercise the same or any other right at any time thereafter.

9. With the exception of challenging the receipt of the requisite notice described in paragraph 2, in the event of a material breach of this Settlement Agreement, both OSC and ROCM do hereby authorize and empower a United States Attorney, any of his or her assistants, or any attorney for or on behalf of the NRC or the United States to enter and confess judgment against OSC and ROCM for the imposed civil penalties in the amount of \$280,000 against OSC and \$80,000 against ROCM, with interest as described in paragraph 6, less payments actually made (such payments will be apportioned equally between OSC and ROCM), in any court of record, Federal or State; to waive the issuance and service of process upon both OSC and ROCM in any suit on the obligation; to waive any venue requirement in such suit; to release all errors which may intervene in entering upon such judgment or in issuing any execution thereon;

and to consent to immediate execution on said judgment. Both OSC and ROCM do hereby ratify and confirm all that said attorney may do by virtue hereof.

10. The Staff, OSC, and ROCM agree that this Settlement Agreement shall not constitute and shall not be construed to constitute any admission or admissions in any regard by either OSC or ROCM of any matters set forth by the NRC in either the NOV-OSC or NOV-ROCM.

11. The Staff, OSC, and ROCM also agree that the matters upon which the NOV's were based have not been resolved as a result of this Settlement Agreement. This Settlement Agreement shall not be relied upon by any person or other entity as proof or evidence of any of the matters set forth in the NOV's.

12. For good cause shown, the Staff may, in writing, extend the time to complete any action set forth in any provision of this Settlement Agreement.

13. The parties agree and understand that this Settlement Agreement is only binding on the NRC, OSC, and ROCM, and only relates to NRC's authority to take civil enforcement action. This Settlement Agreement shall be binding upon the legal representatives, successors and assigns of each of the parties hereto.

14. The Staff, OSC, and ROCM shall jointly move the Atomic Safety and Licensing Boards designated in the above-captioned proceedings for orders approving this Settlement Agreement and terminating the proceedings.

In Witness Whereof, the parties have caused this Settlement Agreement to be executed by their authorized representatives.

FOR ONCOLOGY SERVICES CORPORATION  
AND RADIATION ONCOLOGY CENTER  
AT MARLTON

FOR THE NRC STAFF

Marcy L. Colkitt  
Secretary and General Counsel  
for Oncology Services Corporation  
and Secretary and General Counsel  
for Radiation Oncology Center at Marlton

Marian L. Zobler  
Counsel for NRC Staff

Richard G. Bachmann  
Counsel for NRC Staff

Dated at Rockville, Maryland,  
this 20th day of February 1996.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Charles Bechhoefer, Chairman  
Dr. James C. Lamb III  
Lester S. Rubenstein

In the Matter of

Docket No. 30-32493-CivP  
(ASLBP No. 95-709-02-CivP)  
(EA 93-072)  
(Byproduct Materials  
License No. 29-28685-01)

RADIATION ONCOLOGY CENTER  
AT MARLTON (ROCM)  
(Marlton, New Jersey)

March 28, 1996

The Licensing Board approves a joint settlement agreement governing both this civil penalty proceeding and a related proceeding and terminates this proceeding. (Simultaneously, the Licensing Board in the other civil penalty proceeding approved the joint agreement with respect to that proceeding. See LBP-96-3, 43 NRC 93 (1996).

**MEMORANDUM AND ORDER**

(Approving Settlement Agreement and Terminating Proceeding)

On April 24, 1995, the NRC Staff issued an Order Imposing Civil Penalty to Radiation Oncology Center at Marlton (ROCM or Licensee). The Order sought a civil monetary penalty of \$80,000 for a violation consisting of a failure to ensure that radiation safety activities were performed in accordance with



approved procedures and regulatory requirements in the daily operation of the Licensee's byproduct materials program.

Concurrently, on April 24, 1995, the NRC Staff also issued an Order imposing a \$250,000 civil penalty on Oncology Service Corporation (OSC). The Orders in the ROCM and OSC proceedings, respectively, are related in that, although based on different violations, the facilities have common ownership and each violation for both facilities stems from inspections conducted as a result of a November 1992 misadministration incident at OSC's Indiana, Pennsylvania Regional Cancer Center.

ROCM and OSC filed respective hearing requests in the two proceedings. This Board granted ROCM's hearing request and issued a Notice of Hearing on June 7, 1995 (60 Fed. Reg. 31,332 (June 14, 1995)). Following our approval of issues for litigation in a Prehearing Conference Order dated December 20, 1995, LBP-95-25, 42 NRC 237, the parties in both the proceedings on February 12, 1996, submitted a joint motion for approval of a settlement agreement.

Following a telephone conference on February 20, 1996, between the chairmen of both Licensing Boards and parties' representatives, the parties on February 27 submitted a revised joint settlement agreement reflecting matters discussed during that conference (particularly ¶ 12, concerning changes to the agreement). The revised agreement, as the earlier version, called for a payment of \$140,000 to NRC, together with a schedule for payments. The Staff agreed not to take any further enforcement action against either ROCM or OSC, based on any facts or violations derived from the various inspections and investigations that provided the basis for the Staff's April 24, 1995 civil penalty orders.

Any settlement agreement between ROCM and the Staff is subject to approval by this Board. 10 C.F.R. § 2.203. In doing so, we must accord due weight to the position of the Staff. In the agreement, the Staff states that it is in the public interest (as well as its own) to settle the two enforcement actions, based on the terms set forth. We see no reason to disagree.

Based on sections 81 and 161(b) and (c) of the Atomic Energy Act of 1954, as amended, 42 U.S.C. §§ 2111, 2201(b), and 2201(c), and 10 C.F.R. § 2.203, we have reviewed the revised joint settlement agreement and agree that its approval, and termination of this proceeding, is in the public interest.

Accordingly, it is, this 28th day of March 1996, ORDERED:

1. The February 12, 1996 joint motion of the parties is *granted* and the revised February 27, 1996 "Joint Settlement Agreement" (attached to and incorporated by reference herein) is hereby *approved*.

2. This proceeding is *terminated*.\*

THE ATOMIC SAFETY AND  
LICENSING BOARD

Charles Bechhoefer, Chairman  
ADMINISTRATIVE JUDGE

Lester S. Rubenstein  
ADMINISTRATIVE JUDGE

James C. Lamb III  
ADMINISTRATIVE JUDGE

Rockville, Maryland,  
March 28, 1996

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\*See LBP-96-3, 43 NRC 93 (1996), for similar order terminating OSC proceeding.

## ATTACHMENT 1

### UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

In the Matter of

Docket No. 030-31765-CivP  
(ASLBP No. 95-708-01-CivP)  
(EA 94-006)  
(Byproduct Material  
License No. 37-28540-01)

ONCOLOGY SERVICES CORPORATION

In the Matter of

Docket No. 030-32493-CivP  
(ASLBP No. 95-709-02-CivP)  
(EA 93-072)  
(Byproduct Material  
License No. 29-28685-01)

RADIATION ONCOLOGY CENTER AT  
MARLTON

## JOINT SETTLEMENT AGREEMENT

On May 31, 1994, the staff of the Nuclear Regulatory Commission (Staff) issued a Notice of Violation and Proposed Imposition of Civil Penalties (OSC-NOV) to Oncology Services Corporation (OSC). Also on May 31, 1994, the Staff issued to the Radiation Oncology Center at Marlton (ROCM) a Notice of Violation and Proposed Imposition of Civil Penalty (ROCM-NOV). Both OSC and ROCM share common ownership. On August 31, 1994, both OSC and ROCM filed responses to the respective NOV's, admitting some of the violations and denying others. "Response of Oncology Services Corporation to Notice of Violation and Proposed Imposition of Civil Penalties and Answer to a Notice of Violation," "Response of Radiation Oncology Center at Marlton to Notice of Violation and Proposed Imposition of Civil Penalty and Answer to a Notice of Violation," August 31, 1994. Both OSC and ROCM supplemented their responses on October 4, 1994, and on December 1, 1994, ROCM provided additional documentation to the NRC relative to the alleged violations.

After consideration of OSC's and ROCM's responses, the Staff, on April 24, 1995, issued an "Order Imposing Civil Monetary Penalties — \$280,000"

(OSC Order) to OSC and "An Order Imposing a Civil Monetary Penalty — \$80,000" (ROCM Order) to ROCM. *Oncology Services Corp., Harrisburg, PA; Order Imposing Civil Monetary Penalties*, 60 Fed. Reg. 21,560 (May 2, 1995); *Radiation Oncology Center at Marlton, Marlton, New Jersey; Order Imposing a Civil Monetary Penalty*, 60 Fed. Reg. 21,570 (May 2, 1995).

Both ROCM and OSC requested hearings on May 18, 1995. On May 30, 1995, separate Atomic Safety and Licensing Boards were designated. *Oncology Services Corporation, Harrisburg, Pennsylvania; Establishment of Atomic Safety and Licensing Board*, 60 Fed. Reg. 29,901 (June 6, 1995); *Radiation Oncology Center at Marlton, Marlton, New Jersey; Establishment of Atomic Safety and Licensing Board*, 60 Fed. Reg. 29,901 (June 6, 1995).

The Staff, OSC, and ROCM, agree that it is in their respective interests and in the public interest to settle these enforcement actions and agree to the following terms and conditions:

1. OSC and ROCM withdraw their respective requests for hearings.
2. OSC and ROCM agree to pay a single civil penalty in the amount of \$140,000.00 in twelve (12) equal monthly installments in accordance with paragraph 6 of this Settlement Agreement. In the event that payment is not received by the fifteenth of the month, in accordance with paragraph 6, the Staff will provide written notice of such fact via facsimile transmission to the attention of Marcy L. Colkitt, General Counsel, at (412) 463-3569, with a conforming copy sent via express mail to the Offices of Marcy L. Colkitt, 176 Timbersprings Lane, Indiana, Pennsylvania 15701 and Iles Cooper, Williamson, Friedberg & Jones, One Norwegian Plaza, Pottsville, Pennsylvania 17901. A printed facsimile transmission report from an NRC facsimile machine is proof of the provision of such notice. In the event of a change of facsimile number, OSC and ROCM agree to promptly inform the Staff in writing of any such change and provide the new facsimile number. Any notice sent via facsimile prior to the Staff's receipt of such notification of a change of facsimile number will be deemed to be in compliance with the notice requirements of this paragraph.
3. If any installment remains unpaid for a period of thirty (30) days or more, provided the Staff has given the requisite notice to OSC and ROCM in accordance with the procedures described in paragraph 2, the Staff may, in its discretion, consider this Settlement Agreement as materially breached. In the event of a material breach of this Settlement Agreement, the full amount of the civil penalties imposed on OSC, \$280,000.00 (plus interest and administrative charges, less any payments already made hereunder), will become due. In this event, OSC agrees to waive any right to contest or seek review of the imposition of the civil penalties before the NRC or in any court. Also, in the event of a material breach of this Settlement Agreement, the full amount of the civil penalty imposed on ROCM, \$80,000.00 (plus interest and administrative charges, less any payments already made hereunder), will become due. In this event, ROCM

further agrees to waive any right to contest or seek review of the imposition of the civil penalty before the NRC or in any court.

4. In consideration of the payment of a civil penalty as set forth in paragraph 2 of this Settlement Agreement and in light of the fact that OSC no longer holds License No. 37-28540-01 and the corrective actions taken at the facilities formerly named on License No. 37-28540-01, the Staff agrees not to take any further enforcement action against OSC and all former and present shareholders, directors, officers, and agents (all of whom are referred to by, and included in the definition of, the term "OSC" as used throughout this Agreement) based on the facts or violations cited in the NOV-OSC, any matter within the scope of the Incident Investigation Team's (IIT) investigation, as documented in the IIT report, NUREG-1480, and any matter within the scope of the Office of Investigations' (OI) investigation, as documented in Investigation Report No. 1-92-060R, dated May 25, 1994, including any document within the scope of the subpoenas issued by OI in connection with its investigation.

5. In addition, in consideration of the payment of a civil penalty as set forth in paragraph 2 of this Settlement Agreement and in light of the corrective actions taken by ROCM, the Staff agrees not to take any further enforcement action against ROCM and all former and present shareholders, directors, officers, and agents (all of whom are referred to by, and included in the definition of, the term "ROCM" as used throughout this Agreement) based upon the facts or violations cited in the NOV-ROCM, any matter within the scope of the inspection conducted from February 2-March 11, 1993, documented in Inspection Report No. 030-32493/93-001, and any matter within the scope of OI's investigation, as documented in Investigation Report No. 1-93-030, dated September 3, 1993.

6. OSC and ROCM agree to make payments in twelve (12) equal monthly installments. The first payment is to be received thirty days after this Settlement Agreement has become final agency action (unless such day falls on a Saturday, Sunday or federal holiday, in which case payment is to be received by the next business day), plus interest on the unpaid principal balance accruing at the rate of 5 percent per year, as well as an administrative charge of \$10.00 per month. Subsequent payments shall be received by the fifteenth day of each month thereafter. Payments shall be made payable to the United States Treasury and received at the address below continuing until the principal sum and all interest and other charges assessed under the provisions of this Settlement Agreement have been fully paid. Payments will be mailed to the following address:

U.S. Nuclear Regulatory Commission  
Office of Enforcement  
ATTN: James Lieberman  
Mail Stop - O7H5  
Washington, D.C. 20555



The following is a schedule of monthly installments:

Payment Number	Payment Date	Total Payment	Interest Amount	Admin. Amount	Principal Amount	Remaining Balance
Beginning balance						140,000.00
1		12,000.00	583.33	10.00	11,406.67	128,593.33
2		12,000.00	535.81	10.00	11,454.19	117,139.14
3		12,000.00	488.08	10.00	11,501.92	105,637.22
4		12,000.00	440.16	10.00	11,549.84	94,087.37
5		12,000.00	392.03	10.00	11,597.97	82,489.40
6		12,000.00	343.71	10.00	11,646.29	70,843.11
7		12,000.00	295.18	10.00	11,694.82	59,148.29
8		12,000.00	246.45	10.00	11,743.55	47,404.74
9		12,000.00	197.52	10.00	11,792.48	35,612.26
10		12,000.00	148.38	10.00	11,841.62	23,770.65
11		12,000.00	99.04	10.00	11,890.96	11,879.69
12		11,939.19	49.50	10.00	11,879.69	0.00
TOTAL		143,939.19	3,819.19	120.00	140,000.00	

7. In the event of a material breach of this Settlement Agreement, OSC and ROCM agree to pay all reasonable collection costs, court costs, and attorney's fees incurred by the Nuclear Regulatory Commission and/or the United States for any appropriate collection actions taken by the Nuclear Regulatory Commission and/or the United States. However, in no event will these costs exceed 5% (\$18,000) of the total civil penalties imposed by the Staff's April 24, 1995 Orders.

8. Failure or failures by the Staff to exercise any right in this Settlement Agreement with respect to a material breach shall not be construed as a waiver of its right to exercise the same or any other right at any time thereafter.

9. With the exception of challenging the receipt of the requisite notice described in paragraph 2, in the event of a material breach of this Settlement Agreement, both OSC and ROCM do hereby authorize and empower a United States Attorney, any of his or her assistants, or any attorney for or on behalf of the NRC or the United States to enter and confess judgment against OSC and ROCM for the imposed civil penalties in the amount of \$280,000 against OSC and \$80,000 against ROCM, with interest as described in paragraph 6, less payments actually made (such payments will be apportioned equally between OSC and ROCM), in any court of record, Federal or State; to waive the issuance and service of process upon both OSC and ROCM in any suit on the obligation; to waive any venue requirement in such suit; to release all errors which may intervene in entering upon such judgment or in issuing any execution thereon;

and to consent to immediate execution on said judgment. Both OSC and ROCM do hereby ratify and confirm all that said attorney may do by virtue hereof.

10. The Staff, OSC, and ROCM agree that this Settlement Agreement shall not constitute and shall not be construed to constitute any admission or admissions in any regard by either OSC or ROCM of any matters set forth by the NRC in either the NOV-OSC or NOV-ROCM.

11. The Staff, OSC, and ROCM also agree that the matters upon which the NOVs were based have not been resolved as a result of this Settlement Agreement. This Settlement Agreement shall not be relied upon by any person or other entity as proof or evidence of any of the matters set forth in the NOVs.

12. For good cause shown, the Staff may, in writing, extend the time to complete any action set forth in any provision of this Settlement Agreement.

13. The parties agree and understand that this Settlement Agreement is only binding on the NRC, OSC, and ROCM, and only relates to NRC's authority to take civil enforcement action. This Settlement Agreement shall be binding upon the legal representatives, successors and assigns of each of the parties hereto.

14. The Staff, OSC, and ROCM shall jointly move the Atomic Safety and Licensing Boards designated in the above-captioned proceedings for orders approving this Settlement Agreement and terminating the proceedings.

In Witness Whereof, the parties have caused this Settlement Agreement to be executed by their authorized representatives.

FOR ONCOLOGY SERVICES CORPORATION  
AND RADIATION ONCOLOGY CENTER  
AT MARLTON

FOR THE NRC STAFF

Marcy L. Colkitt  
Secretary and General Counsel  
for Oncology Services Corporation  
and Secretary and General Counsel  
for Radiation Oncology Center at Marlton

Marian L. Zobler  
Counsel for NRC Staff

Richard G. Bachmann  
Counsel for NRC Staff

Dated at Rockville, Maryland,  
this 20th day of February 1996.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

## OFFICE OF NUCLEAR REACTOR REGULATION

William T. Russell, Director

In the Matter of

Docket No. 50-029

YANKEE ATOMIC ELECTRIC  
COMPANY  
(Yankee Nuclear Power Station)

March 18, 1996

The Director of the Office of Nuclear Reactor Regulation denies a supplemental petition dated February 9, 1996, filed with the Nuclear Regulatory Commission by Citizens Awareness Network and New England Coalition on Nuclear Pollution. The supplemental petition requests that the Commission: (1) reverse the February 2, 1996 decision of the NRC Staff on the emergency aspects of a January 17, 1996 petition filed pursuant to 10 C.F.R. § 2.206, and (2) require Yankee Atomic Electric Company to cease six unlawful decommissioning activities and to direct the Staff to cease approving or acquiescing to such unlawful decommissioning activities. By Order dated February 15, 1996, the Commission declined to reverse the February 2, 1996 decision of the NRC Staff on the emergency aspects of the January 17, 1996 petition, and directed the NRC Staff to address the arguments advanced by Petitioners at page 13 of the supplemental petition in a supplementary section 2.206 decision.

The Director denied the request to prohibit the conduct of six activities identified at page 13 of the supplemental petition because they are permissible, prior to approval of a decommissioning plan, under the pre-1993 interpretation of the NRC's decommissioning regulations, and thus under *Citizens Awareness Network Inc. v. U.S. Nuclear Regulatory Commission and Yankee Atomic Electric Co.*, 59 F.3d 284 (1st Cir. 1995).

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

### I. INTRODUCTION

On January 17, 1996, Citizens Awareness Network and New England Coalition on Nuclear Pollution (Petitioners) submitted an "Emergency Motion for Compliance with Circuit Court Opinion" (petition). Petitioners requested that the United States Nuclear Regulatory Commission (NRC or Commission) take action with respect to activities conducted by Yankee Atomic Electric Company (YAEC or Licensee) at the Yankee Nuclear Power Station in Rowe, Massachusetts (Yankee Rowe or the facility). In particular, Petitioners requested that the NRC comply with *Citizens Awareness Network Inc. v. United States Nuclear Regulatory Commission and Yankee Atomic Electric Co.*, 59 F.3d 284 (1st Cir. 1995) (*CAN v. NRC*), and that the Commission immediately order YAEC not to undertake and the Staff not to approve, and YAEC to cease, further major dismantling activities or other decommissioning activities, unless such activities are necessary to ensure the protection of occupational and public health and safety. Petitioners requested that the Commission prohibit five of nine activities that the Licensee proposed to conduct prior to approval of a decommissioning plan, which activities were evaluated by the Staff in a letter dated November 2, 1995.

By letter dated February 2, 1996, the NRC Staff declined to take emergency action to prohibit the Licensee's shipment of low-level radioactive waste, and found that Petitioners' request to prohibit four other activities was moot.

By a supplemental petition, Petitioners requested the Commission to reverse the NRC Staff's February 2, 1996 decision on the emergency aspects of the petition, and contended that the Staff had implicitly approved six additional activities, which the Licensee identified for the first time as under consideration in its January 29, 1996 response to the petition, although the activities are not minor alterations to the facility. (A seventh activity was mentioned, but not contested). See Citizens Awareness Network's and New England Coalition on Nuclear Pollution's Motion for Exercise of Plenary Commission Authority to Reverse NRC Staff 2.206 Opinion (February 9, 1996).

By Order dated February 15, 1996, the Commission directed the Licensee to provide the NRC with at least 2 weeks' advance notice before engaging in any of the seven new activities identified at page 13 of the supplemental petition, and directed the Staff to address the arguments advanced by Petitioners at page 13 of the supplemental petition in a supplementary 10 C.F.R. § 2.206 decision.

By letter dated February 16, 1996, the Licensee notified the NRC Staff and Petitioners that YAEC intended to commence five activities between March 1, 1996, and March 25, 1996.

On February 22, 1996, the Staff issued a Director's Decision (DD-96-1, 43 NRC 29) on the petition as a whole. The Staff denied Petitioners' request to prohibit the Licensee's shipments of low-level radioactive waste, and found four other activities contested by Petitioners to be moot.

By letter dated February 27, 1996, the NRC Staff requested the Licensee to supply information regarding the seven activities identified by the supplemental petition, plus information regarding four other activities identified as ongoing in the Licensee's January 29, 1996 response to the petition. The Licensee responded by letter dated February 28, 1996, providing information regarding the eleven activities plus an additional activity, removal of the spent fuel pool upender. Three activities were ongoing, and the remaining nine were scheduled to commence between March 1, 1996, and April 22, 1996.

By letter dated March 1, 1996, the Staff notified the Licensee that three activities scheduled to commence March 1, 1996, are permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations, and thus, that there was no reason to take emergency action to prevent YAEC from starting or to order discontinuance of the ongoing activities. Additionally, the Staff found no health or safety reason for immediate NRC action.

The Staff has evaluated the six ongoing and planned activities contested by the supplemental petition and the five additional activities identified in the Licensee's letters of January 29, 1996, February 16, 1996, and February 28, 1996. Two activities, removal of miscellaneous equipment outside the vapor container bioshield wall and preparation for decontamination<sup>1</sup> of the main coolant system (removal of spool pieces) were completed in February 1996. For the reasons discussed below, the Staff has concluded that the activities are permissible, prior to approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations. Accordingly, Petitioners' request that the NRC prohibit YAEC from undertaking or continuing the six contested activities identified at page 13 of the supplemental Motion is denied.

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<sup>1</sup> Decontamination at a nuclear plant is the flushing of pipes, pumps, pressure vessels, etc., with fluids to remove materials that are contaminated with radiation from the inner surfaces of these components.



## II. BACKGROUND

As explained in detail in DD-96-1, Petitioners sought judicial review of certain NRC actions, related to the Licensee's Component Removal Project (CRP). Petitioners challenged the CRP as an impermissible activity, before the approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.

On July 20, 1995, the United States Court of Appeals held, in part, that the Commission had: (1) failed to provide an opportunity for hearing to CAN, as required by section 189 of the Atomic Energy Act, in connection with the Commission's decision to permit the CRP decommissioning activities; and (2) changed its pre-1993 interpretation of its decommissioning regulations without notice to the public and in violation of the Administrative Procedure Act. *CAN v. NRC*, 59 F.3d at 291-92, 292-93. The court remanded the matter to the Commission for proceedings consistent with the court's opinion.

The Commission implemented *CAN v. NRC*, in part, by issuing CLI-95-14, 42 NRC 130 (1995). In CLI-95-14, the Commission reinstated its pre-1993 interpretation of its decommissioning policy, required the issuance of a notice of opportunity for an adjudicatory hearing on the Yankee Rowe decommissioning plan,<sup>2</sup> held that YAEC may not conduct further "major" decommissioning activities at Yankee Rowe until approval of a decommissioning plan after completion of any required hearing, and directed YAEC to inform the Commission within 14 days of the steps it is taking to come into compliance with the reinstated interpretation of the Commission's decommissioning regulations. CLI-95-14, *supra*.

## III. DISCUSSION

### A. The Licensee's Planned and Ongoing Activities Are Permissible, Prior to Approval of a Decommissioning Plan, Under the Commission's Pre-1993 Interpretation of Its Decommissioning Regulations, and Thus Are Permissible Under *CAN v. NRC* and CLI-95-14

Petitioners contest six of the seven activities they mention in the supplemental petition on the ground that they do not constitute minor alterations to the facility,

<sup>2</sup> Pursuant to CLI-95-14, a proceeding was commenced to offer an opportunity for hearing on the Licensee's decommissioning plan for Yankee Rowe. Petitioners sought intervention and a hearing. By an Order dated March 1, 1996, the Atomic Safety and Licensing Board denied the request for intervention and dismissed the proceeding. Yankee Atomic Electric Company, LBP-96-2. By Order dated February 27, 1996, the Commission stayed any order of the Board insofar as it may have the effect of authorizing decommissioning activities that were prohibited prior to approval of a decommissioning plan.

and thus are not permissible before approval of a decommissioning plan under the pre-1993 interpretation of the Commission's decommissioning regulations. Specifically, Petitioners object to: (1) consolidation of sediment in the reactor vessel; (2) removal of miscellaneous safety injection building equipment; (3) installation of a temporary electrical system; (4) removal of pipe on the exterior of the vapor container; (5) removal of main coolant system insulation; and (6) installation of a temporary waste processing system. Petitioners do not object to decontamination of the main coolant system. The Staff has also evaluated the following five activities identified by the Licensee in its letters of January 29, 1996, February 16, 1996, and February 28, 1996: (1) preparation for decontamination of the main coolant system — removal of spool pieces; (2) removal of miscellaneous equipment outside the vapor container bioshield wall; (3) removal of primary auxiliary building tanks; (4) removal of turbine building insulation; and (5) removal of spent fuel pool upender.

Under the Commission's pre-1993 interpretation of its decommissioning regulations, a licensee "may proceed with some activities such as decontamination, minor component disassembly, and shipment and storage of spent fuel if the activities are permitted by the operating license and/or § 50.59" prior to final approval of a licensee's decommissioning plan,<sup>3</sup> as long as the activity does not involve major structural or other changes and does not materially and demonstrably affect the methods or options available for decommissioning or substantially increase the costs of decommissioning. *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-90-8, 32 NRC 201, 207 n.3 (1990); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 73 n.5 (1991); and *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-92-2, 35 NRC 47, 61 n.7 (1992).

Activities such as normal maintenance and repairs, removal of small radioactive components for storage or shipment, and removal of components similar to that for maintenance and repair also were permitted prior to approval of a decommissioning plan under the Commission's pre-1993 interpretation of the Commission's decommissioning regulations. See NRC Inspection Manual, ch. 2561, § 06.06 (Issue Date: 03/20/92).<sup>4</sup>

Under the pre-1993 interpretation of the Commission's decommissioning regulations, examples of activities that were conducted at various facilities under

<sup>3</sup> Statement of Consideration, "General Requirements for Decommissioning Nuclear Facilities," 53 Fed. Reg. 24,018, 24,025-26 (June 27, 1988).

<sup>4</sup> "Examples of modifications and activities, that are allowed during the post-operational phase [the interval between permanent shutdown and the NRC's approval of the Licensee's decommissioning plan] are (1) those that could be performed under normal maintenance and repair activities, (2) removal of certain, relatively small radioactive components, such as control-rod drive mechanism, control rods, and core internals for disassembly, and storage or shipment, (3) removal of nonradioactive components and structures not required for safety in the post-operational phase, (5) shipment of reactor fuel offsite, and (6) activities related to site and equipment radiation and contamination characterization." *Id.*

a possession-only license, and which the Staff considered permissible before approval of a decommissioning plan included:

*Shoreham<sup>5</sup>*

- a. Core borings in biological shield wall
- b. Core borings of the reactor pressure vessel
- c. Regenerative heat exchanger removal and disassembly
- d. Various sections of reactor water cleanup system piping cut out and removed to determine effectiveness of chemical decontamination processes being used
- e. Removal of approximately half of reactor pressure vessel insulation and preparation for disposal
- f. Removal of fuel support castings and peripheral pieces removed and shipment offsite for disposal at Barnwell, South Carolina
- g. Reactor water cleanup system recirculation holding pump removed and shipped to James A. FitzPatrick Nuclear Power Plant
- h. Control-rod drive pump shipped to Brunswick Nuclear Station
- i. One full set of control-rod blade guides sold to Carolina Power and Light Company
- j. Control-rod drives removed, cleaned, and stored in boxes for salvage
- k. Process initiated for segmenting and removing reactor pressure vessel cavity shield blocks
- l. Process initiated for removal of instrument racks, tubing, conduits, walkways, and pipe insulation presenting interferences for decommissioning activities and/or removal of salvageable equipment

*Fort St. Vrain<sup>6</sup>*

- a. Control-rod drive and orifice assemblies and control rods removed from core during defueling and shipped offsite for processing or disposal as low-level waste
- b. All helium circulators removed and shipped offsite for disposal
- c. Core region constraint devices (internals) removed and approximately one-half shipped offsite for disposal
- d. About 50 core metal-clad reflector blocks (top layer of core) removed and stored in fuel storage wells
- e. Removal of remaining hexagonal graphite reflector elements, defueling elements, and metal-clad reflector blocks begun
- f. Prestressed concrete reactor vessel (PCRVR) top cross-head tendons and some circumferential tendons detensioned

<sup>5</sup> See Letter dated December 11, 1991, from John D. Leonard, Jr., Long Island Lighting Company, to U.S. Nuclear Regulatory Commission, Docket No. 50-822.

<sup>6</sup> See Letter dated September 4, 1992, from Donald M. Warembourg, Public Service Company of Colorado, to the U.S. Nuclear Regulatory Commission, Docket No. 50-267.

- g. Some detensioned tendons removed from PCRV
- h. Work initiated to cut and remove PCRV liner cooling system piping presenting interferences to detensioning of PCRV tendons, and
- i. Asbestos insulation completely removed from piping under PCRV

In its letter of November 2, 1995, the NRC Staff identified certain activities, although not proposed by the Licensee, which may not be conducted before reapproval of a decommissioning plan. Those activities include dismantlement of systems such as the main reactor coolant system, the lower neutron shield tank, vessels that have significant radiological contamination, pipes, pumps and other such components and the vapor container (containment). The Staff also identified segmentation or removal of the reactor vessel from its support structure as a major dismantlement not to be conducted until after the decommissioning plan is reapproved.

Upon review of the supplemental petition and the Licensee's letters of January 29, 1996, February 16, 1996, and February 28, 1996, the Staff concludes that the eleven planned and ongoing activities are permissible, prior to approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.

#### ***1. Consolidation of Sediment in the Reactor Vessel***

This item is a decontamination activity. It involves flushing loose radioactive material from the bottom of the reactor vessel (RV) and binding it in a solid mass inside the RV, in a centralized volume and, thus, displacing the contamination from the lower head of the vessel. This activity results in a large reduction of external dose during later removal and shipping of the vessel, and in a reduction of external dose to personnel who must perform day-to-day maintenance and monitoring activities.

In view of the above, this activity is permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.

#### ***2. Removal of Miscellaneous Safety Injection Building Equipment***

This activity entails the removal of mechanical and electrical equipment and some seismic reinforcement that is no longer required in the Safety Injection Building. The components involved in this activity are small, and constitute a minor decommissioning activity. Similar activities were conducted at the Shoreham plant prior to decommissioning plan approval. See items c, d, and g, above. Accordingly, this activity is permissible prior to approval of a

decommissioning plan under the pre-1993 interpretation of the Commission's decommissioning regulations.

### **3. *Installation of a New Electrical System***

This activity is not decommissioning. This activity is part of the Licensee's overall project to enhance the safety of the spent fuel pool by establishing independent systems dedicated to spent fuel pool reliability, and is consistent with NRC Bulletin 94-01, "Potential Fuel Pool Draindown Caused by Inadequate Maintenance Practice at Dresden Unit 1" (April 14, 1994). Installation of the new electrical system involves installation of power supply and switching capability to the previously installed electrical conduit, which conduit installation the Staff found to be permissible prior to approval of a decommissioning plan. See DD-96-1, Section III.A.7.

Accordingly, this activity is permissible before approval of a decommissioning plan under the pre-1993 interpretation of the Commission's decommissioning regulations.

### **4. *Removal of Pipe on the Exterior of the Vapor Container***

These pipe lines are located outdoors beneath the vapor container and are in secondary-side systems, such as piping carrying steam from the secondary side of the steam generator to the turbine. Because this involves the removal of piping from the secondary side, it is not a major decommissioning activity. Similar activities were conducted at the Shoreham plant (*see* items d and g, above) and at the Fort St. Vrain plant (*see* item b, above) prior to approval of the decommissioning plans.

In view of the above, this activity is permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.

### **5. *Removal of Main Coolant System Insulation***

This insulation will not be removed until after the decontamination of the main coolant system. This insulation is not a major component and its removal is, therefore, not a major decommissioning activity. Similar activities were conducted at the Shoreham plant (*see* item e, above) and at the Fort St. Vrain plant (*see* item i, above) prior to approval of the decommissioning plans.

In view of the above, this activity is permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.



#### **6. *Installation of a Temporary Waste Processing System***

This activity is not decommissioning. It is permitted by the Defueled Technical Specifications, an appendix to the POL. The activity involves installation of a liquid waste processing system designed to process spent fuel pool water by removing contaminants. The activity will increase assurance of satisfactory long-term operation of the spent fuel pool and is, therefore, a safety enhancement.

In view of the above, this activity is permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.

#### **7. *Preparation for Decontamination of the Main Coolant System — Removal of Spool Pieces***

This is a decontamination activity that involved the removal of eight spool pieces, and was completed in February 1996. It was part of an ongoing project, preparation of pipe flanges for the chemical decontamination of the main coolant system.

Because this action is in preparation for decontamination and without which decontamination could not proceed, this activity is permissible. Decontamination is permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations. In any event, the petition, insofar as it can be inferred to request action in this matter, is moot.

#### **8. *Removal of Miscellaneous Equipment Outside the Vapor Container Bioshield Wall***

This activity involved the removal of heating and ventilating equipment from the Vapor Container, and was completed in mid-February 1996. The components removed are minor and do not constitute a major decommissioning activity. Similar activities were conducted at the Shoreham plant prior to approval of the decommissioning plan. See items c and d, above.

Accordingly, this activity is permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations. In any event, the petition, insofar as it can be inferred to request action in this matter, is moot.

#### **9. Removal of Primary Auxiliary Building Tanks**

This activity involves the removal of four low-pressure or drain tanks from the primary auxiliary building, because they are not needed to support operation of the spent fuel pool. Two of the tanks were removed during February 1996. Similar activities were conducted at the Shoreham plant prior to approval of the decommissioning plan. See items c, d, and g, above. This is not a major decommissioning activity because the removed equipment involves minor components.

In view of the above, this activity is permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.

#### **10. Removal of Turbine Building Insulation**

This is an ongoing activity involving the removal of non-radioactive material from a noncontaminated area of the plant. This is not a decommissioning activity.

Accordingly, this activity is permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.

#### **11. Removal of Spent Fuel Pool Upender**

This device was used during reactor operations to transfer fuel, during reload outages, into the vapor container. The upender is not needed to support storage of fuel in the spent fuel pool. The upender is not a major component or structure and, therefore, this is not a major decommissioning activity. Similar activities were conducted at the Shoreham plant (see items d and f, above) and at Fort St. Vrain (see item a, above) prior to approval of the decommissioning plan.

In view of the above, this activity is permissible, before approval of a decommissioning plan, under the pre-1993 interpretation of the Commission's decommissioning regulations.

#### **B. The Eleven Ongoing and Planned Activities Will Neither Individually nor Collectively Substantially Increase the Costs of Decommissioning**

YAEC estimates the cost of the six activities contested by Petitioners and the five additional planned and ongoing activities to be approximately \$6.0 million.<sup>7</sup> YAEC estimates the cost of the previously contested five activities to be \$6.5

<sup>7</sup> See NRC Letter from Russell A. Mellor, YAEC, to Morton B. Fairlie, NRC, dated February 28, 1996.

million. See DD-96-1, Section III.B. The total cost of all activities that have been evaluated by the Staff is approximately \$12.5 million or 3.4% of the estimated \$368.8 million total decommissioning cost. It would be speculative to conclude that the decommissioning method proposed by Petitioners, SAFSTOR, would be less expensive. Moreover, there is no evidence that the combined activities will give rise to consequences that will increase the total cost of decommissioning. Thus, the Staff concludes that there is no evidence the combined activities will substantially increase the costs of decommissioning.

**C. The Activities Contested by Petitioners Will Neither Individually nor Collectively Demonstrably Affect the Methods or Options Available for Decommissioning**

As the Staff explained in DD-96-1, the criteria for determining whether the Licensee's planned and ongoing activities will demonstrably affect the methods or options available for decommissioning have not been well defined. During review of the petition and the supplemental petition, the NRC Staff has continued to examine the question of whether the Licensee's activities will demonstrably affect the methods or options available for decommissioning. In this case, the Staff has now also compared the radiation dose involved in the contested activities with the radiation doses estimated for decommissioning of the Licensee's facility. This is because, under Petitioners' theory regarding the choice of the decommissioning option, as we understand it, it seems that adoption of a different decommissioning option would most likely be required to reduce dose.

The Licensee estimates that the radiation dose involved in the six activities contested by the supplemental petition is 23.6 person-rem.<sup>8</sup> The Licensee estimates that the radiation dose involved in shipment of low-level radioactive waste, contested in the petition, is 17 person-rem.<sup>9</sup> The Licensee estimates that the radiation dose involved in the other four activities contested by the petition is 24.7 person-rem.<sup>10</sup> Accordingly, the radiation dose involved in all activities contested

<sup>8</sup> The Licensee estimates the radiation dose to be 13.8 person-rem for consolidation of sediment in the Reactor Vessel; 0.4 person-rem for removal of miscellaneous Safety Injection Building equipment; 0.5 person-rem for installation of a temporary electrical system; 0.4 person-rem for removal of pipe on the exterior of the Vapor Container; 7.7 person-rem for removal of main coolant system insulation; and 0.8 person-rem for installation of a temporary waste processing system. See Letter dated February 28, 1996, from Russell A. Mellor, YAEC, to Morton B. Fairlie, NRC.

<sup>9</sup> See Letter dated February 21, 1996, from K. J. Heider, YAEC, to Morton B. Fairlie, NRC.

<sup>10</sup> The Licensee estimates the radiation dose to be 4 person-rem for fuel chute isolation and negligible for spent fuel pool electrical conduit installation. See Letter dated February 21, 1996, from K. J. Heider, YAEC, to Morton B. Fairlie, NRC. The Staff estimates the radiation dose to be 19.7 person-rem from completion of removal of the remaining portions of the upper neutron shield tank, and 1.0 person-rem from removal of component cooling water system pipes and components and spent fuel cooling system pipes and components based on a telephone conversation with the Licensee on March 15, 1996.

by Petitioners is approximately 65.3 person-rem. Thus, the estimated dose from the contested activities is less than 10% of the total 755 person-rem estimate for total radiation exposure from decommissioning Yankee Rowe.<sup>11</sup> The Staff estimates that the remaining estimated dose from decommissioning activities at Yankee Rowe is, at the most, approximately 358 person-rem.<sup>12</sup> Thus the estimated dose from the activities contested by Petitioners is approximately 18.3% of the remaining dose from decommissioning the facility.<sup>13</sup> Accordingly, the Staff concludes that the contested activities will not demonstrably affect the methods and options available for decommissioning.

It is not possible to determine with precision how much of the 65.3 person-rem involved in the contested activities might be avoidable by using the SAFSTOR option, i.e., by delaying completion of those activities for several decades to allow for radioactive decay. But even if the entire 65.3 person-rem could be counted as part of the potential SAFSTOR dose savings (an unlikely situation), the SAFSTOR dose savings still available is substantially more than the 65.3 person-rem "lost" by carrying out the contested activities now. Thus, even in an unlikely worst case, the SAFSTOR option would be substantially preserved. Accordingly, the Staff concludes that the contested activities will not demonstrably affect the methods and options available for decommissioning.

In sum, the NRC Staff will not take action to halt relatively minor YAEC activities, many of which are closely similar to ones allowed at Shoreham and Ft. St. Vrain, where there is no evidence that these activities are consuming a significant portion of the remaining radioactive dose at Yankee Rowe. In the Staff's judgment, the prohibition against dismantling major systems, such as the reactor vessel and other reactor components with substantial contamination,<sup>14</sup> sufficiently preserves the possibility of ultimately moving to the SAFSTOR option, should that be the result of the still-pending challenge to YAEC's decommissioning plan.

<sup>11</sup> See Order Approving the Decommissioning Plan and Authorizing Decommissioning of Facility (Yankee Nuclear Power Station), "Environmental Assessment by the U.S. Nuclear Regulatory Commission Related to the Request to Authorize Facility Decommissioning," at 22.

<sup>12</sup> To estimate the remaining dose from decommissioning, the Staff subtracted, from the 755 person-rem estimate for total allotted dose, the personnel exposures reported for calendar years 1993, 1994, and 1995, or 163, 156, and 78 person-rem, respectively. See "Personnel Exposure Report by Duty Function and 10 CFR 20.407 Personnel Monitoring Report," dated December 31, 1993, December 31, 1994, and December 31, 1995. The resulting estimate of approximately 358 person-rem may be an underestimate of the remaining available exposure. Some of the dose from 1993 includes nondecommissioning activities and some of the dose from the contested activities was incurred during calendar year 1995, but should not be counted as expended for purposes of estimating remaining dose.

<sup>13</sup> DD-96-1 compared the dose from the contested shipping activity to the total radiation exposure from decommissioning, see Section III B 9. It is, however, preferable to use the more sophisticated approach of comparing dose from contested activities to the remaining radiation exposure from decommissioning. Nonetheless, under both approaches the Staff concludes that the contested activities will not demonstrably affect the options and methods available for decommissioning.

<sup>14</sup> See Letter dated November 2, 1995, from Morton B. Fairlie, NRC, to James A. Kay, YAEC.

#### IV. CONCLUSION

For the reasons given above, Petitioner's request to prohibit six activities is denied. Those activities, plus an additional five activities identified by the Licensee as planned or ongoing, are permissible prior to approval of a decommissioning plan under the pre-1993 interpretation of the Commission's decommissioning regulations.

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

FOR THE NUCLEAR  
REGULATORY COMMISSION

William T. Russell, Director  
Office of Nuclear Reactor  
Regulation

Dated at Rockville, Maryland,  
this 18th day of March 1996.



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Shirley Ann Jackson, Chairman  
Kenneth C. Rogers  
Greta J. Dicus

In the Matter of

Docket No. 50-029  
(For Relief Under  
10 C.F.R. § 2.206)

YANKEE ATOMIC ELECTRIC  
COMPANY  
(Yankee Nuclear Power Station)

April 1, 1996

The Commission reviews, *sua sponte*, the denial by the Director of the Office of Nuclear Reactor Regulation, under 10 C.F.R. § 2.206, of two emergency motions filed by Petitioners challenging activities by the Licensee in decommissioning the Yankee Nuclear Power Station. These petitions follow the Commission's reinstatement of its pre-1993 interpretation of NRC decommissioning regulations, which prohibit a licensee from undertaking "major" decommissioning activities pending NRC approval and prior to the opportunity for a hearing.

The Commission affirms the Director's Decisions, finding no abuse of discretion. The Commission issues this Memorandum Opinion to describe the reasons why it has decided not to disturb the Director's denial of the two petitions. The two decisions now become final agency action in this matter.

**NRC: SUPERVISORY AUTHORITY**

The Commission retains plenary authority to review Director's decisions. 10 C.F.R. § 2.206(c)(1).

#### **NRC: SUPERVISORY AUTHORITY**

NRC regulations specifically provide that the Commission will not entertain appeals from the Director's decision, *see* 10 C.F.R. § 2.206(c)(2) (1995); however, the Commission may undertake *sua sponte* review of each denial of a 2.206 petition to ensure that the Director has not abused his discretion. *See* 10 C.F.R. § 2.206(c)(1) (1995).

#### **NRC: AUTHORITY**

If the Commission takes no action to reverse or modify a Director's decision within twenty-five (25) days of issuance of the decision, it becomes final agency action. 10 C.F.R. § 2.206(c)(1).

#### **NRC: AUTHORITY**

The Commission can extend the *sua sponte* review time to consider whether it will take review of a Director's decision.

#### **NRC: HEALTH AND SAFETY RESPONSIBILITIES**

Where there is no evidence that potential small occupational exposures will violate Commission regulations in 10 C.F.R. Part 20, the Commission cannot find public health and safety hazards justifying an enforcement action to halt a licensee's decommissioning activities.

#### **NRC: DECOMMISSIONING**

It is clear from past Commission statements and from prior NRC Staff practice that some "preliminary" or "minor" activities have always been permitted in advance of NRC approval of a decommissioning plan.

#### **NRC: DECOMMISSIONING**

Although the Commission did not explicitly limit, in its Statement of Considerations accompanying the 1988 decommissioning rule changes, the scope of decontamination allowed, it is clear that a licensee may not complete decommissioning prior to NRC approval by simply "decontaminating" the entire facility. But, it is equally clear that some decontamination is allowed.

#### **NRC: DECOMMISSIONING**

While the Commission has not had occasion to define terms such as "major" dismantling in prior contested decommissioning cases, such as Shoreham and Rancho Seco, the Commission has consistently contemplated that a licensee could conduct a range of activities that were not "major" in advance of decommissioning plan approval.

#### **NRC: DECOMMISSIONING**

Actual pre-1993 practice at shutdown plants was the undertaking of some minor disassembly and decontamination prior to decommissioning plan approval, and the NRC elected not to interfere with those activities.

#### **REGULATIONS: INTERPRETATION**

Agency practice, of course, is one indicator of how an agency interprets its regulations. See *Power Reactor Development Co. v. International Union*, 367 U.S. 396, 408 (1961).

#### **NRC: DECOMMISSIONING**

The NRC's Statement of Considerations for the 1988 decommissioning rule and its pre-1993 decisions and practice contemplated that a licensee would be able to conduct some minor or preliminary work prior to approval of a decommissioning plan. Clearly, however, at some point such work is no longer "minor" or may vitiate decommissioning alternatives. At that point a licensee must cease work pending NRC approval of the decommissioning plan following any hearing that has been requested on the plan.

#### **NRC: DECOMMISSIONING**

Further Commission action to develop and enforce more precise guidelines on what activities can or cannot be done prior to decommissioning plan approval would not be an effective use of limited NRC resources, based on a single case and given the likely issuance in the near future of a new decommissioning rule.

#### **NRC: DECOMMISSIONING**

Where the estimated person-rem exposure from a licensee's minor decommissioning activities represents a reasonably small portion of the total estimated dose originally available for possible SAFSTOR treatment, the undertaking of

those decommissioning activities does not compromise a meaningful SAFSTOR option or the hearing process in which petitioners are participating.

#### **NRC: DECOMMISSIONING**

The Commission will halt decommissioning activities, "minor" or not, that individually or cumulatively threaten the continued viability of the SAFSTOR decommissioning alternative when it is the subject of an adjudicatory hearing.

### **MEMORANDUM AND ORDER**

#### **I. INTRODUCTION**

This matter is before the Commission on *sua sponte* review of two Director's Decisions issued by the Director of the Office of Nuclear Reactor Regulation under 10 C.F.R. § 2.206 (1995). These two decisions are DD-96-1, 43 NRC 29 (1996), and DD-96-2, 43 NRC 109 (1996), as a supplement to DD-96-1. These decisions were in response to two pleadings<sup>1</sup> filed by the Citizens Awareness Network and the New England Coalition on Nuclear Pollution (collectively "Petitioners"), who have challenged the plan by which the Yankee Atomic Electric Company ("YAEC") proposes to decommission the Yankee Nuclear Power Station ("Yankee NPS"), located near Rowe, Massachusetts. YAEC has an NRC license to possess, but not operate, the Yankee NPS facility.

We referred both pleadings to the Staff for consideration under section 2.206. See Unpublished Orders in this docket dated January 23, 1996, and February 15, 1996. In the latter order we also declined to reverse the Staff's denial of emergency relief, dated February 2, 1996, which had been requested in the Petitioners' first pleading and the denial of which had been challenged in the Petitioners' second pleading.<sup>2</sup> In both orders we stated that we retained plenary authority to review the Director's Decisions, *see* 10 C.F.R. § 2.206(c)(1), and that we would take appropriate action if we found that our regulations were being violated.

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<sup>1</sup> "Emergency Motion for Compliance with First Circuit Opinion," dated January 17, 1996; "Motion for Exercise of Plenary Commission Authority to Reverse NRC Staff 2.206 Decision, and Renewed Emergency Request for Compliance with Circuit Court Opinion," dated February 9, 1996. We will cite these pleadings as "Petitioners' Emergency Motion" and "Petitioners' Renewed Emergency Motion," respectively.

<sup>2</sup> In the second order, dated February 15th, we directed YAEC to provide at least 2 weeks' advance notice before engaging in any of the activities identified by Petitioners. YAEC promptly advised the Staff and Petitioners that it sought to start several of the activities. On March 1, 1996, the Staff issued a letter finding that these activities were permissible under the pre-1993 interpretation of the regulations and finding no reason to take emergency action to prevent these activities.



After due consideration, we have decided not to reverse or modify the Director's Decisions. But because of the novel nature of this case, we have decided to issue this Memorandum Opinion describing the reasons why we have decided not to disturb the Staff's denial of Petitioners' requests for relief.

## II. BACKGROUND

The background of this controversy is set out at length in both the Director's Decisions and in prior Commission decisions and need not be repeated here. Suffice it to say that as a result of a decision by the U.S. Court of Appeals for the First Circuit, the Commission reinstated its pre-1993 interpretation of its decommissioning regulations. *See generally Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-95-14, 42 NRC 130 (1995). Under the reinstated interpretation, YAEC is prohibited from undertaking "major" decommissioning activities pending NRC approval — after an opportunity for a hearing — of YAEC's proposed decommissioning plan for the Yankee NPS. *See generally* 42 NRC at 136.

The Petitioners alleged that YAEC is conducting activities that not only are "major" but also would foreclose the SAFSTOR option, thereby negating their right to a hearing on the proposed decommissioning plan. The Petitioners then identified five YAEC actions in their first pleading and seven YAEC actions in their second pleading that they allege are outside the scope of the pre-1993 interpretation of the regulations. *See generally* Petitioners' Emergency Motion at 13; Petitioners' Renewed Emergency Motion at 13.

Upon review, the Director determined that the activities identified by Petitioners' pleadings were within the scope of activities that were permissible under the pre-1993 interpretation of the NRC's decommissioning regulations. *See* DD-96-1, 43 NRC at 38-47; DD-96-2, 43 NRC 115-17. In addition, the Director found that five additional activities either proposed or already completed by YAEC were also permissible under the pre-1993 interpretation of the decommissioning regulations. *See* DD-96-2, 43 NRC 117-18. Accordingly, the Director declined to take enforcement action ordering YAEC to cease the ongoing contested activities or to impose sanctions against YAEC for those actions already completed. DD-96-1, 43 NRC at 49; DD-96-2, 43 NRC at 121.

## III. COMMISSION REVIEW OF DIRECTOR'S DECISIONS

While our regulations specifically provide that the Commission will not entertain appeals from the Director's decision, *see* 10 C.F.R. § 2.206(c)(2) (1995), the Commission may undertake *sua sponte* review of each denial of



a 2.206 petition to ensure that the Director has not abused his discretion. See 10 C.F.R. § 2.206(c)(1) (1995). If the Commission takes no action to reverse or modify the Director's Decision within twenty-five (25) days of issuing the decision, it becomes final agency action. *Id.* Here, to allow us to review these two Director's Decisions together, we have extended the *sua sponte* review period for DD-96-1 for a brief period.<sup>3</sup>

#### IV. ANALYSIS

##### A. The Contested Activities Do Not Constitute a Threat to the Public Health and Safety

The Petitioners do not allege in either pleading that the contested activities constitute an imminent threat to the public health and safety. Moreover, it is clear from a review of the two Director's Decisions that the only potential radiation doses could come from small occupational exposure in the plant and from shipment of low-level waste to a disposal facility. There is no evidence that these exposures will violate Commission regulations in 10 C.F.R. Part 20, which specifies maximum limits for public and occupational exposure, or cause any imminent or substantial health and safety hazard. Accordingly, we find no public health and safety hazard justifying an enforcement action halting YAEC's activities.

##### B. The Director's Decisions Are Reasonable

One problem that faced the Director in considering the contested activities was the absence of clear prior Commission guidance on what specific activities are permissible prior to approval of a decommissioning plan. But it is clear from past Commission statements and from prior NRC Staff practice that some "preliminary" or "minor" activities have always been permitted in advance of NRC approval of a decommissioning plan.

First, the Statement of Considerations accompanying our 1988 decommissioning rule changes explicitly allowed licensees to "proceed with some activities such as decontamination [and] minor component disassembly . . . if those activities are permitted by the . . . license and/or § 50.59." 53 Fed. Reg. 24,018, 24,026 (June 27, 1988). However, we did not define the word "minor" and we did not place any explicit limit on the scope of "decontamination." Clearly, a licensee may not complete decommissioning prior to approval of a decommis-

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<sup>3</sup> See Unpublished Order in this Docket, dated March 18, 1996; Unpublished Order in this Docket dated March 25, 1996. These extensions were necessary because the review period for DD-96-1 would otherwise have expired on March 18, the same day that DD-96-2 was issued.

sioning plan by simply "decontaminating" the entire facility. But it is equally clear that some decontamination is allowed.

Second, while our pre-1993 guidance directed licensees to refrain from actions that would "materially and demonstrably" affect decommissioning options or "substantially increase" decommissioning costs, *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-90-8, 32 NRC 201, 207 n.3 (1990), we never have had occasion to define these terms. Likewise, while we held that "major dismantling and other activities that constitute decommissioning must await NRC approval of a decommissioning plan[.]" see *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 73 n.5 (1991); *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-92-2, 35 NRC 47, 61 n.7 (1992), we never have had occasion to define further what these phrases mean.<sup>4</sup> But one thing is apparent: The Commission consistently contemplated that a licensee could conduct a range of activities that were not "major" in advance of decommissioning plan approval.

Third, as the Director has stressed, actual pre-1993 practice at shutdown plants such as Shoreham and Fort St. Vrain was to undertake some minor disassembly and decontamination prior to decommissioning plan approval. See, e.g., DD-96-1, 43 NRC at 35-37; DD-96-2, 43 NRC at 113-15. The NRC saw no problem with such activities and elected not to interfere with them. The Director found that many of the activities reviewed in DD-96-1 and DD-96-2 are quite similar to the activities that the NRC did not halt in those earlier cases. See, e.g., DD-96-2, 43 NRC at 116. Agency practice, of course, is one indicator of how an agency interprets its regulations. See *Power Reactor Development Co. v. International Union*, 367 U.S. 396, 408 (1961); see also *Martin v. OSHRC*, 499 U.S. 144, 156-57 (1991).

In sum, the Statement of Considerations for the 1988 decommissioning rule and our pre-1993 decisions and practice contemplated that a licensee would be able to conduct some minor or preliminary work prior to approval of a decommissioning plan. Clearly, however, at some point such work is no longer "minor" or may vitiate decommissioning alternatives. At that point a licensee must cease work pending NRC approval of the decommissioning plan following any hearing that has been requested on the plan.

Given this state of affairs, we conclude that the activities reviewed in the two decisions before us today may reasonably be viewed as within the scope of activities that are permissible under the pre-1993 interpretation of our regulations. The overall scope of the contested activities does not constitute

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<sup>4</sup>Of our two prior contested decommissioning cases, one (Shoreham) was settled before the scope of dismantling became a serious issue while in the other (Rancho Seco), the licensee chose SAFSTOR. Thus, defining these terms has never been required.

so large a portion of the overall decommissioning project that it compromises the decommissioning plan approval procedures. See Part C, *infra*. And, as the Director explained, these activities (individually and collectively) are quite minor and, indeed, very similar to those undertaken at Shoreham and Fort St. Vrain under the pre-1993 interpretation of the decommissioning regulations.

Further Commission action now to fine-tune the process would require development and enforcement of more precise guidelines on what activities can or cannot be done prior to decommissioning plan approval. But this would not be a sensible allocation of limited agency resources, given (1) the already-completed activities at Yankee NPS (during the time prior to the court of appeals decision and the Commission's response to it in CLI-95-14), and (2) the posture of the adjudication (with a Licensing Board decision dismissing Petitioners' contentions now on appeal to the Commission), and (3) the likely issuance in the near future of a new Commission rule substantially altering the process accompanying decommissioning.<sup>5</sup> We are loath to expend additional Commission and Staff resources on a single case that raises no imminent public health and safety concerns. Such limited agency resources are far better used elsewhere, such as overseeing currently operating plants.

Thus, the Commission sees no need to second-guess the Staff's reasonable judgments in the peculiar circumstances of this case.

### **C. Despite the Denial of Relief, Major Decommissioning Activities Await Approval of the Decommissioning Plan**

Neither DD-96-1 nor DD-96-2 relaxes the strict guidelines issued by the Staff to YAEC in the aftermath of CLI-95-14. Those guidelines expressly prohibit YAEC from dismantling those major systems or components still remaining at Yankee NPS, such as the main reactor coolant system, the lower neutron shield tank, and the reactor vessel itself. See Letter from Morton B. Fairtile, NRC, to James A. Kay, YAEC (Nov. 2, 1995). The Director reaffirmed those strict guidelines in his most recent decisions. See DD-96-1, 43 NRC at 35; DD-96-2, 43 NRC at 115, 120.

As the Director indicated in DD-96-2, the estimated dose from the YAEC activities that Petitioners contested in their Emergency Motion and Renewed Emergency Motion is approximately 65.3 person-rem, while the total estimated dose from all remaining decommissioning activities (prior to the start of the

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<sup>5</sup> The Commission is currently assessing public comments on a proposed new decommissioning rule. See 60 Fed. Reg. 37,374 (July 20, 1995).

contested activities) was approximately 358 person-rem.<sup>6</sup> As the Director also pointed out, it is not at all clear how much of the 65.3 person-rem might be avoided even if YAEC and the NRC ultimately were to embrace the Petitioners' preferred SAFSTOR option. In our judgment, 65.3 person-rem represents a reasonably small portion — approximately 18% — of the total dose originally available for possible SAFSTOR treatment and, therefore, the contested activities do not compromise a meaningful SAFSTOR option or the hearing process in which Petitioners are participating.<sup>7</sup>

In short, despite the various minor activities YAEC has undertaken, a substantial portion of the remaining facility remains available for possible application of the SAFSTOR option, should that be the result of the Petitioners' challenge to YAEC's proposed decommissioning plan. Accordingly, we cannot accept Petitioners' claim that their hearing rights will be "eviscerate[d]." See Emergency Motion at 19, if YAEC conducts the contested activities.

#### D. Future YAEC Activities

For the reasons stated above, we agree with the Director that the activities he has found permissible may reasonably be termed "minor." In addition, they do not compromise decommissioning alternatives because they affect only a relatively small portion of the estimated remaining radioactive dose inventory. But it is also true that an accumulation of "minor" activities could so eviscerate the SAFSTOR option that a halt would be necessary.

<sup>6</sup> See DD-96-2, 43 NRC at 120 n.12, for an explanation of the 358 person-rem estimate. See also note 5, *infra*. These numbers are based upon YAEC's submissions and are used here for enforcement purposes only. Petitioners contest some of these numbers in the adjudicatory proceeding now on appeal and our use of these numbers does not indicate in any way that we have prejudged that dispute. Similarly, any mention of SAFSTOR and DECON in this Order is not meant to prejudice any of the issues related to the YAEC's choice of decommissioning options.

<sup>7</sup> The situation is complicated by Petitioners' recently filed "Third Request for Immediate Stay of Unlawful Decommissioning Activities and Renewed Emergency Request for Compliance with Circuit Court Opinion" (March 18, 1996). This pleading challenges a number of YAEC activities that Petitioners previously did not challenge. YAEC estimates that the radiation exposure involved in the newly contested five activities to be approximately 35.5 person-rem: 21.6 person-rem in preparation for decontamination of the main coolant system; 0.5 person-rem in removal of miscellaneous equipment outside the vapor container bioshield wall; 5.4 person-rem in removal of the primary auxiliary building tanks; 0.7 person-rem in removal of the spent fuel pool upender; and 7.3 person-rem in decontamination of the main coolant system. See Letter dated February 28, 1996, from Russell A. Mellor, YAEC, to Morton B. Furtile, NRC. Accordingly, all of the activities now contested by the Petitioners involve a total of 100.8 person-rem, or approximately 28% of the 358 person-rem in radiation exposure estimated for the remaining decommissioning activities.

With the exception of the decontamination of the main coolant system, the newly challenged activities were evaluated in DD-96-2. See DD-96-2, 43 NRC at 117-18. The Director did not address this activity in DD-96-2 because Petitioners expressly stated that decontamination of the Main Coolant system appears to be permitted by the 1988 decommissioning rule. See Petitioners' Renewed Emergency Motion at 13. This activity involves the flushing of pipes to remove materials contaminated with radiation from the inner surfaces of these components and is plainly the kind of minor decontamination permissible under the pre-1993 interpretation of our regulations. See DD-96-1, 43 NRC at 33, 35 n.1. In these circumstances, and in view of the lateness of Petitioners' change of position, we see no reason to refer the matter to the NRC Staff for yet another 2.206 decision. See also note 9, *infra*.



It is our understanding from our Staff that YAEC currently plans no further "minor" activities (with radioactive dose consequences) beyond those found permissible in the Director's Decisions. This understanding supports the conclusion that the SAFSTOR option remains viable pending final approval of YAEC's decommissioning plan. Should this understanding prove false, and YAEC propose additional activities, "minor" or not,<sup>8</sup> that individually or cumulatively would threaten the continued viability of SAFSTOR, the Commission stands ready to call a halt to such activities.<sup>9</sup>

## V. CONCLUSION

We hereby review and affirm DD-96-1 and DD-96-2, both of which now become final agency action. Commissioner Dicus has abstained from this decision and provided a separate statement which is attached.

It is so ORDERED.

For the Commission

JOHN C. HOYLE  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 1st day of April 1996.

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<sup>8</sup> The Commission expects YAEC to provide at least 2 weeks' advance notification to both the Staff and the Petitioners if it intends to undertake any additional activities prior to decommissioning plan approval.

<sup>9</sup> As noted, Petitioners recently filed a third pleading, 38 pages long, which appears to challenge the same YAEC activities addressed in the two Director's Decisions. See Petitioners' "Third Request for Immediate Stay of Unlawful Decommissioning Activities and Renewed Emergency Request for Compliance with Circuit Court Opinion," dated March 18, 1996. Because Petitioners' "Third Request" raises issues already decided (albeit with some revised argumentation), it is denied. See also note 7, *supra*.



#### SEPARATE STATEMENT OF COMMISSIONER DICUS

Given the extensive and lengthy litigative and technical history of this proceeding, the multiple technical issues involved in the current Order in this proceeding, and my relatively short time with the Commission, it would take me some time to become fully informed and act upon the issues in this Order, unlike several procedural issues in this proceeding on which I have previously participated. Because I would view it as a disservice to both Petitioners and the Licensee in this proceeding to delay a final decision on the Director's Decisions being addressed in the current Order, I have determined to abstain from voting on this particular Order.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

B. Paul Cotter, Jr., Chairman  
Dr. Richard F. Cole  
Dr. Peter S. Lam

In the Matter of

Docket No. 50-458-OLA  
(ASLBP No. 93-680-04-OLA)

GULF STATES UTILITIES  
COMPANY, *et al.*  
(River Bend Station, Unit 1)

March 29, 1996

The Licensing Board grants a motion of the bankruptcy trustee of the Intervenor, Cajun Electric Cooperative, to terminate its litigation, without prejudice, contesting a license amendment requested by Gulf States Utilities.

**TERMINATION OF PROCEEDINGS: TERMINATION WITHOUT  
PREJUDICE**

Under Rule 41 of the Federal Rules of Civil Procedure, a voluntary dismissal of a court action is generally without prejudice to the action being reinstituted at a later date. Although there is no provision in the Commission's Rules of Practice that corresponds to the voluntary dismissal procedure in Rule 41, the Board found that those provisions were applicable in this case, especially since the public interest theoretically would be served if Cajun could later establish that additional financial assurances were needed. Moreover, the Board found that it was unfair to impose a form of punishment, such as a bar of future action,

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\*This opinion was inadvertently omitted from the March Issuance.

against an Intervenor whose decisions were being directed by a person (the bankruptcy trustee) with legal responsibilities on or more than those that supported the original petition.

## MEMORANDUM AND ORDER (Grant of Motion to Terminate Proceeding)

### BACKGROUND

On January 25, 1996, Ralph R. Mabey, the court-appointed Bankruptcy Trustee ("Trustee") for Intervenor Cajun Electric Power Cooperative, Inc. ("Intervenor"), filed with this Board a "Withdrawal of Contention and Motion for Termination of Hearing" ("Trustee's Motion").<sup>1</sup> The Motion seeks to withdraw the Intervenor's only contention and to terminate its litigation contesting a license amendment requested by Gulf States Utilities Company for its River Bend Station nuclear reactor.<sup>2</sup> The Motion seeks termination of the proceeding "without prejudice."

The NRC Staff supports the Trustee's motion insofar as it withdraws the admitted contention and asks that the hearing be terminated. However, the Staff takes exception to the Trustee's request that the contention be withdrawn without prejudice. The Staff does not believe that the Trustee can withdraw Cajun's contention without prejudice "given the posture of the proceeding before the Licensing Board."<sup>3</sup> The Staff would have the Board dismiss the proceeding *with* prejudice.

In support of his request to withdraw Contention 2 without prejudice, the Trustee states that Cajun

is not withdrawing its Petition to Intervene, as amended and supplemented, or any of the other issues, matters or contentions contained therein . . . .

. . . . Cajun continues to have concerns about EOL's lack of financial qualifications, although the Trustee does not wish to litigate the safety contention at this time. Withdrawal without prejudice is the standard at this Commission. See *Mississippi Power and Light Co.* (Grand Gulf Nuclear Station, Units 1 and 2), LBP-73-41, 6 AEC 1057 (1973). . . .

The Trustee requests that the ASLB terminate the hearing proceeding. Since Contention 2 is the only contention and Cajun is the only intervenor, withdrawal should bring this hearing proceeding to an end. . . . Since the Staff has advocated against Cajun's safety contention,

<sup>1</sup> On February 9, 1996, the Trustee filed a Supplement to Withdrawal of Contention and Motion for Termination of Hearing that confirmed his authority to act on behalf of Cajun in this proceeding.

<sup>2</sup> For the complete background in this proceeding, see this Board's decision on intervention reported in LBP-94-3, 39 NRC 31 (1994).

<sup>3</sup> NRC Staff Response to Chapter 11 Trustee's Motion for Termination of Hearing, February 14, 1996 ("Staff Response") at 1.

no party remains which could assume Contention 2. Therefore, a hearin[g] [sic] on Cajun's Contention 2 would serve no purpose at this time.

Trustee's Motion at 7.

Countering the Trustee's position, the Staff argues that dismissal of the Intervenor's contention without prejudice is somehow beyond the Board's jurisdiction, which the Staff insists is limited to "considering Cajun's petition for intervention and rendering a decision on any contentions that might be admitted." Staff Response at 2. The Staff says *Grand Gulf*, relied upon by the Intervenor, is not apposite because that proceeding apparently continued after the intervenor in question withdrew its contention. The *Grand Gulf* Licensing Board ruled that, following a voluntary withdrawal, an intervenor may reinstitute its intervention upon "good cause shown," the same standard as that for untimely intervention found under 10 C.F.R. § 2.714(a). In other words, in an operating license proceeding, the intervenor, upon good cause shown, could again intervene in the ongoing proceeding. However, the Staff reiterates that "[t]his proceeding will not be an ongoing proceeding once the Trustee's contention is withdrawn." *Id.* at 3. The Staff argues that since withdrawal of the only admitted contention in a proceeding brings the proceeding to an end (citing *Houston Lighting and Power Co.* (South Texas Project, Units 1 and 2), ALAB-799, 21 NRC 360, 382 (1985)), "the Trustee's unopposed withdrawal of Cajun's contention must result in a Licensing Board decision granting the Trustee's request and terminating the proceeding with prejudice." *Id.* (emphasis supplied).

### ANALYSIS

There is no guidance in Commission rules addressing the situation before us. It is clear that the Trustee desires, in the best interest of Cajun's bankruptcy, to end Cajun's involvement in this proceeding. And the Trustee clearly acknowledges his understanding that the withdrawal of the only contention submitted by the only intervenor in the proceeding "bring[s] this hearing proceeding to an end." Trustee's Motion at 7. However, it is also implicit in the Trustee's statements that the Trustee does not wish Cajun to be barred from litigating its concerns at some future time. Therefore, the Trustee expresses his desire to have the contention dismissed without prejudice. It appears that the Trustee is following the guidance of Rule 41 of the Federal Rules of Civil Procedure.

Under Rule 41 of the Federal Rules of Civil Procedure, a voluntary dismissal of a court action is generally without prejudice to the action being reinstituted at a later date. Although there is no provision in the Commission's Rules of Practice that corresponds to the voluntary dismissal procedure in a court action,



we see no good reason why those rules should not be applicable here, especially since the public interest theoretically would be served if Cajun can later establish that additional financial assurances are needed. Financial assurance is an issue of renewed current importance given the industry's transition to a more competitive environment.

Moreover, even if it were within our power to bar future action, there is a consideration of fairness at play here. Cajun is withdrawing its contention and seeking the termination of this proceeding under the duress caused by its own fiscal situation. As the Trustee stated in his Motion

I believe that the creditors of Cajun Electric's estate will be benefitted by the savings realized from terminating further participation in [this Board Proceeding] and by the dedication of the estate's limited resources, so far as practicable, to Cajun Electric's effective reorganization.

Trustee's Motion at 6. While the Trustee's current actions may be binding on Cajun in the event Cajun is returned to debtor-in-possession status, it would be unfair to impose a form of punishment, such as a bar of future action, against an Intervenor whose decisions are now being directed by a person with legal responsibilities other than those that supported the original intervention petition.

#### **ORDER**

For all the foregoing reasons and upon consideration of the entire record in this matter, it is, this 29th day of March 1996, ORDERED



That the motion of Cajun Electric Cooperative to withdraw its contention and terminate this proceeding, shall be, and it hereby is, granted and the proceeding is terminated without prejudice.

THE ATOMIC SAFETY AND  
LICENSING BOARD<sup>4</sup>

B. Paul Cotter, Jr., Chairman  
ADMINISTRATIVE JUDGE

Dr. Richard F. Cole  
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
March 29, 1996

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<sup>4</sup> Judge Cotter was not present for the signing of this Memorandum and Order, but concurs in it.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

James P. Gleason, Chairman  
Richard F. Cole  
Peter S. Lam

In the Matter of

Docket No. 50-245-OLA  
(ASLBP No. 96-711-011-OLA)

NORTHEAST NUCLEAR ENERGY  
COMPANY  
(Millstone Nuclear Power Station,  
Unit 1)

April 15, 1996

**ORDER**  
(Terminating Proceeding)

By Memorandum and Order dated March 6, 1996 (unpublished), this Licensing Board granted two hearing requesters, We the People and Donald W. Del Core ("Petitioners"), an opportunity for hearing conditioned upon their filing at least one admissible contention by close of business on March 29, 1996.<sup>1</sup> As that date passed, no contention was received by the Board.

On April 9, 1996, the NRC Staff and Licensee Northeast Nuclear Energy Company filed a Joint Motion seeking termination of this proceeding on the basis of the Petitioners' failure to file a litigable contention. The Licensing Board was informed in the Motion that counsel for the Petitioners had confirmed upon inquiry that no contention would be filed. Subsequently, legal counsel for the

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<sup>1</sup> This date was a 3-week extension of a prior established filing deadline.

Licensing Board telephoned counsel for the Petitioners to verify this statement.<sup>2</sup> Counsel for the Petitioners confirmed that no contentions would be filed in this matter and that further efforts to litigate issues surrounding the Millstone Plant would not be pursued due to a "lack of funds." Counsel for the Board was also informed that no response to the Joint Motion would be forthcoming and that the Board should take whatever actions were necessary to terminate the proceeding.

In light of the record before us, it is, this fifteenth day of April 1996, ORDERED that this proceeding is terminated.

FOR THE ATOMIC SAFETY  
AND LICENSING BOARD

James P. Gleason, Chairman  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
April 15, 1996

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<sup>2</sup> Telephone conversation between Robert Pierce, ASLBP Senior Attorney, and Robert Backus, Counsel for the Petitioners, April 11, 1996.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Thomas S. Moore, Chairman  
Richard F. Cole  
Frederick J. Shon

In the Matter of

Docket No. 70-3070-ML  
(ASLBP No. 91-641-02-ML)  
(Special Nuclear Material License)

LOUISIANA ENERGY SERVICES, L.P.  
(Claiborne Enrichment Center)

April 26, 1996

In this Partial Initial Decision in the combined construction permit-operating license proceeding for the Claiborne Enrichment Center, the Licensing Board resolves in favor of the Applicant Intervenor's contentions H concerning the adequacy of the Applicant's emergency plan and L and M concerning the sufficiency of the Applicant's safeguards measures.

**RULES OF PRACTICE: BURDEN OF PROOF**

The Commission's rules of practice for the conduct of formal adjudicatory hearings provide in 10 C.F.R. § 2.732 that the applicant has the burden of proof in the proceeding. Thus, in order for the applicant to prevail on each contested factual issue, the applicant's position must be supported by a preponderance of the evidence. *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 720 (1985); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-763, 19 NRC 571, 577 (1984). See 1 Charles H. Koch, Jr., *Administrative Law and Practice* § 6.44 (1985).

## **EMERGENCY PLAN(S): REQUIREMENT FOR MATERIAL LICENSE**

Under the Commission's regulatory scheme for emergency planning at certain facilities possessing and using special nuclear material or source and byproduct material, an emergency plan for responding to the hazards of an accidental release constitutes one of the Applicant's procedures that must be found adequate under 10 C.F.R. §§ 40.32(c) and 70.23(a)(4) to protect health and minimize danger to life or property.

## **REGULATORY GUIDES: STATUS**

A regulatory guide, however, only presents the Staff's view of how to comply with the regulatory requirements. Such a guide is advisory, not obligatory and, as the guide itself states at the bottom of the first page: "Regulatory Guides are not substitutes for regulations, and compliance with them is not required."

## **FUNDAMENTAL NUCLEAR MATERIAL CONTROL PLAN(S): ENRICHMENT FACILITIES**

The Commission's material control and accounting regulations require that the licensee of an enrichment facility "shall establish, implement, and maintain a NRC-approved material control and accounting system," 10 C.F.R. § 74.33(a), through the creation of a fundamental nuclear material control plan. 10 C.F.R. § 74.33(b).

## **TECHNICAL ISSUES DISCUSSED**

Emergency plan; safeguards procedures.

## **PARTIAL INITIAL DECISION** **(Resolving Contentions H, L, and M)**

### **I.**

This Partial Initial Decision resolves contentions H, L, and M filed by the Intervenor, Citizens Against Nuclear Trash ("CANT"), in this combined construction permit-operating license proceeding. The application of Louisiana Energy Services, L.P. ("LES" or "Applicant") seeks a license to possess and use byproduct, source, and special nuclear material in order to enrich uranium U<sup>235</sup>



to a maximum of 5% by weight. LES would provide enrichment services using a gas centrifuge process at the Claiborne Enrichment Center ("CEC") it intends to build in Claiborne Parish, Louisiana, on a site about 5 miles northeast of the town of Homer.

Pursuant to the amendments to the Atomic Energy Act ("AEA") contained in the Solar, Wind, Waste, and Geothermal Power Production Incentives Act of 1990, Pub. L. No. 101-575, 104 Stat. 2834, uranium enrichment facilities, with one exception not relevant here, are no longer licensed under chapter 10 of the AEA as production facilities. Rather, facilities such as the CEC now are licensed pursuant to chapter 6, section 53, and chapter 7, section 63, as licenses for source and special nuclear material. These amendments to the AEA also simplified the licensing process by requiring only the issuance of an environmental impact statement and a single formal adjudicatory hearing for construction and operation followed by an inspection to verify that the facility has been constructed properly.

In its initial notice and order for this proceeding, 56 Fed. Reg. 23,310 (1991), the Commission directed that the Licensing Board determine whether the application satisfies the standards set forth in 10 C.F.R. §§ 30.33, 40.32, and 70.23 as well as the requirements of 10 C.F.R. Part 51. Additionally, it ordered that certain special standards and instructions must be satisfied so that the Commission could determine whether the issuance of a license will be inimical to the common defense and security of the United States and will not constitute an unreasonable risk to the health and safety of the public. Those special standards and instructions include the draft General Design Criteria for uranium enrichment contained in the Advance Notice of Proposed Rulemaking in 53 Fed. Reg. 13,276 (1988); the criteria contained in NUREG-1391, "Chemical Toxicity of Uranium Hexafluoride Compared to Acute Effects of Radiation" (1991); the financial protection requirements of 10 C.F.R. §§ 140.15-.17 and Part 140, Appendix A; the creditor regulations in 10 C.F.R. § 50.81 dealing with the creation of creditor interests in a uranium enrichment facility; and the creditor regulations in 10 C.F.R. § 70.44 concerning the creation of creditor interests in special nuclear material.

The Commission's initial notice and order also directed that the proceeding be conducted pursuant to 10 C.F.R. Part 2, Subparts G and I. Among other things, the Subpart G rules of practice for the conduct of formal adjudicatory hearings provide in 10 C.F.R. § 2.732 that the applicant has the burden of proof in the proceeding. Thus, in order for the applicant to prevail on each contested factual issue, the applicant's position must be supported by a preponderance of the evidence. *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 720 (1985); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-763, 19 NRC 571, 577 (1984). See 1 Charles H. Koch, Jr., *Administrative Law and Practice* § 6.44

(1985). Consistent with the Commission's burden of proof rule and pursuant to the stipulation of the parties, the applicant presented its case on the admitted contentions first, followed by the Intervenor, and then the NRC Staff.

## II.

CANT's contention H concerns the adequacy of the Applicant's emergency plan for the CEC. Under the Commission's regulatory scheme for emergency planning at facilities possessing and using special nuclear material or source and byproduct material, an emergency plan for responding to the hazards of an accidental release constitutes one of the Applicant's procedures that must be found adequate under 10 C.F.R. §§ 40.32(c) and 70.23(a)(4) to protect health and minimize danger to life or property. The information that must be contained in the Applicant's emergency plan is set out in 10 C.F.R. §§ 40.31(j) and 70.22(i). Although the regulations do not require an emergency plan if the Applicant can demonstrate that the intake and dose to a member of the public from an accidental release would not exceed certain protective action guides, LES has not made such a showing in its license application. Accordingly, LES must demonstrate that the CEC emergency plan meets the requirements of the Commission's regulations.

In the statement of considerations accompanying the final emergency plan regulations for fuel cycle and other material licenses, the Commission set forth the rationale for the rule. That background material provides the proper context for understanding the regulatory requirements with respect to the information that must be included in the Applicant's emergency plan. In promulgating the regulations, the Commission indicated that for emergency planning purposes accidents at facilities with significant quantities of uranium hexafluoride such as the CEC were of greater concern than facilities that possessed only small quantities of that material. The Commission stated:

The rupture of a large heated cylinder of  $UF_6$  is an exception in that both the probability of a large release and the consequences due to the chemical toxicity of the released material could be of greater concern than the radiation doses from other accidents at fuel cycle or other radioactive material facilities . . . .

Airborne releases due to a severe accident at these licensed facilities are likely to occur rapidly with little warning. The only types of accidents identified in NUREG-1140 for which protective action guide doses, or the 2 milligram soluble uranium intake, could theoretically be exceeded are a fire, a  $UF_6$  cylinder rupture, and a criticality accident. Releases from a fire could start even before the fire is detected or shortly thereafter. Plume travel time to nearby people is likely to be no more than a few minutes. Releases would usually end when the local fire department has controlled the fire, generally within half an hour to an hour. Releases of  $UF_6$  are likely to start without warning and be of short duration. Many other accidental releases could also start without warning and be of short duration. As a result,

protective actions would usually have to be taken very quickly to be effective. Protective actions could also be effective if the release were not as fast.

In view of two factors — (1) realistically, exposures should generally be low compared to protective action guides and (2) the fast-moving nature of accidents of concern — formal evacuation planning is not considered necessary, appropriate, or feasible. In particular, evacuation of neighborhoods before plume arrival would most often not be possible. Thus, the emphasis of the licensee's emergency preparedness should be on ending the accident as quickly as possible, reducing the quantity of material released, protecting workers onsite, recommending appropriate protective actions to offsite officials, notifying offsite response organizations of the accident, and promptly restoring the facility to a safe condition. Offsite, it would be appropriate for police and fire personnel to either move people out of areas of dense smoke or fumes or get them to seek shelter indoors. Such actions are routine for fires and chemical releases and would be expected whether the offsite response organizations had formal written emergency plans or not.

54 Fed. Reg. 14,051, 14,052 (1989).

In response to public comments to the effect that there was no need for emergency plans at material license facilities, that the proposed protective action dose guidelines were too conservative, that engineered safeguards could prevent accidents, and that compliance costs did not justify the benefits, the Commission determined that the rule nevertheless should be issued. Specifically, it stated:

Any system of engineered safeguards is considered to have some possibility of failure. No system could ever be perfect. Therefore, the NRC has decided to require another level of protection beyond engineered safeguards designed to prevent or mitigate an accident if releases could cause doses exceeding protective action guides. The NRC agrees that its dose calculations are very conservative and that doses from an actual accident are likely to be far lower than calculated. Nevertheless, the NRC considers the calculated doses to be possible even if improbable. The NRC recognizes that the costs to licensees tend to exceed the anticipated benefits. Nonetheless, in view of the uncertainties inherent in making the cost-benefit balance, and considering in any event the limited additional financial burden that would result from adoption of the rule, NRC concludes that the emergency planning measures are desirable to protect health. While the NRC agrees that in many instances it would not be possible to reduce exposures offsite because there would not be enough time, the NRC believes that in some instances there would be a possibility of reducing doses. The requirements are aimed at those potential dose saving situations. There is no requirement, stated or implied, that the emergency response would always be effective in reducing exposures offsite or that specified dose levels would not be exceeded. Instead, the requirement is that the licensee be prepared to take some practical steps that could, in favorable circumstances, reduce radiation exposure to the public.

*Id.* at 14,056.

Finally, in rejecting comments that offsite notification systems, informational brochures, emergency planning zones, and response guidelines should be adopted, the Commission remarked:

The NRC believes that the normally available capabilities of States and local governments for responding to industrial emergencies and the normally available radiological health capabilities of States will be adequate to deal with accidents at fuel cycle and other radioactive material licensees. These radiological emergencies would involve small (not life threatening) doses, small areas, and small numbers of people. The potential risks are much lower than the risks from accidents involving chemical plants or the shipping of hazardous chemicals, to which states and local governments routinely respond. In other words, the response to radiological accidents at fuel cycle and other radioactive materials licensees can and should be handled by State and local governments as part of their normal emergency response capability without additional resources.

In most situations, the NRC would expect the local authorities to handle public notification and response on an ad hoc basis, the way those authorities would handle a truck or rail accident in which hazardous chemicals had been, were being, or might be released. . . .

The NRC intentionally did not establish emergency planning zones, deciding instead to define the offsite response in terms of when offsite response organizations should be notified. The NRC concluded that dose projections during an accident would not be possible. Thus, the size of the response would be dictated mainly by the practicality of response actions. Because fires are the primary accident of concern, this would usually involve any actions offsite that could reduce the exposure of people to smoke from the fire . . . .

In general, the appropriate responses and distances are dictated by what is practical at the time the accident occurs. Police and emergency personnel have generally been quite proficient in handling similar types of emergencies, such as truck and rail accidents.

*Id.* at 14,057.

The NRC Staff has published guidance as to how to comply with the emergency plan regulations in Regulatory Guide 3.67, "Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facilities" (1992). That document, however, only presents the Staff's view of how to comply with the regulatory requirements. Such a guide is advisory, not obligatory and, as the guide itself states at the bottom of the first page: "Regulatory Guides are not substitutes for regulations, and compliance with them is not required." Thus, it is the Commission's emergency plan regulations by which the Applicant's emergency plan must be judged and it is the regulations, not the guide, that must be found to have been met in the first instance. See *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-644, 13 NRC 903, 937 (1981).

CANT's contention H asserts that the license application for the CEC does not provide reasonable assurance that the public health and safety will be adequately protected in the event of an emergency at the plant. Although CANT proffered numerous supporting bases for this contention, only ten were allowed -- H2, H3, H4, H5, H6, H7, H10, H17, H20, and H23. Each of these bases will be addressed seriatim.

In support of its position on contention H, the Applicant presented the testimony of Peter G. LeRoy, the Licensing Manager of the CEC, who directed



the preparation of the Applicant's emergency plan and then reviewed and approved it. (LeRoy at 1 fol. Tr. 40.) In admitting his prefiled direct testimony, the Board found that Mr. LeRoy was qualified to testify as an expert on emergency planning. (Tr. 41.) Pursuant to a stipulation of the parties, the following Applicant exhibits were admitted into evidence: Applicant's Exhibit 1, the CEC License Application, through revision 9, January 7, 1994 (App. Exh. 1); Applicant's Exhibit 1(a), CEC Safety Analysis Report, through revision 19, January 7, 1994 (App. Exh. 1(a)); Applicant's Exhibit 1(c), CEC Emergency Plan, through revision 6, June 29, 1994 (App. Exh. 1(c)); and Applicant's Exhibit 2, letter from Kenneth W. Tanner, Chief, Claiborne Parish Fire District No. 6, to Louisiana Energy Services, L.P., July 13, 1994 (App. Exh. 2). (Tr. 30-33.)

CANT presented the testimony of Clifford J. Earl, the President of Resource Management Systems, Inc., a management and organizational consulting firm. (Earl at 1 fol. Tr. 80.) In admitting his prefiled direct testimony, the Board found that Mr. Earl was qualified by knowledge, experience, training, and education to testify as an expert on the adequacy of the Applicant's emergency plan. (Tr. 79.) Pursuant to the stipulation of the parties, Intervenor Exhibit 18, Regulatory Guide 3.67 (1992) (Int. Exh. 18) was admitted into evidence. (Tr. 81.)

The NRC Staff presented the testimony of Kevin M. Ramsey, a nuclear engineer in the Operations Branch of the Division of Industrial and Medical Nuclear Safety, Office of Nuclear Materials Safety and Safeguards, who was involved in the Staff review of the Applicant's emergency plan. (Ramsey at 1 fol. Tr. 155.) Although the Staff did not move the admission of Mr. Ramsey's testimony as that of an expert witness on emergency planning, he would qualify as such an expert by reason of his experience. Pursuant to a stipulation of the parties, NRC Staff Exhibit 1, NUREG-1491, "Safety Evaluation Report for the CEC, Homer, Louisiana" (1994) (Staff Exh. 1), was admitted into evidence. (Tr. 154.)

The Intervenor's basis H2 for contention H asserts:

LES has not identified primary routes for access of emergency equipment or for evacuation, as well as potential impediments to traffic flow (rivers, drawbridges, railroad grade crossings, etc.). Moreover, it has not specified whether fire stations, police stations, hospitals, and other offsite emergency support organizations are qualified to handle exposure to radioactive contamination or toxic chemicals.

The Commission's regulations for facilities licensed under Part 40 and Part 70 contain identical requirements concerning the information that must be included in the facility emergency plan. With respect to the features of the site, the regulations, 10 C.F.R. §§ 40.31(j)(3)(i) and 70.22(i)(3)(i), state that the plan must include the following: "Facility description. A brief description of the licensee's facility and area near the site." The statement of considerations accompanying the final emergency plan rule repeats this succinct regulatory



language and then states that "[t]he purpose is to provide the reader with enough basic information to evaluate the licensee's plan. Significant nearby facilities, such as schools, should be included in the site area description." 54 Fed. Reg. at 14,054.

In contrast to the brevity of the facility description provision of the emergency plan regulations, the Staff's Regulatory Guide 3.67 expands exponentially the information about the facility that should be included in the plan. That guidance first calls for a description of the licensed activities conducted at the facility including the type, form, and quantities of radioactive and other hazardous material present on the site. Next, it requires a description of the facility that includes a detailed scale drawing of a prescribed size containing five categories of geographical features plus a bar scale and compass indicating north. Finally, the guidance calls for a description of the area near the site that includes six categories of information located and identified on an area site map or an aerial site photograph. The third informational category calls for the identification of the primary routes for site access and evacuation and the identification of traffic flow impediments. The fourth informational category requires the "[l]ocations of fire stations, police stations, hospitals, and other offsite emergency support organizations (specify whether qualified to handle exposure to radioactive contamination or toxic chemicals)." (Int. Exh. 18: Reg. Guide 3.67 § 1.3.)

Contrary to the Intervenor's first claim in basis H2, the primary routes for access to the CEC and evacuation from the facility are included in the CEC Emergency Plan. (App. Exh. 1(c), Fig. 1.3-4; § 1.3; LeRoy at 13 fol. Tr. 40.) Further, the LES Licensing Manager, Mr. LeRoy, in his prefiled direct testimony indicated that there are no impediments to traffic flow. He also stated that the same type of emergency vehicles that would respond to the CEC in the event of an emergency regularly use the roads accessing the facility. (LeRoy at 13-14 fol. Tr. 40.) In like vein, the NRC Staff's witness, Mr. Ramsey, stated in his prefiled direct testimony that the CEC Emergency Plan description of the site area was adequate. (Ramsey at 4 fol. Tr. 155.) The Intervenor presented no evidence to support its claim. Thus, we find that LES has met its burden on this claim in basis H2 and this claim cannot be sustained.

The Intervenor's second claim in basis H2, i.e., LES has not specified whether emergency organizations are qualified to handle radioactive contamination or toxic chemicals, also cannot be sustained. CANT's expert, Mr. Earl, identified 10 C.F.R. §§ 40.31(j)(3)(i) and 70.22 (i)(3)(i) and the Commission's brief statement about the facility description provision in its statement of considerations accompanying the promulgation of the emergency plan rule, *see infra* pp. 148-49, as the foundation for the facility description requirement. He also asserted that Regulatory Guide 3.67 "prescribes the criteria for an 'acceptable' emergency plan." (Earl at 4 fol. Tr. 80.) Indeed, CANT's claim is taken directly

from that regulatory guide and parrots its language. But, as we have previously indicated, such Staff guidance is not a regulation and compliance with it is not mandatory. Rather, we must judge the adequacy of the CEC Emergency Plan by the requirements of the Commission's regulations. Here, we simply cannot find that the regulatory requirements of 10 C.F.R. §§ 40.31(j)(3)(i) and 70.22(i)(3)(i), which call only for "[a] brief description of the licensee's facility and area near the site," mandate that the CEC Emergency Plan must include qualification information about the ability of emergency support organizations to handle exposure to radioactive contamination or toxic chemicals. Even the NRC Staff, as the author of the guidance, concedes this point in its proposed findings when it states that "[a]lthough the regulatory guide suggests that Applicant specify whether the local fire stations, police stations, hospitals and other offsite emergency support organizations are qualified to handle exposure to radioactive contamination or toxic chemicals, the regulations call only for a description of the facility and area near the site." NRC Staff's Proposed Findings of Fact and Conclusions of Law Regarding Contentions H, L, and M (Oct. 21, 1994) at 20.

Moreover, the premise underlying the Commission's emergency plan regulations is that "the normally available capabilities of States and local governments for responding to industrial emergencies and the normally available radiological health capabilities of States will be adequate to deal with accidents at fuel cycle and other radioactive material licensees." 54 Fed. Reg. at 14,057. Further, the Commission stated that "[p]olice and emergency personnel have generally been quite proficient in handling similar types of emergencies, such as truck and rail accidents." *Id.* Thus, contrary to the Intervenor's claim, we cannot find that the CEC Emergency Plan does not comply with NRC regulations for not specifying the qualifications of emergency organizations when such information is not required by those regulations.

Nonetheless, even though the information called for in Regulatory Guide 3.67 is not required by the Commission's regulations to be included in a facility emergency plan, the Applicant has committed to meet the Staff's guidance. Mr. LeRoy stated unequivocally that "LES is committed to meet regulatory requirements and will conform to the guidance set forth in Reg. Guide 3.67." (LeRoy at 10 fol. Tr. 40.) Normally, an applicant's commitments are made to the Staff and, as such, are a matter for the Staff to enforce. Here, however, LES made this commitment before us as part of its evidentiary case in support of license authorization. In these circumstances, we cannot ignore the Applicant's commitment if we are to preserve the integrity of the hearing process. Thus, we must insist that the Applicant meet its voluntary commitment to exceed the requirements of the regulations on this matter and conform the CEC Emergency Plan to Regulatory Guide 3.67.

This agency guidance requires that an emergency plan include an area map or aerial photograph of the site indicating onsite and near site structures. On

this photograph or map the Staff guidance calls for the Applicant to include the locations of the various offsite emergency support organizations. (Int. Exh. 18; Reg. Guide 3.67 § 1.3.) Along with marking the locations of such emergency organizations on the map, it instructs the applicant to specify whether each organization is qualified to handle exposure to radiological contamination or toxic chemicals. Although the CEC Emergency Plan contains the requisite map locating the offsite emergency organizations, the map carries no legend or other marking denoting the qualifications of each offsite organization to handle radiological or toxic chemical exposure. (App. Exh. 1(c), Fig. 1.3-4.) The Applicant must, therefore, revise the CEC Emergency Plan to make this amendment so that the LES plan conforms to its voluntary commitment to us.

Rather than impose a license condition to ensure that the Applicant makes the necessary revision to the CEC Emergency Plan, we believe that it is more appropriate in the circumstances to request that the Staff issue a brief supplement to the SER before any license is issued indicating that the Applicant has made the appropriate amendment and thus met its voluntary commitment to us. Moreover, because the Applicant's commitment to conform its emergency plan to the Staff's regulatory guidance was not limited to this one matter, the Staff should ensure that the entire plan conforms in all respects to Regulatory Guide 3.67.

Even though the Applicant has not specifically noted on an area map whether the emergency response organizations are qualified to handle exposure to radioactive contamination or toxic chemicals as called for by the Staff guidance, we are satisfied that the CEC Emergency Plan contains sufficient information for us at least reasonably to infer that all emergency response organizations are qualified or, as a result of planned training, will be qualified to handle exposure to radioactive contamination or toxic chemicals by the time the facility commences operation. (*Id.* §§ 4.3, 5.5.1.1, 5.7, 7.2.3, 11.0; LeRoy at 15-16 fol. Tr. 40; Tr. 93, 96.) Further, the NRC Staff's witness, Mr. Ramsey, indicated that, under the training regimen of the plan, the emergency response organizations would all be qualified to handle radioactive and chemical contamination. (Tr. 165-66.)

Moreover, the Intervenor offered no evidence that the various offsite emergency response organizations were not qualified in this regard. Rather, the Intervenor's expert, Mr. Earl, testified that the applicable Staff guidance requires that the Applicant's emergency plan contain sufficient information about the knowledge, skills, and abilities of the personnel of such organizations to permit independent evaluation whether they can successfully perform their planned duties. The quantity and type of information that Mr. Earl seeks to have included in the emergency plan, however, is much more extensive than the simple notation of qualifications called for by Regulatory Guide 3.67 and far exceeds the Commission's regulatory requirements. Thus, rather than offer testimony or other evidence that the offsite emergency organizations are, in fact, not quali-

fied, or that the planned training will not make them qualified, the Intervenor merely claims there is not enough information or detail in the plan to determine qualifications. We do not agree that the information contained in the Applicant's emergency plan is insufficient to determine the qualifications of the emergency response organizations. In any event, the level of information in the emergency plan that CANT asserts is necessary is not the regulatory standard for judging the adequacy of the CEC Emergency Plan nor is it the standard of the NRC Staff guidance. We find, therefore, that the Intervenor's second claim in basis H2 cannot be sustained.

In basis H3, CANT asserts:

The Emergency Plan does not include the following items: a list of all hazardous chemicals used at the site, typical quantities possessed, and locations of use and storage; description of stack heights, typical stack flow rates, and the efficiencies of any emission control devices; or identification of communication and assessment centers, assembly and relocation areas, and process and storage areas.

Contrary to the assertions set forth in CANT's original basis H3, all of the missing items are now contained in the CEC Emergency Plan and that information has been found acceptable by the NRC Staff. (App. Exh. 1(c) § 1.2, Tables 1.2-1 to 1.2-4; LeRoy at 21-22 fol. Tr. 40; Ramsey at 5 fol. Tr. 155.) Thus, we find that LES has met its burden on the claims contained in basis H3 and these claims cannot be sustained.

In basis H4, the Intervenor asserts:

LES does not identify and describe each type of radioactive materials accident for which actions may be needed to prevent or minimize exposure of persons off-site to radiation or radioactive materials. For all accidents that are postulated pursuant to DG-3005 §§ 2.1.1 and 2.1.2, LES should meet the requirements of draft Regulatory Guide DG-3005, which include identifying the exposure levels at the site boundary (i.e., the levels potentially affecting persons off-site.) For criticality accidents, direct radiation exposure from postulated criticality accidents should be evaluated in addition to the dose from released radioactive materials.

With respect to the various types of accidents that may occur at a facility, the Commission's regulations, 10 C.F.R. §§ 40.31(j)(3)(ii) and 70.33(i)(3)(ii), require the facility emergency plan to provide "[a]n identification of each type of accident for which protective actions may be needed." In the statement of considerations accompanying the emergency plan rule, the Commission stated in regard to this provision that

[t]ypically, the accidents of concern are fires involving radioactive materials, releases of large quantities of uranium hexafluoride, and criticalities involving high-enriched uranium or



plutonium. Releases of hazardous chemicals that could affect the radiological safety of the facility and result in releases of or exposure to radioactive materials must also be considered.

54 Fed. Reg. at 14,054.

Contrary to the first claim in CANT's basis 4, the CEC Emergency Plan identifies and describes each type of accident with potential offsite consequences. The Applicant's listing of postulated accidents (i.e., those events involving  $UF_6$  releases that could exceed NRC exposure guidelines) includes those caused by natural phenomena, a nuclear criticality event, and various other accident scenarios. The plan also includes a listing of abnormal operational events that could result in a release of  $UF_6$  beyond the site boundary. (App. Exh. 1(c) §§ 2.1.1, 2.1.2; LeRoy at 24 fol. Tr. 40.) Additionally, the CEC Emergency Plan identifies the accident with the maximum exposure level at the site boundary as occurring from a autoclave heater malfunction accident. The plan states that maximum exposure from all other postulated accidents would be less than that occurring from this bounding accident. (App. Exh. 1(c) § 2.1; LeRoy at 24 fol. Tr. 40.) Finally, the Applicant's plan evaluates at the site boundary the direct radiation exposure and the dose from released radioactive material from a criticality event. (App. Exh. 1(c) § 2.1.1.2; LeRoy at 25 fol. Tr. 40.) Thus, the CEC Emergency Plan adequately identifies the type of accidents for which protective actions may be needed as required by the Commission's regulations. Additionally, the NRC Staff found that the Applicant's identification and description of accidents in the plan is adequate. (Ramsey at 5 fol. Tr. 155.)

The Intervenor presented no testimony to support its specific claims in basis H4. Rather, its expert, Mr. Earl, generally challenged the adequacy of the CEC Emergency Plan for not providing sufficient details about each postulated accident, including such information as the nature, location, timing, and consequences of the accident. He also criticized the Applicant's description of postulated accidents for failing to include the potential size and scope of the accident, the mitigating actions that would need to be undertaken, and the consequences of delay or failure to take timely mitigative actions. (Earl at 14-15 fol. Tr. 80.) Once again, however, Mr. Earl seeks a level of information well beyond what is required by the Commission's regulations or even the NRC Staff regulatory guidance for the identification and description of the type of accidents for which protective actions may be needed. Further, some of the information he seeks, such as that concerning mitigating actions, is required by other regulations and appears in other parts of the CEC Emergency Plan. (See 10 C.F.R. §§ 40.31(j)(3)(v) and 70.22(i)(3)(v); App. Exh. 1(c) § 5.3.) Most importantly, in his call for greater detail, Mr. Earl did not review or evaluate the Applicant's Safety Analysis Report, which is prominently referenced in the postulated accident identification section of the CEC Emergency Plan. (Earl Tr. 117-18.) The Applicant's SAR contains an analysis for each of the



postulated accidents set out in the emergency plan. That analysis includes a full description of the accident, its causes, and consequences. (App. Exh. 1(a) § 9.2.) The Commission's regulations do not require that the level of detail contained in the Applicant's SAR with respect to postulated accidents be set forth in the emergency plan. Indeed, the Staff's regulatory guidance specifically recognizes that such detailed information may be incorporated by reference in the emergency plan. (Int. Exh. 18: Regulatory Guide 3.67 at 1.) Accordingly, the Applicant has met its burden on the claims contained in basis H4 and these claims cannot be sustained.

CANT's basis 5 for contention H asserts:

LES has provided few details to meet the requirements of DG-3005 § 3.2. For example, it is unclear that state authorities will be notified within 15 minutes of declaration of a Site Area Emergency, and who will notify them; whether the NRC will be notified within 1 hour, and who will notify it; who has the authority to recommend and initiate on-site and off-site protective actions, and under what conditions these actions will be taken. As currently presented, the Emergency Plan seems designed to respond to only the most limited emergency situations.

The Commission's regulations, 10 C.F.R. §§ 40.31(j)(3)(viii) and 70.22(i)(3) (viii), require that the facility emergency plan include

[a] commitment to and a brief description of the means to promptly notify offsite response organizations and request offsite assistance, including medical assistance for the treatment of contaminated injured onsite workers when appropriate. A control point must be established. The notification and coordination must be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify the NRC operations center immediately after notification of the appropriate offsite response organizations and not later than one hour after the licensee declares an emergency [footnote omitted].

Contrary to the various claims in Intervenor's basis H5, the CEC Emergency Plan contains all necessary information required by the Commission's regulations dealing with the notification of authorities. (App. Exh. 1(c) §§ 3.2.1, 3.2.2, 4.2.1, 4.3, 4.4, 5.4; LeRoy at 26 fol. Tr. 40.) The plan clearly identifies the CEC Emergency Coordinator as the LES official responsible for notifying state and local authorities and the NRC (App. Exh. 1(c) §§ 3.2.1, 3.2.2, 4.2.1; LeRoy at 26 fol. Tr. 40) and a current telephone listing of all offsite response organizations is maintained in the Emergency Plan Implementing Procedures ("EPIP") for the plan and verified and updated quarterly. (App. Exh. 1(c) §§ 4.3, 7.8.) The classification scheme covering all incidents at the facility establishes and clearly defines two categories of events, i.e., an alert and a site area emergency, based upon a threshold release of  $UF_6$ . (*Id.* §§ 3.0, 3.1.) Upon the declaration of an alert or site emergency the plan requires that the CEC Emergency Coordinator

[n]otify) the appropriate offsite assistance organizations and the Nuclear Regulatory Commission (NRC). The offsite organizations will be notified within 15 minutes of declaring an Alert. Immediately following notification of the offsite assistance organizations, the NRC will be notified. In all cases, the NRC will be notified within 1 hour of declaring an Alert.

(*Id.* § 3.2.1 at 3-5.) Further, the plan provides that the CEC Emergency Coordinator is responsible for recommending and initiating onsite protective actions and for recommending offsite protective actions to the appropriate state and local authorities. (*Id.* §§ 3.2.1, 3.2.2; LeRoy at 26 fol. Tr. 40.) Under the plan, initiation of offsite protective actions is left to the discretion of the appropriate offsite authorities. (LeRoy at 26 fol. Tr. 40; App. Exh. 1(c) § 3.3.) Leaving the responsibility for the initiation of offsite protective actions in the hands of state and local authorities is, of course, the premise underlying the Commission's emergency plan rule. *See* 54 Fed. Reg. at 14,052, 14,057. Finally, and contrary to the last claim in Intervenor's basis H5, the CEC Emergency Plan, taken as a whole, is designed to respond to the full range of potential events and accidents at the facility. (LeRoy at 27 fol. Tr. 40; App. Exh. 1(c).) In this regard, the NRC Staff's witness, Mr. Ramsey, stated that the Staff found that the provisions in the emergency plan for notifying offsite response organizations and recommending protective actions are adequate. (Ramsey at 5 fol. Tr. 155.) Based upon this evidence, we find that the Applicant has met its burden on the claims contained in basis H5 and that these claims cannot be sustained.

In his testimony, CANT's expert largely ignores the Intervenor's claims in basis H5 and the Intervenor presented no other testimony or evidence directly to support them. Rather, Mr. Earl asserts that the Applicant's plan fails to provide sufficient detail to demonstrate that offsite authorities can or will be notified within 15 minutes. Mr. Earl faults the plan for not providing the title of the state and local authorities who will receive notification from the CEC and, in the case of the Claiborne Parish Sheriff's Department, the title of the person who will retransmit the notification to the firefighters, hospital, or highway patrol. Additionally, Mr. Earl claims that the plan neither states nor demonstrates that the offsite personnel needed to respond to an emergency can be notified promptly or arrive at their duty stations in time. Similarly, he asserts that the emergency plan fails to demonstrate that notification for effective offsite protective actions can be accomplished in a timely fashion. (Earl at 17 fol. Tr. 80.)

The Commission's emergency plan regulations require the Applicant to provide "a brief description of the means to promptly notify offsite response organizations." 10 C.F.R. §§ 40.31(j)(3)(viii) and 70.22(i)(3)(viii). This regulatory requirement simply does not require the level of detailed information that the Intervenor's expert asserts is essential for an emergency plan. Nor does the Commission's regulatory requirement of "a brief description" require a *demonstration* that the Applicant's emergency plan will accomplish the various

notifications. Likewise, the agency's regulations do not require, as Mr. Earl would have it, that the Applicant's plan demonstrate that the offsite emergency response organizations can respond to their duty stations "in time." (Earl at 17 fol. Tr. 80.) We note, however, that even though such a demonstration is unnecessary, the evidentiary record amply supports the conclusion that Claiborne Fire District No. 6 volunteer firefighters can and will timely respond to the CEC and that the dispatch process through the sheriff's office is adequate. (LeRoy at 19-20 fol. Tr. 40; Tr. 82-95.) We have no basis to conclude, and the Intervenor has provided us none, that the CEC Emergency Coordinator will not make the required notifications in a timely manner as set forth in the Applicant's plan.

CANT's basis H6 asserts:

In much of its operation, the LES plant will be operating with a skeletal 4-6 person shift. It is unclear who will have emergency response authority when a full operating crew is not present. It is also unclear where emergency telephone numbers and other types of communication will be placed in the facility; whether all shift personnel will have had adequate training in emergency procedures; whether there will be shift personnel at all times with authority to undertake emergency measures.

The claims in Intervenor's basis H6 generally relate to the responsibilities of CEC personnel and the adequacy of the training of shift personnel. With respect to the former, the Commission's regulations, 10 C.F.R. §§ 40.51(j)(3)(vii) and 70.22(i)(3)(vii), provide that the emergency plan must include "[a] brief description of the responsibilities of licensee personnel should an accident occur, including identification of personnel responsible for promptly notifying offsite response organizations and the NRC; also responsibilities for developing, maintaining, and updating the plan." With regard to training, the Commission's regulations, 10 C.F.R. §§ 40.31(j)(3)(x) and 70.22(i)(3)(x), state that the facility plan must contain

[a] brief description of the frequency, performance objectives and plans for the training that the licensee will provide workers on how to respond to an emergency including any special instructions and orientation tours the licensee would offer to fire, police, medical and other emergency personnel. The training shall familiarize personnel with site-specific emergency procedures. Also, the training shall thoroughly prepare site personnel for their responsibilities in the event of accident scenarios postulated as most probable for the specific site, including the use of team training for such scenarios.

The Intervenor's assertions in basis H6 that the emergency plan fails to delineate who has emergency response authority when a full operating crew is not present and whether shift personnel have authority to undertake emergency measures are without merit. The CEC Emergency Plan provides that during nonregular hours, such as backshifts and weekends, when the full complement of station personnel are not present, the facility always is staffed with at least a shift

supervisor, four operators, and the requisite number of security personnel. (App. Exh. 1(c) § 4.2.) Because the number of security personnel on site at any given time is protected safeguards information, the emergency plan does not include this information. The plan provides, however, that under emergency conditions during nonregular hours the CEC Emergency Organization is staffed with the shift supervisor as the CEC Emergency Coordinator, who has the authority and responsibility unilaterally to initiate any emergency actions. (*Id.* §§ 4.2, 4.2.1.) Further, the plan provides that during an emergency the operators assume the mantle of CEC Operations Shift Technicians and the security personnel fulfill the CEC Emergency Organization's security functions. (*Id.* § 4.2.) The applicable organization chart in the plan for the CEC Emergency Organization indicates that the security personnel perform fire control, first aid, evacuation, and search and rescue duties during an emergency. (*Id.*, Table 4.2-1.) The plan also provides that in an emergency occurring during nonregular hours, the remainder of the CEC Emergency Organization is staffed by persons summoned to the facility and that the procedures for such staffing will be set forth in the EPIP. (*Id.* § 4.2.) According to the NRC Staff's witness, the Staff found that the Applicant's emergency organization staffing was adequate. (Ramsey at 6 fol. Tr. 155.) Thus, contrary to CANT's claims, the Applicant's plan meets the requirement of the Commission's regulations for "[a] brief description of the responsibilities of licensee personnel" in an emergency during nonregular hours. We find, therefore, that the Applicant has met its burden on these claims in basis H6 and these claims cannot be sustained.

In basis H6, the Intervenor also claims that the Applicant's plan fails to detail clearly where emergency telephone numbers and other types of communications will be placed in the facility. Additionally, CANT's expert, Mr. Earl, asserts in his prefiled direct testimony that the plan fails to describe communications channels to summon offsite assistance and that the plan provides insufficient detail to demonstrate that skeletal shifts will have the necessary qualifications to fight fires and prevent or mitigate accidents. (Earl at 18, 19 fol. Tr. 80.)

Contrary to these assertions, the Applicant's plan provides that the offsite telephone numbers of all emergency personnel that may be needed at the plant will be placed in the control room, which is the primary Emergency Operations Center, and also in the Administration building security station, which is the secondary Emergency Operations Center. (App. Exh. 1(c) § 4.2; LeRoy at 28 fol. Tr. 40.) The plan also details the four communications systems at the CEC: (1) the facility telephone system; (2) the public address system; (3) the alarm system; and (4) the two-way radios. It indicates that these systems are designed so that a single failure in one system does not leave the facility without communications capability. Further, the systems are designed with redundant devices for emergency conditions and backup power is supplied to essential devices to ensure communications during abnormal conditions. The plan states



that radios are the major communications equipment used during emergencies, that the CEC radios are compatible with those of offsite emergency response organizations, and that spare portable radios are maintained in the primary and secondary Emergency Operations Centers. Additionally, under emergency conditions, backup communications also are accomplished by mobile telephones. (App. Exh. 1(c) §§ 6.2, 6.3; LeRoy at 28 fol. Tr. 40; App. Exh. 1(a) § 6.4.8.1.) Finally, the emergency plan provides that alarm systems indicating abnormal operating conditions are part of the central control room for each plant unit and the control room has direct intercom equipment to all principal points within and outside the plant. The control rooms also have radio and public address audio communication with operators and supervisors in the operating areas of the plant. (App. Exh. 1(c) §§ 5.3, 6.1; LeRoy at 9 fol. Tr. 40; App. Exh. 1(a) § 6.4.8.1.) We find, therefore, that the description in the plan of the types and locations of communications equipment and the description of the telephone listings for emergency personnel and their locations is adequate.

Similarly, we find that the Applicant's plan sufficiently describes the communications channels to summon offsite assistance. The CEC Emergency Plan sets out the communications process for contacting offsite emergency response organizations and spells out the information to be communicated. (App. Exh. 1(c) §§ 3.3, 3.2.2.) As previously indicated, the plan describes the CEC emergency organization officials responsible for notifying the offsite emergency response organizations and the means available for such communications. (*Id.* §§ 4.2, 4.4, 5.2.)

The Applicant's plan also adequately describes the training of CEC personnel so that, once trained, skeletal shifts will be qualified to fight fires and prevent or mitigate accidents. The plan provides that all workers at the facility are trained in the physical characteristics and potential hazards involved with plant processes and materials so that in the event of an incident at the facility they know how to lessen their exposures to chemical and radioactive materials. (*Id.* § 2.1; LeRoy at 9 fol. Tr. 40.) The plan describes the LES training and training exercise program, including its frequency, for all onsite personnel as well as offsite emergency responders. That program includes provisions for evaluating, and critiquing training exercises. (App. Exh. 1(c) §§ 7.2, 7.3.) Although the Applicant's plan does not include any separate provisions concerning the specific training of the onsite fire brigade, a brief description of that training is set out in the CEC Safety Analysis Report. (App. Exh. 1(a) § 11.3.1.1.2.) Finally, the NRC Staff's witness indicated that the Staff found the Applicant's provision for training adequate. (Ramsey at 6 fol. Tr. 155.) Thus, with respect to training that will lead to qualified firefighters, we find that the Applicant's plan complies with the Commission's regulations which require "[a] brief description" of the training program. We find, therefore, that the Applicant has met its burden on CANT's claims in basis H6 and these claims cannot be sustained.



CANT's basis H7 asserts:

The list of participating government agencies in § 4.4 of the Emergency Plan does not include the Claiborne Parish Emergency Response Committee, the primary body responsible for coordinating and responding to emergencies in Claiborne Parish. Nor does the list include the Homer Fire Department, the largest and closest such agency in the jurisdiction.

Contrary to the Intervenor's original claims in basis H7, the list of participating government agencies in the CEC Emergency Plan now includes the Claiborne Parish Emergency Response Committee, which is the local representative of the Louisiana Emergency Response Commission. (App. Exh. 1(c) §§ 4.3, 4.4; LeRoy at 35 fol. Tr. 40.) The plan also includes an agreement letter with that committee confirming its participation with the Applicant in planning for and assisting in the management of any emergency at the CEC. (App. Exh. 1(c), Appendix at 11-9.) Further, because the CEC is located in Claiborne Parish Fire District No. 6, which includes the Lisbon Volunteer Fire Department, that nearby constituent fire department is the primary responder and it is included on the plan's list of participating government agencies. (*Id.* § 4.3.) The fire department in Homer, Louisiana, only provides backup to Claiborne Parish Fire District No. 6 so it is not included in the list of primary participating government agencies. (LeRoy at 30 fol. Tr. 40.) We find that the Applicant has met its burden on the claims contained in basis H7 and these claims cannot be sustained.

In basis H10, the Intervenor asserts:

For each participating government agency, § 4.4 of the Emergency Plan fails to describe the agency's authority and responsibility in a radiological or hazardous material emergency and its interface with others, if any; its specific response capabilities in terms of personnel and resources available; or what rumor control arrangements have been made with the agency or organization.

As in the case of CANT's bases H5 and H6 these claims largely implicate the responsibility and the notification and coordination provisions of the Commissions regulations, 10 C.F.R. §§ 40.31(j)(3)(vii), (viii), and 70.22(i)(3)(vii), (viii).

Contrary to the Intervenor's claims, the Applicant's emergency plan sets out the authority and responsibility of each participating government agency for a radiological or hazardous material emergency. (App. Exh. 1(c), Table 4.4-1.) The plan does not detail how those government agencies interface with each other but such interface is not a regulatory requirement or a required measure under the NRC Staff's regulatory guidance. (See 54 Fed. Reg. at 14,057; Int. Exh. 18: Regulatory Guide 3.67 § 4.4.) The Applicant's expert, Mr. LeRoy, testified that in responding to emergencies in Claiborne Parish it is the practice of the various emergency response organizations for each organization to operate within its own area of responsibility and that these organizations have had no

past problems coordinating their responsibilities with one another in such an ad hoc manner. (Tr. 94-95.) The plan also gives a brief description of the equipment and personnel response capabilities of each participating government agency. (App. Exh. 1(c), Table 4.4-1; LeRoy Tr. 88-92, 99-101.)

Finally, with regard to rumor control, the emergency plan provides that controls such as passwords and call-back verification procedures are used with offsite organizations to ensure that only real and accurate information is released to such organizations and the media. (App. Exh. 1(c) §4.4; LeRoy at 30 fol. Tr. 40.) Additionally, the plan specifies that the LES Community Relations Coordinator is responsible for coordinating news releases. That official has a direct line of communication to the CEC Manager in order to ensure current and factual information. According to the plan, guidelines and provisions for media and public access to information are set out in the EPIP. In the event of an emergency at the facility, the plan states that the Community Relations Coordinator will notify designated media contacts and provide them by telecopier or by personal runner approved news releases and schedules for any news conferences. To help eliminate inaccurate information to the news media and the public, the plan contains a sample form news release. (App. Exh. 1(c) § 5.8, Figure 5.8-1; LeRoy at 30-31 fol. Tr. 40.) In light of these various provisions, we find that the Applicant has met its burden on the claims contained in basis H10 and these claims cannot be sustained.

In his prefiled direct testimony, the Intervenor's expert, Mr. Earl, made a number of additional allegations that are generally related to the claims in basis H10. He asserts that the Applicant's plan lacks sufficient information about coordinating and interfacing offsite emergency organizations with onsite personnel. (Earl at 8, 21 fol. Tr. 80.) But the Applicant's emergency plan provides that during emergencies at the CEC all offsite assistance organizations called to the plant are met at the entrance gate by facility security personnel and immediately assigned an escort and that escort is in charge and responsible for directing and coordinating the offsite responder's activities. The plan specifically provides that this access procedure is practiced during emergency exercise drills and that CEC emergency organization personnel meet at least once a year with offsite assistance groups for training and to review matters of interest. (App. Exh. 1(c) §§ 4.3, 4.4; LeRoy Tr. 93-94.) Accordingly, we find that the Applicant's provision for coordinating the emergency activities of onsite CEC personnel with offsite assistance organizations is adequate.

Mr. Earl also variously asserts that the CEC Emergency Plan is unclear and contradictory with regard to firefighting responsibilities. (Earl Tr. 7, 9-11.) Contrary to the thrust of one of Mr. Earl's assertions, however, the fact that the Applicant's emergency plan contemplates that offsite emergency organizations, including offsite firefighters, may have responsibilities offsite for implementing certain protective actions in the event of a site area emergency and those same

organizations, including offsite firefighters, also may have responsibilities onsite at the facility to respond to a fire or other situation during that same site area emergency does not make the plan ambiguous or contradictory. (App. Exh. 1(c) §§ 3.1.2, 4.3.) The participating government agencies have the capability to perform both offsite and onsite functions and the Commission's regulations specifically anticipate that dual role for emergency response organizations. 54 Fed. Reg. at 14,052.

Mr. Earl also asserts that the Applicant's plan is ambiguous as to the onsite responsibility of offsite fire departments for fighting fires at the site. Although we do not find that the various provisions of the CEC Emergency Plan that Mr. Earl relies upon support his assertion, we are troubled by the testimony of the Applicant's expert, Mr. LeRoy, that appears to contradict statements in the CEC SAR and the Staff's SER and thereby introduces such an ambiguity. The Applicant's SAR states that "[t]he intent of the facility fire brigade is to be a first response effect designed to supplement the local fire department for fires at the plant and not to replace local fire fighters." (App. Exh. 1(a) § 11.3.1.1.2.) The Staff's SER copies this same statement. (Staff Exh. 1 § 10.4.3.) In his prefiled direct testimony, however, Mr. LeRoy stated that "the off-site fire fighting capability will be relied upon as a backup to on-site fire fighting capabilities." (LeRoy at 19 fol. Tr. 40.) Mr. LeRoy's testimony appears to contradict the statements in the Applicant's own SAR and the Staff's SER. This matter is important because the intended role of the onsite fire brigade may affect the number of fire brigade members needed and the kind of training the brigade should receive. To correct any ambiguity introduced by Mr. LeRoy's testimony regarding the role of the offsite fire departments, the Applicant shall amend the CEC Emergency Plan to include a clear statement of the function of the offsite fire department with respect to onsite firefighting responsibilities. If the function of the onsite fire brigade now differs from the role set forth in the SAR, the Applicant shall revise the SAR accordingly. Similarly, if additional training or the size of the brigade must be increased because of the changed role of the onsite brigade, the emergency plan should be revised to reflect this changed role. The Staff shall ensure that the SER, which it introduced into evidence, reflects the correct role of the onsite fire brigade. Any necessary changes should be included in a supplement to the SER. If the function of the onsite fire brigade differs from the role described in the SER, the Staff shall ensure that the size and training of the brigade are sufficient to meet such a differing role.

CANT's basis H17 asserts:

LES has provided no proposed measures for mitigating the consequences of accidents at the CEC for the off-site public. LES also fails to describe, in the event of a warning of impending danger, the criteria that will be used to decide whether a single process or the entire facility will be shut down and the steps that will be taken to ensure a safe orderly shutdown of equipment.

The Commission's regulations, 10 C.F.R. §§ 40.31(j)(3)(v) and 70.33(i)(3)(v), require the facility emergency plan to contain "[a] brief description of the means and equipment for mitigating the consequences of each type of accident, including those provided to protect workers onsite, and a description of the program for maintaining the equipment." The regulations, 10 C.F.R. §§ 40.31(j)(3)(xi) and 70.33(i)(3)(xi), further require that the plan include "[a] brief description of the means of restoring the facility to a safe condition after an accident."

Contrary to the claims in basis H17, the Applicant's emergency plan adequately describes the mitigating actions to be taken by plant operating personnel during an accident. (App. Exh. 1(c) § 5.3; LeRoy at 32 fol. Tr. 40.) The plan specifically provides that in the event of a situation where releases could reach offsite persons, the CEC Emergency Coordinator makes recommendations to offsite authorities concerning safeguards for offsite persons. Specific recommendations would depend upon the event in progress and meteorological conditions but, in the worst case, could include advising people to go indoors, close all doors and windows, and turn off any ventilating systems drawing air from the outside. In order to familiarize offsite persons with the potential hazards of the CEC and the implementation of emergency measures, a brochure is sent to each home within one mile of the facility describing the operation of the CEC and what could be expected during a serious emergency at the facility. (App. Exh. 1(c) § 5.44.) Under the provisions of the Applicant's emergency plan for the classification of accidents, the decision to shut down the facility or isolated systems and how that is done is left to the discretion of the CEC Emergency Coordinator. (App. Exh. 1(c) § 3.2; LeRoy at 32 fol. Tr. 40.) The NRC Staff's witness, Mr. Ramsey, indicated that the Staff found the Applicant's description of mitigating actions in the plan adequate. (Ramsey at 7 fol. Tr. 155.) The Intervenor presented no testimony in support of its claims in basis H10. We find that the Applicant's plan satisfactorily complies with the mitigation and shut-down requirements of the Commission's regulations. The Applicant has met its burden with respect to the claims contained in basis H17 and these claims cannot be sustained.

CANT's basis H20 alleges:

LES has not described the plans for ensuring that the equipment and instrumentation are in good working condition and that an adequate stock of supplies is maintained; nor has LES implemented procedures to ensure timely corrective actions are taken when deficiencies in supplies are noted, as required by DG-3005 § 7.6.

The claims raised in basis H20 also implicate the provisions of the Commission's regulations on the mitigation of the consequences of an accident.

The Intervenor offered no testimony in support of its claims in basis H20. Contrary to these claims, however, the CEC Emergency Plan specifically



describes the emergency equipment and supplies that are available at the facility and their locations. (App. Exh. 1(c) §§ 5.4.2, 6.4.4.) The plan also provides that the emergency equipment and supplies are inventoried and tested as appropriate once per quarter to ensure that the supplies and equipment are available in emergencies. (App. Exh. 1(c) §§ 5.4.2, 7.6; LeRoy at 33 fol. Tr. 155.) Additionally, the NRC Staff's witness, Mr. Ramsey, indicated that the Staff finds that the provisions in the plan for inventory and maintenance are adequate. (Ramsey at 7 fol. Tr. 155.) Although the Applicant's emergency plan does not contain any explicit procedures for corrective actions when deficiencies in emergency equipment or supplies are discovered, the Applicant's witness, Mr. LeRoy, stated in his prefiled testimony that LES will implement procedures to ensure timely corrective actions when deficiencies in emergency equipment or supplies are found. (LeRoy at 34 fol. Tr. 40.) In this regard, the NRC Staff's witness indicated that the Staff found it acceptable, and consistent with its regulatory guidance, for the Applicant to deal with corrective actions in the facility EPIP. (Ramsey at 7 fol. Tr. 155.) We find, therefore, that the Applicant's provisions in the plan for the inventory and maintenance of emergency equipment and supplies comply with the applicable requirements of the Commission's regulations. The Applicant has met its burden on these claims and the claims contained in basis H20 cannot be sustained.

The last admitted bases for contention H, basis H23, asserts:

The Appendix to the Emergency Plan lacks the following information:

a. The letter from Homer Memorial Hospital does not specify for how many people the hospital may be able to transport and provide emergency care, including decontamination. This information should be specified. If these facilities, coupled with those from North Claiborne Hospital, are inadequate to provide treatment for a credible number of contaminated or chemically injured individuals, then further medical services agreements should be supplied.

b. Agreement letters are not supplied from the Claiborne Parish Emergency Planning Committee; the Homer Fire Department (which is larger and closer to the plant site than the Lisbon department); the Homer Police Department; or the Louisiana Emergency Response Commission.

c. The available resources of the Lisbon Volunteer Fire Department, Claiborne Parish Sheriff's office, and the Louisiana Highway Patrol are not specified. Thus, it is impossible to ascertain whether these agencies are capable of responding adequately to an emergency, or whether they have the jurisdictional authority to adequately respond to an emergency.

The Intervenor's claims in basis H23 implicate portions of the notification and coordination provisions of the Commission's regulations, 10 C.F.R. §§ 40.31(j) (3)(viii) and 70.22(i)(3)(viii).

Although the agreement letter from Homer Memorial Hospital in the Applicant's emergency plan does not specify how many people the hospital can transport and treat in the event of an emergency at the CEC, that information is



provided elsewhere in the plan. The plan states that Homer Memorial Hospital is capable of handling five persons in its emergency room and the emergency room has a staging area with twelve overflow beds. (App. Exh. 1(c), Table 4.4-1; LeRoy Tr. 100.) The plan indicates that the hospital has six staff physicians and that five specialists are on call. (App. Exh. 1(c), Table 4.4-1.) The Applicant's expert, Mr. LeRoy, explained that the emergency room is always staffed with at least one physician, one registered nurse, one licensed practical nurse, and two nurses' aides. (LeRoy Tr. 99.) Additionally, the plan provides that physicians associated with the hospital and hospital personnel participate in annual training involving the transportation and treatment of radiologically contaminated patients and their role in providing emergency support. (App. Exh. 1(c) § 5.7.) The hospital agreement letter also states that the hospital will store near the emergency room the CEC-provided emergency supply kit and permit its quarterly inventory by CEC. (*Id.*, Appendix at 11-2.)

Further, the emergency plan indicates that two ambulances from Metro Ambulance are available to transport patients and that 17-minute helicopter service to Shreveport medical facilities is available. (*Id.*, Table 4.4-1.) The plan states that in the event of an injury to facility personnel, Homer Memorial Hospital is contacted and provides for ambulance transportation from the plant to the hospital. If the injured individual is radiologically contaminated, the person is accompanied to the hospital by a qualified health physics representative. (*Id.* § 5.6.) The plan also includes an agreement letter with Metro Ambulance. (App. Exh. 1(c), Appendix at 11-4.) The Applicant's expert, Mr. LeRoy, explained that Metro Ambulance always has two ambulances in Claiborne Parish, one in Homer and one in Haynesville, and that the company has more than 30 ambulances in northern Louisiana parishes that can be moved to provide coverage in an emergency. (LeRoy Tr. 100-01.)

We find that the Applicant has met its burden on the claims in basis H23a and these claims cannot be sustained. There is no regulatory requirement dictating the specific information that must be contained in the Applicant's agreement letters. Rather the Commission's regulations require that the emergency plan contain a commitment and brief description of the means to obtain offsite assistance for injured contaminated workers. Here, we find that the Applicant's plan, including the agreement letters, provides the necessary commitment and brief description for transporting and treating any credible number of contaminated injured individuals.

The Intervenor's claims in basis H23b also are without merit. Contrary to CANT's assertion, the Applicant's plan includes an agreement letter with the Claiborne Parish Emergency Planning Committee. That committee is the local representative of the Louisiana Emergency Response Commission. (App. Exh. 1(c), Appendix at 11-9; LeRoy at 35 fol. Tr. 40.) As previously indicated, Claiborne Parish Fire District No. 6, which includes the Lisbon Volunteer Fire

Department, has jurisdiction over the geographical area of the CEC and is the primary responder to fires at the facility. The Applicant's plan includes an agreement letter with that emergency response organization. (App. Exh. 1(c), Appendix at 11-6; App. Exh. 2.) The Homer Fire Department provides backup to the primary responder. Similarly, the Claiborne Parish Sheriff's Department, not the Homer Police Department, has jurisdiction over the geographical area of the CEC and the Applicant's plan includes an agreement letter with the Sheriff's Department. (App. Exh. 1(c), Appendix at 11-7.) Accordingly, we find that the Applicant has met its burden on the claims contained in bases H23b and these claims cannot be sustained.

Likewise, the Intervenor's claims in basis H23c are without merit. The Applicant's plan specifies the available resources of the Lisbon Volunteer Fire Department, which is a component of Claiborne Parish Fire District No. 6. (*Id.*, Table 4.4-1.) The response capabilities of the Claiborne Parish Sheriff's Department and Louisiana Highway Patrol are not included in the CEC Emergency Plan. The Applicant considers that information proprietary because it relates to the physical security of the facility. During the proceeding, the Intervenor failed to take the necessary steps to obtain that information so CANT cannot now be heard to complain that it lacks the necessary information to determine whether the capabilities of those responding agencies are adequate. We find, therefore, that the Applicant has met its burden on the claims contained in basis H23c and these claims cannot be sustained.

In addition to the foregoing findings on contention H, we have carefully considered all of the Intervenor's other claims and assertions concerning the CEC Emergency Plan and find them to be without merit. We conclude that the CEC Emergency Plan complies with the Commission's emergency plan regulations and that contention H cannot be sustained. With regard to those matters where the plan fails to comply with the Staff's regulatory guidance, the Staff shall ensure that the Applicant makes all appropriate additions and amendments to the plan and its implementing procedures before issuing any license. As previously indicated, in order that we may ascertain that the Applicant has met its commitment to us, we request that the Staff issue a brief supplement to the SER indicating the necessary amendments LES has made so that the CEC Emergency Plan fully conforms to the Staff's regulatory guidance.

### III.

CANT's contentions L and M concern the adequacy of the Applicant's Fundamental Nuclear Material Control ("FNMC") Plan for detecting and preventing the unlawful production of enriched uranium at the CEC. In this regard, 10 C.F.R. § 70.22(b) provides that a license application to possess special nuclear

material or to operate a uranium enrichment facility must contain a full description of the applicant's program for control and accounting of the special nuclear material or any enrichment equipment in order to show how compliance with the Commission's material control and accounting ("MC&A") regulations will be accomplished.

The Commission's MC&A regulations require that the licensee of an enrichment facility "shall establish, implement, and maintain a NRC-approved material control and accounting system," *id.* § 74.33(a), through the creation of a fundamental nuclear material control plan. *Id.* § 74.33(b). That regulation further provides that the licensee's MC&A system must achieve nine enumerated performance objectives, including the ability to "[p]rotect against and detect production of uranium enriched to 10 percent or more in the isotope U<sup>235</sup>" and "[p]rotect against and detect unauthorized production of uranium of low strategic significance." *Id.* § 74.33(a)(2) and (3). To meet these general performance objectives, the regulation also requires that the licensee establish, document, and maintain, *inter alia*,

- [a] detection program, independent of production, that provides high assurance of detecting:
  - (i) Production of uranium enriched to 10 percent or more in the U<sup>235</sup> isotope, to the extent that SNM of moderate strategic significance could be produced within any 370 calendar day period;
  - (ii) Production of uranium enriched to 20 percent or more in the U<sup>235</sup> isotope; and
  - (iii) Unauthorized production of uranium of low strategic significance;

*Id.* § 74.33(c)(5). Finally, in order to authorize a license for an enrichment facility, the Commission's regulations require that we find the applicant's MC&A plan adequate. *Id.* § 70.23(a)(6).

Because CANT's contentions L and M involve the same general safeguards subject matter, the contentions were combined for hearing. (Tr. 189-90.) The Intervenor's contention L asserts:

In order to provide reasonable assurance that gas centrifuge equipment at the CEC is not unlawfully diverted to the production of highly enriched uranium (HEU), the applicant's fundamental nuclear material control (FNMC) plan should require continuous or frequent online enrichment monitoring for all cascades. To ensure the effectiveness of such monitoring, the plan should stipulate minimum process pipe inner diameters of 110 millimeters or greater at all potential measurement points.<sup>41</sup> The current design of the CEC does not meet these specifications.<sup>42</sup>

<sup>41</sup>Minimum process pipe inner diameter should be 110 mm if uranium hexafluoride gas pressure in the pipe is relatively high, as at the Capenhurst plant in the United Kingdom. . . . Minimum process pipe inner diameters must be larger than 110 mm for pipes in which the uranium hexafluoride gas pressure is moderate or low. For example, if the gas pressure were one-half that in a typical corresponding pipe at the Capenhurst plant, then the minimum process pipe inner diameter should be the square root of the two times 100 mm [sic], or 155 mm.

<sup>42</sup>The safeguards issues addressed in the following four contentions will also be raised in CANT's comments to the Commission regarding the proposed standards for the CEC.

In a similar vein to its first safeguards contention, CANT's contention M asserts:

In order to preclude or detect production of HEU by a batch recycling scheme involving misuse of sampling ports, process valves, and/or flanges, the applicant's FNMC plan should require effective monitoring by reliable technical means which accurately keep track of employer access to these process connection locations.

To support its position on contentions L and M, the Applicant presented the testimony of a two-witness panel comprised of Peter G. LeRoy and Erich F. Kraska. (LeRoy-Kraska fol. Tr. 194.) As Licensing Manager for the CEC, Mr. LeRoy directed the preparation of the CEC FNMC Plan and reviewed and approved it. Mr. LeRoy also is an NRC-authorized derivative classifier. (LeRoy-Kraska re L at 1-2 fol. Tr. 194.) Mr. Kraska is employed as a senior technical manager by Urenco Investments, Inc., one of the general partners of LES. He is responsible for ensuring that the CEC is designed in accordance with the information transferred to LES by Urenco. Mr. Kraska assisted in the development and review of the CEC FNMC Plan to ensure that the Applicant's safeguards program is consistent with equivalent security programs at Urenco's European facilities that are based on Euratom and International Atomic Energy Agency ("IAEA") requirements. Because Mr. Kraska does not have agency clearance for classified information developed in the United States, he has not had access to the classified portions of the CEC FNMC Plan. (LeRoy-Kraska re L at 2-3 fol. Tr. 194.)

Pursuant to a stipulation of the parties, the following Applicant exhibits were admitted into evidence: Applicant's Exhibit 1(b), the Classified Addendum to the CEC SAR (App. Exh. 1(b)); Applicant's Exhibit 1(d), the CEC FNMC Plan (App. Exh. 1(d)); Applicant's Exhibit 1(f), the CEC Physical Security Plan (App. Exh. 1(f)); and, Applicant's Exhibit 1(g), the CEC Security Plan for the protection of classified matter and information (App. Exh. 1(g)). (Tr. 31.) Each of these Applicant exhibits contains proprietary information pursuant to 10 C.F.R. § 2.790(d)(1), classified information, or both. Although these exhibits are part of the decisional record of the proceeding, they are not publicly available. In particular, all twelve chapters of the CEC FNMC Plan (App. Exh. 1(d)) contain proprietary information and, in addition, Chapter 9 describes the clandestine prevention program and is classified as confidential national security information.

The NRC Staff supported the position of the Applicant on contentions L and M and presented the testimony of a panel of witnesses made up of Donald R. Joy and Bruce W. Moran. (Joy-Moran fol. Tr. 243.) Mr. Joy is a senior physical scientist with the NRC in the area of material control and accounting, with experience in safeguards inspections of fuel fabrication facilities. He helped write the Commission's regulations on material control and accounting for enrichment facilities in 10 C.F.R. § 74.33 and the Staff guidance on those



requirements in Regulatory Guide 5.67 (1993). (Joy re L at 1, Attachment 1 fol. Tr. 243.) Mr. Moran is a program manager for national safeguards support, Safeguards Office, in the National Security Program Office of Martin Marietta Energy Systems, Inc. As the Program Manager for an NRC contract to provide technical assistance and an assessment of safeguards issues for licensing uranium enrichment facilities, he was one of the principal authors of NUREG/CR-5734, "Recommendations to the NRC on Acceptable Standard Format and Content for the Fundamental Nuclear Material Control (FNMC) Plan Required for Low-Enriched Uranium Enrichment Facilities" (1991), and has substantial experience in material control and accounting for DOE facilities. (Moran re L at 1 and Attachment 2 fol. Tr. 243; Moran Tr. 245.)

In support of contentions L and M, the Intervenor offered the testimony of Helen M. Hunt, an independent consultant on nuclear safeguards who has written extensively on safeguards issues and served as an expert for the United States Department of Energy. (Hunt at 1, 24 fol. Tr. 226.) The Applicant objected to Ms. Hunt testifying on the grounds that she lacked the necessary factual foundation to offer an expert opinion on the sufficiency of the CEC safeguards provisions because she had not had access to any of the proprietary or classified information on the CEC.

The genesis of the Applicant's objection to the testimony of CANT's expert witness was an earlier discovery dispute. In resolving that matter, we found that the Intervenor had waived its right to obtain the proprietary portions of the CEC FNMC Plan and Physical Security Plan because CANT refused to participate in an in camera hearing session involving those documents. The Intervenor took the position that, as a public interest organization with the purpose of bringing important issues to public light, it would not participate in closed hearings. *See* Memorandum and Order (Ruling on Discovery Disputes Pertaining to Contentions L and M) at 15-16 (July 8, 1992). Similarly, none of CANT's attorneys or experts took the necessary steps under the Commission's regulations to obtain security clearances so that they could have access to the classified information concerning the CEC. *See* 10 C.F.R. Part 25. Accordingly, neither Intervenor's counsel nor Ms. Hunt had access to the Applicant's classified addendum to the CEC SAR (App. Exh. 1(b)), the CEC FNMC Plan (App. Exh. 1(d)), or the CEC Physical Security Plan (App. Exh. 1(f)). It was Ms. Hunt's lack of knowledge of these materials that formed the bases for the Applicant's objection.

In response to the Applicant's objection, the Intervenor argued that Ms. Hunt had sufficient facts about the CEC without resort to any classified information to offer her expert opinion that the Commission's safeguards regulations will not be satisfied with the technology LES proposes. According to CANT, the Applicant was not employing tamperproof, continuous, online enrichment monitoring and, therefore, "both factually and legally," the Applicant cannot comply with 10



C.F.R. § 74.33 without using such technology. (Tr. 216-18.) We overruled the Applicant's objection and admitted Ms. Hunt's prefiled direct testimony. In so ruling, we indicated that, consistent with Rule 703 of the Federal Rules of Evidence, the Applicant and the Staff could attempt to establish through cross-examination the lack of factual foundation for Ms. Hunt's expert opinion and that we would decide the appropriate weight to give her testimony. (Tr. 225-26.)<sup>1</sup>

In resolving contentions L and M, we initially turn to the case the Intervenor seeks to build from Ms. Hunt's testimony. Because CANT's argument is succinctly set out in its proposed findings, we address the argument it presents there.

The Intervenor first asserts that in promulgating 10 C.F.R. § 74.33 the Commission noted that the regulation "was written with full consideration of IAEA agreements. . . ." 56 Fed. Reg. 55,991, 55,992 (October 31, 1991)" and "[t]hus, an MC&A program which does not comply with IAEA agreements cannot comply with 10 C.F.R. § 74.33." CANT's Clarified Proposed Findings

<sup>1</sup> Pursuant to the stipulation of the parties, the following Intervenor exhibits pertinent to contentions L and M were also admitted into evidence: Intervenor's Exhibit 1, International Technology Programs Division, Martin Marietta Energy Systems, Inc., Safeguards Training Course, "Nuclear Material Safeguards for Enrichment Plants, Part 4. Gas Centrifuge Enrichment Plant: Diversion Scenarios and IAEA Safeguards Activities," Nov. 14-18, 1988; Intervenor's Exhibit 2, P. Ting and B. Moran, "Material Control and Accounting Requirements for Uranium Enrichment Facilities," *Proceedings of the 32nd Annual Meeting of the Institute of Nuclear Materials Management*, New Orleans, La., July 28-31, 1991, at 404-07; Intervenor's Exhibit 3, S. Baker, B. Dekker, P. Friend, and K. Ide, "Developments in Safeguards as Applicable to Urenco's Enrichment Plants — An Operator's Perspective," IAEA-SM-333/11 (1994); Intervenor's Exhibit 4, M. Benedict, T. Pigford, and H. Levi, *Nuclear Chemical Engineering* 644-85 (2d ed. 1981); Intervenor's Exhibit 5, International Technology Programs Division, Martin Marietta Energy Systems, Inc., Safeguards Training Course, "Nuclear Material Safeguards for Enrichment Plants, Part 2. Cascade and Centrifuge Separation Theory; Uranium Hexafluoride," Nov. 14-18, 1988, at 124-27; Intervenor's Exhibit 6, CEC SAR Table 4.3-2 at 6.3-13 to -15, 6.3-17, 6.3-20 (1991); Intervenor's Exhibit 7, K. van der Meer, "Enrichment Verification on UF<sub>6</sub> in Low Pressure Process Pipes: An Application of the Two Geometry Method," *Proceedings of the 11th ESARDA Symposium on Safeguards and Nuclear Material Management*, Luxembourg, May 30-June 1, 1989, at 177-88; Intervenor's Exhibit 8, H. Hunt, "Effective Go/No Go Enrichment Measurements," *Proceedings of the 13th ESARDA Symposium on Safeguards and Nuclear Material Management*, Avignon, France, May 14-16, 1991, at 363-69; Intervenor's Exhibit 9, A. von Baekmann, "Implementation of IAEA Safeguards in Centrifuge Enrichment Plants," *Proceedings of the Fourth International Conference on Facility Operations-Safeguards Interface*, Albuquerque, N.M., Sept. 29-Oct. 4, 1991, at 185-90; Intervenor's Exhibit 10, T. Packer, "Continuous Monitoring of Variations in the <sup>235</sup>U Enrichment of Uranium in the Header Pipework of a Centrifuge Enrichment Plant," *Proceedings of the 13th ESARDA Symposium on Safeguards and Nuclear Material Management*, Avignon, France, May 14-16, 1991, at 371-76; Intervenor's Exhibit 11, P. Evans and C. Rutherford, "A Uranium Enrichment Monitor for Surveillance of a Small Centrifuge Cascade," *Journal of Nuclear Materials Management* 34-39 (Apr. 1989); Intervenor's Exhibit 12, President William Clinton, Address to the 48th Session of the United Nations General Assembly (Sept. 27, 1993); Intervenor's Exhibit 13, H. Hunt, "Safeguards for Advanced Gas Centrifuge Uranium Enrichment Plants," *Proceedings of the 15th ESARDA Symposium on Safeguards and Nuclear Materials Management*, Rome, Italy, May 11-13, 1993, at 271-76; Intervenor's Exhibit 14, H. Hunt, "Transparency of National and Regional Safeguards Systems," *Proceedings of the 34th Annual Meeting of the Institute of Nuclear Materials Management*, Scottsdale, Ariz., July 18-21, 1993, at 791; Intervenor's Exhibit 15, D. Drayer, D. Mangan, C. Sonnier, and J. Lovett, "Authentication of Operator-Designed Monitoring Systems," *Proceedings of the 30th Annual Meeting of the Institute of Nuclear Materials Management*, Orlando, Fla., July 9-12, 1989, at 1044-49; Intervenor's Exhibit 16, C. Johnson, "Data Transmission Authentication Techniques for Use in Unattended Surveillance Systems," *Proceedings of the 30th Annual Meeting of the Institute of Nuclear Materials Management*, Orlando, Fla., July 9-12, 1989, at 1050-52; Intervenor's Exhibit 17, M. Cauty, E. Hakkila, and R. Weh, "The Third U.S.-German Workshop on Near-Real-Time Accounting for Reprocessing Plants," *Journal of Nuclear Materials Management* 14-15 (Feb. 1992).

of Fact and Conclusions of Law Pertaining to Contentions L and M (Oct. 24, 1994) at 2. Next, the Intervenor asserts that the LES license application is subject to the Agreement Between the United States of America and the International Atomic Energy Agency for the Application of Safeguards in the United States of America, Nov. 18, 1977, 32 U.S.T. 3062, that took effect in 1980 as part of the implementation of the Treaty on the Non-Proliferation of Nuclear Weapons, July 1, 1968, 21 U.S.T. 483. Citing article 72(b) of the IAEA Agreement, the Intervenor claims that "this treaty provides that the IAEA must be able to 'make independent measurement of all nuclear material subject to safeguards. . . .'" CANT's PF at 2-3 citing 32 U.S.T. at 3082. CANT then argues that the Applicant's classified information concerning the CEC safeguards provisions is irrelevant to evaluating compliance with IAEA safeguards "because it does not pertain to the IAEA's ability to independently verify the absence of HEU production." *Id.* at 4-5. According to CANT, only continuous on-line enrichment monitoring of each CEC cascade will permit "the IAEA to independently verify the absence of HEU production at the CEC." *Id.* at 7. Similarly, CANT declares that only tamperproof monitors with authenticated transmission to a central computer will permit "the IAEA . . . to be able to independently detect unauthorized patterns of valve manipulation which would indicate possible HEU production." *Id.* at 9.

CANT's entire argument fails, however, because it is footed on an erroneous premise. The Intervenor misreads and misapprehends article 72(b) of the IAEA Agreement, which is the cornerstone of its argument. Contrary to its assertions, that IAEA provision does not, through the mechanism of allowing the IAEA to make independent measurements of nuclear material subject to safeguards, mandate that the Applicant employ at its enrichment facility any particular design configuration or any specific hardware in order to provide the IAEA with an independent means of verifying that no HEU has been produced at the facility.

To make its argument, the Intervenor selectively quotes article 72(b) and adds language to its description of the provision to convey the meaning that the IAEA Agreement creates a design or hardware requirement. In describing article 72(b), CANT states that "[a]mong other things, this treaty provides that the IAEA *must be able to* 'make independent measurement of all nuclear material subject to safeguards. . . .'" *Id.* at 3-4 (first emphasis supplied). But the actual language of article 72 conveys no such meaning. It states:

For the purposes specified in Articles 69 through 71 [dealing with ad hoc inspections, routine inspections, and special inspections, respectively], the Agency may:

- (a) Examine the records kept pursuant to Articles 49 through 56;
- (b) Make independent measurements of all nuclear material subject to safeguards under this Agreement;

- (c) Verify the functioning and calibration of instruments and other measuring and control equipment;
- (d) Apply and make use of surveillance and containment measures; and
- (e) Use other objective methods which have been demonstrated to be technically feasible.

32 U.S.T. at 3082. The meaning of article 72 is further delineated by article 73, which states:

Within the scope of Article 72, the Agency shall be enabled:

- (a) To observe that samples at key measurement points for material balance accountability are taken in accordance with procedures which produce representative samples, to observe the treatment and analysis of the samples and to obtain duplicates of such samples;
- (b) To observe that the measurements of nuclear material at key measurement points for material balance accountability are representative, and to observe the calibration of the instruments and equipment involved;
- (c) To make arrangements with the United States that, if necessary:
  - (i) Additional measurements are made and additional samples taken for the Agency's use;
  - (ii) The Agency's standard analytical samples are analysed;
  - (iii) Appropriate absolute standards are used in calibrating instruments and other equipment;
  - (iv) Other calibrations are carried out;
- (d) To arrange to use its own equipment for independent measurement and surveillance, and if so agreed and specified in the Subsidiary Arrangements to arrange to install such equipment;
- (e) To apply its seals and other identifying and tamper-indicating devices to containments, if so agreed and specified in the Subsidiary Arrangements; and
- (f) To make arrangements with the United States for the shipping of samples taken for the Agency's use.

*Id.* As the language of these provisions makes clear, the authority of the IAEA pursuant to article 72(b) to make its own measurements of nuclear material subject to safeguards does not translate into a requirement that a facility subject to IAEA inspection must employ a particular design or a specific kind of hardware to provide the IAEA an independent and foolproof method of verifying that no HEU has been produced at the facility, as the Intervenor asserts.

Further, the Intervenor's case is not advanced by its argument that because the Commission's safeguards rule for enrichment facilities was written "with full consideration of IAEA agreements," an applicant's MC&A program compliance with the IAEA Agreement is central to its compliance with 10 C.F.R. § 74.33. Although CANT is correct that the Commission issued the safeguards rule "with full consideration of IAEA agreements," 56 Fed. Reg. at 55,992, contrary to the Intervenor's claim the IAEA Agreement does not prescribe any particular design configuration or specific hardware for the CEC to provide the IAEA

an independent method of verifying enrichment production. Because CANT's argument is based upon a misreading of the IAEA Agreement, the fact that the Commission issued the safeguards rule with full consideration of the IAEA Agreement provides no support for its position.

Indeed, in promulgating 10 C.F.R. § 74.33, the Commission expressly rejected the suggestion of a commenter with close ties to CANT that it should require that plant hardware be designed to permit and facilitate independent "go/no go" verification of the absence of unauthorized enrichment. *See* CLI-92-7, 35 NRC 93, 103 n.9 (1992). Similarly, the Commission rejected the suggestion that it should require that an applicant consult with the IAEA on plant hardware design. In the statement of considerations accompanying the final rule, it stated:

The Commission does not believe that the suggested hardware design is either necessary or practical. Based upon its experience with safeguarding SNM in licensed material activities, the Commission is convinced that a proper MC&A program can provide adequate protection against unauthorized enrichment, and assurance that should it occur, it will be detected in a timely manner. Therefore, the Commission does not believe it is necessary to impose such a requirement. Furthermore, as it is the NRC's responsibility to license the enrichment facility, its requirements for protection of health and safety of the public and common defense and security take precedence over IAEA inspection schemes and protocols. Nonetheless, these MC&A requirements were developed cognizant of IAEA programs because the U.S. is a member country of IAEA and complies with the IAEA requirements. Consequently, the suggestion of the commenter is refused.

56 Fed. Reg. 55,991, 55,995 (1991).

That the Intervenor's reading of the IAEA Agreement is erroneous also is evident from one of the Commission's rulings in this proceeding. In the notice initiating the proceeding, the Commission provided that any subsequently admitted party could seek reconsideration of the special licensing criteria that the Commission stated would be applicable to the CEC. The Intervenor sought reconsideration and, in its motion, complained of the lack of a safeguards design criterion applicable to the CEC. It requested a design criterion for the facility and its hardware conducive to the implementation of effective advanced national and international safeguards techniques and procedures. CANT also asked the Commission to impose licensing standards that would ensure effective monitoring of the CEC by the IAEA, including online enrichment monitoring and effective monitoring of all sampling ports, process valves, and flanges — the subject of CANT's contentions L and M. CLI-92-7, 35 NRC at 102.

In denying the Intervenor's request for a safeguards design criterion, the Commission stated that it already had addressed the need for safeguards against unauthorized activities by issuing 10 C.F.R. § 74.33. It also rejected CANT's call for licensing standards requiring online enrichment monitoring and effective monitoring of sampling ports, process valves, and flanges. The Commission indicated that the Intervenor's proposed licensing standards were "prescriptive"



and explained that, in promulgating the safeguards rule, it had made a reasoned policy choice to regulate by performance-based standards for MC&A programs. It added that "[l]icensees may, of course, choose or need to employ the CANT-suggested means to achieve an appropriate level of safeguards; however, those means are not necessarily the exclusive solutions to meeting the Commission's performance requirements." *Id.* at 104.

The Commission's statements denying CANT's reconsideration motion, taken in conjunction with the statement of considerations accompanying the final safeguards rule, make it clear that the Intervenor's reading of the IAEA Agreement is not shared by the Commission. In promulgating the safeguards rule, the Commission remarked that the rule was written with full consideration of IAEA agreements. Consistent with that statement, in denying CANT's reconsideration motion the Commission could not have rejected the intervenor's suggested licensing standards on the ground that such standards were prescriptive, and hence incompatible with the performance-based standards of the safeguards rule, if those very same prescriptive standards were mandated by the IAEA Agreement.

Thus, as the Commission suggested, 10 C.F.R. § 74.33 is fully consistent with the IAEA Agreement and the Intervenor's reading of that Agreement is erroneous. Contrary to CANT's assertions, the IAEA Agreement, and hence the Commission's safeguards rule, simply do not impose on the Applicant a requirement that the CEC must employ a particular design configuration or a specific kind of hardware in order to provide the IAEA an independent and foolproof method of verifying that no HEU has been produced at the facility. Whether the Intervenor's position is viewed as a strictly legal argument that the IAEA Agreement requires, as a matter of law, continuous online enrichment monitoring and effective monitoring of sampling ports, process valves, and flanges, or whether CANT's position is viewed as a factual argument that these same methods are the only possible way to provide IAEA with an independent method of verifying that no HEU has been produced at the facility, the arguments fail because they are entirely based on CANT's incorrect assumption that IAEA safeguards provisions provide the baseline requirements needed to comply with NRC safeguards regulations. CANT's erroneous reading of the IAEA Agreement renders its contentions L and M meritless.

As the foregoing discussion demonstrates, the adequacy of the Applicant's safeguards measures to detect unauthorized production of enriched uranium must be determined under the Commission's safeguards rule. Pursuant to 10 C.F.R. § 74.33(c)(5), the CEC FNMC Plan must provide high assurance that the Applicant's detection program will detect the unauthorized production of enriched uranium. As previously indicated, the Intervenor's expert chose to forego reviewing of the proprietary and classified information on the Applicant's safeguards program. Additionally, the Intervenor took the position that such information was irrelevant for determining compliance with what it believed (albeit erroneously)



were the controlling IAEA safeguards requirements. Therefore, in providing her analysis of the Applicant's compliance with 10 C.F.R. § 74.33(c)(5) Ms. Hunt lacked complete, accurate, factual information about the Applicant's safeguards measures and the design and layout of the CEC, including the classified addendum to the CEC SAR (App. Exh. 1(b)), the CEC FNMC Plan (App. Exh. 1(d)), and the CEC Physical Security Plan (App. Exh. 1(f)). As a result, the quality of Ms. Hunt's analysis was seriously impaired. For example, Ms. Hunt did not know how the CEC centrifuges are interconnected to form cascades, how the cascades are controlled, or how many process valves are on each cascade. Similarly, the Intervenor's expert did not know whether the CEC cascades can be reconfigured and, if so, by what means, where the process valves are located, or what measures LES will employ to control personnel access to the centrifuges. (Tr. 231-36.) The proprietary and classified information in the Applicant's Exhibits 1(b), 1(d), and 1(f) are at the heart of the question of the adequacy of the Applicant's safeguards provisions and indispensable to any determination of whether the Commission's regulations have been met. Without knowledge of the relevant facts, CANT's expert did not have a sufficient foundation to reach an informed expert opinion on whether the Applicant's safeguards provisions provide high assurance of detecting the unauthorized production of enriched uranium. Hence, we can give Ms. Hunt's testimony no weight in considering contentions L and M.

Turning to the merits of CANT's contention L, it asserts that continuous online enrichment monitoring of all cascades, with minimum pipe diameters of 110 millimeters to support it, is necessary to provide reasonable assurance that gas centrifuge equipment is not unlawfully diverted to the production of HEU. In responding to contention L, the Applicant's expert witnesses, Mr. LeRoy and Mr. Kraska, stated in their prefiled direct testimony that continuous online enrichment monitoring is not necessary to prevent diversion of centrifuge equipment to the production of HEU at the CEC. (LeRoy-Kraska re L at 4, 12 fol. Tr. 194.) Mr. LeRoy indicated that the classified material in chapter 9 of the CEC FNMC Plan describes the Applicant's clandestine enrichment prevention program. This program is multifaceted and provides a number of means of preventing, detecting, and mitigating diversion of enriched uranium. (LeRoy-Kraska re L at 10-11 fol. Tr. 194.)

Because the CEC FNMC Plan (App. Exh. 1(d)), the CEC Physical Security Plan (App. Exh. 1(f)), and the classified addendum to the CEC SAR (App. Exh. 1(b)) that detail the Applicant's safeguards provisions are comprised of proprietary and classified information, and the Intervenor has chosen not to review this vital information, no purpose would be served by filing separate classified findings on CANT's contentions. It suffices to note generally that the Applicant's safeguards program works through the control of personnel access, the control of enrichment equipment, the control of UF<sub>6</sub> systems operations,

maintenance, testing, and the monitoring and inspection of UF<sub>6</sub> systems and UF<sub>6</sub> usage and storage areas. Through these methods various clandestine scenarios such as batch recycling will be prevented from occurring at the CEC. (LeRoy-Kraska re L at 13-14 fol. Tr. 194.) Mr. LeRoy concluded that the Applicant's safeguards measures, particularly the CEC design and the CEC FNMC Plan, as well as the proposed procedures, operating practices, and administrative programs for the facility, provide a high degree of assurance that clandestine diversion of enrichment will not occur at the CEC. (LeRoy-Kraska re L at 23 fol. Tr. 194.) Further, the NRC Staff's expert witnesses, Mr. Joy and Mr. Moran, stated in their prefiled direct testimony that continuous online enrichment monitoring is not necessary to detect unauthorized enrichment. (Joy-Moran re L at 7 fol. Tr. 243.) The Staff evaluated the Applicant's safeguards provisions and concluded that the CEC FNMC Plan provides the required assurance of detecting the unauthorized production of HEU at the facility and meets all NRC regulatory requirements. (Joy-Moran re L at 6-7 fol. Tr. 243; Tr. 247.)

Based upon the testimony of the expert witnesses for the Applicant and the Staff and the proprietary and classified information contained in Applicant's Exhibits 1(b), 1(d), and 1(f), we find that the CEC FNMC Plan meets the regulatory requirements of the Commission's safeguards regulations, particularly 10 C.F.R. § 74.33(c)(5). The Applicant has met its burden on CANT's contention L and that contention cannot be sustained.

CANT's other safeguards contention, contention M, asserts that in order to effectively preclude and detect production of HEU by batch recycling through the misuse of sampling ports, process valves, and flanges, the CEC FNMC Plan should require effective monitoring by reliable technical means, i.e., tamperproof controls, to track employee access to process connection locations. The Applicant's expert witnesses, Mr. LeRoy and Mr. Kraska, both testified that the tamperproof devices called for by CANT in contention M are not necessary to comply with the Commission's safeguards regulations. (LeRoy-Kraska re M at 4 fol. Tr. 194; Tr. 256.) Access to sampling ports, valves, and flanges is controlled at the CEC and the monitoring devices and methods employed by LES for sampling ports, process valves, and flanges will provide the high assurance required by 10 C.F.R. § 74.33(c)(5) for detecting unauthorized production of enriched uranium. (LeRoy-Kraska re M at 4, 8-9 fol. Tr. 194.) Chapters 2, 6, and 9 of the CEC FNMC Plan describe the devices, methods, and programs for controlling sampling ports, valves, and flanges. Specifically, the classified material in Chapter 9 contains, inter alia, the enrichment scenarios involving sampling ports, valves, and flanges that will be detected and prevented by the Applicant's program, including batch recycling. (LeRoy-Kraska re M at 8-11 fol. Tr. 194.) Further, the NRC Staff witnesses, Mr. Joy and Mr. Moran, indicated in their prefiled direct testimony that the Staff concluded that batch recycling through the use of sampling ports, valves, and flanges has been adequately

addressed by the Applicant and that compliance with the CEC FNMC Plan will provide adequate deterrence to, and detection of, unauthorized production of HEU. (Joy-Moran re M at 6-7 fol. Tr. 243.) Both Mr. Joy and Mr. Moran testified that they were satisfied that the CEC FNMC Plan meets all NRC regulatory requirements and provides the high assurance required by the regulations. (Tr. 247.)

Based on the testimony of the expert witnesses of the Applicant and the Staff and the proprietary and classified information contained in Applicant's Exhibits 1(b), 1(d), and 1(f), we find that the CEC FNMC Plan also meets the requirements of 10 C.F.R. § 74.33(c)(5). The Applicant has met its burden on CANT's contention M and that contention cannot be sustained.

#### IV.

For the foregoing reasons, we conclude that the CEC Emergency Plan and the CEC FNMC Plan comply with the Commission's applicable regulations and that CANT's contentions H, L, and M cannot be sustained. Pursuant to 10 C.F.R. § 2.760 of the Commission's Rules of Practice, this Partial Initial Decision will constitute the final decision of the Commission on these contentions forty (40) days from the date of its issuance 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 Partial Initial 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 in order for a party to have exhausted its administrative remedies before seeking judicial review at the appropriate time. 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).

It is so ORDERED.

THE ATOMIC SAFETY AND  
LICENSING BOARD

Thomas S. Moore  
ADMINISTRATIVE JUDGE

Richard F. Cole  
ADMINISTRATIVE JUDGE

Frederick J. Shon  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
April 26, 1996

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Charles Bechhoefer, Chairman  
Dr. Jerry R. Kline  
Dr. Peter S. Lam

In the Matter of

Docket No. 50-160-Ren  
(ASLBP No. 95-704-01-Ren)  
(Renewal of Facility  
License No. R-97)

GEORGIA INSTITUTE OF  
TECHNOLOGY  
(Georgia Tech Research Reactor,  
Atlanta, Georgia)

April 30, 1996

The Atomic Safety and Licensing Board issues a Prehearing Conference Order setting forth determinations made at a prehearing conference on April 24, 1996, including witness schedules and other matters bearing on the evidentiary hearing scheduled to commence on May 20, 1996.

**RULES OF PRACTICE: WITNESSES**

The Rules of Practice do not permit particular Staff witnesses to be subpoenaed. But a licensing board, pursuant to 10 C.F.R. § 2.720(h)(2), may, upon a showing of exceptional circumstances, require the attendance and testimony of named NRC personnel. Where an NRC employee has taken positions at odds with those espoused by witnesses to be presented by the Staff, on matters at issue in a proceeding, exceptional circumstances exist. The Board determined that differing views of such matters are facts differing from those likely to be



presented by the Staff witnesses and, on that basis, required the attendance and testimony of the named NRC personnel.

### THIRD PREHEARING CONFERENCE ORDER

On April 24, 1996, the Atomic Safety and Licensing Board conducted a prehearing conference in Atlanta, Georgia (Tr. 834-914).<sup>1</sup> Participating were representatives of Georgia Institute of Technology (Georgia Tech or Applicant), Georgians Against Nuclear Energy (GANE or Intervenor), and the NRC Staff. This conference served many of the purposes described in 10 C.F.R. § 2.752. Following are the specific matters considered.

#### A. Witness Schedules

The Board approved schedules for the appearance of particular witnesses at the hearing commencing on May 20, 1996. Previously, the Board had directed the parties to present the names of all of their witnesses at the prehearing conference. All of them did so.<sup>2</sup> Because much of Georgia Tech's case is likely to be rebuttal testimony, Georgia Tech was given the authority to identify additional rebuttal witnesses following the testimony of GANE's witnesses. (Georgia Tech in fact identified not only its direct witnesses but also certain potential rebuttal witnesses.) The schedules for particular witnesses are as follows:

1. Georgia Tech:
  - a. Dr. R.A. Karam May 29, 1996, 9:30 a.m.
  - b. Dr. Nicholas Tsoulfanidis
  - c. Dr. Rodney IceRebuttal — above witnesses plus:
  - d. Dr. B.K. Revsin May 31, 1996, 9:00 a.m.
  - e. Dr. P. Michael O'Bannon (June 24, 9:30 a.m.,
  - f. Dr. Burnd Kahn if necessary)
2. GANE:
  - a. R.M. Boyd May 23, 1996, 9:00 a.m.
  - b. Glenn Carroll May 21, 1996, 9:30 a.m.

<sup>1</sup> Notice of this conference, dated March 25, 1996, was published in the *Federal Register* of March 29, 1996, 61 Fed. Reg. 14,164.

<sup>2</sup> The Applicant and Staff filed witness lists. GANE announced its witnesses during the prehearing conference (Tr. 847-49).

- c. Dr. Brian Copcutt May 20, 1996, 1:00 p.m.  
(May 21, 9:00 a.m.,  
if necessary)
  - d. John Galloway May 21, 1996, 1:00 p.m.
  - e. A.R. Long May 24, 1996, 9:00 a.m.
3. NRC Staff:
- a. *Panel A:* May 22, 1996, 9:00 a.m.  
Douglas M. Collins  
Paul E. Fredrickson  
Albert F. Gibson  
George B. Kuzo
  - b. *Panel B:* May 30, 1996, 9:00 a.m.  
Craig H. Bassett  
Edward J. McAlpine  
Marvin M. Mendonca
  - c. *Panel C:* May 30, 1996, following  
Alexander Adams, Jr. Panel B  
Marvin M. Mendonca

### B. Subpoenas

As requested, the Board issued subpoenas for two GANE witnesses: Mr. Boyd and Dr. Copcutt. GANE also sought a subpoena for Staff Inspector A.R. Long. GANE's response to Staff and Georgia Tech discovery, dated February 22, 1996, at 18-19. The Rules of Practice do not permit particular Staff witnesses to be subpoenaed. 10 C.F.R. § 2.720(h)(1). GANE had earlier identified and has now listed as one of its witnesses Ms. Long. Ms. Long was not included in the three panels of witnesses proposed to be presented by the Staff.

Notwithstanding the Board's lack of authority to subpoena particular Staff witnesses, the Board, pursuant to 10 C.F.R. § 2.720(h)(2), may, upon a showing of "exceptional circumstances, *such as* a case in which a particular named NRC employee has direct, personal knowledge of a material fact not known to the witnesses made available by the [Staff] require the attendance and testimony of named NRC personnel" (emphasis supplied). GANE has identified Inspector Long as having taken positions at odds with other NRC personnel with respect to the conduct of Georgia Tech management. GANE has stated in its response to NRC discovery, dated February 22, 1996 (at 18), that Ms. Long brought a sex-discrimination suit against NRC "for chilling her investigation of the Georgia Tech Research Reactor, complaining of a good old boy network that was covering up Georgia Tech's mistakes."

GANE attached two newspaper articles (Attachment 6 of Discovery Response) describing in more detail Ms. Long's views. GANE has also filed a motion to compel, dated March 8, 1996, seeking Staff documents regarding Inspector Long, and the Board in large part granted that motion.

The Staff took the position that one of its witnesses (Albert F. Gibson) was well aware of the events about which Ms. Long would testify (Tr. 856) and that the Staff's selection of witnesses was adequate. The Board views this situation as comprising the exceptional circumstances referenced by the NRC rule, and it regards differing views of the adequacy of Georgia Tech's management as facts differing from those likely to be presented by the referenced NRC witness.

According to GANE, Ms. Long "still has some questions about oversight of Georgia Tech [by NRC]." Discovery Response, dated February 22, 1996, at 2. Ms. Long's view of the facts thus can reasonably be expected to differ significantly from views likely to be presented by the inspectors on NRC's witness panels. As set forth in one of the newspaper articles attached to GANE's February 22, 1996 discovery response (Attachment 6, *Atlanta Journal-Constitution* article), Ms. Long's disagreement with other NRC employees concerned an alleged "breakdown in management controls" at Georgia Tech — the very issue raised by GANE in this proceeding. Accordingly, the Board hereby requires the attendance and testimony of Ms. A.R. Long, on the schedule set forth above.

#### **C. Local Public Document Room**

The Board has long urged the establishment of a Local Public Document Room in the Atlanta, Georgia area. *See, e.g.*, LBP-95-6, 41 NRC 281, 297-98 (1995). Effective April 25, 1996, such a room was established, at the Decatur Library, 215 Sycamore Street, Decatur, Georgia 30030 (telephone (404) 370-3070). Hours of operation are 9:00 a.m. to 9:00 p.m. Monday through Thursday, 9:00 a.m. to 5:00 p.m. Friday and Saturday, and 1:00 p.m. to 5:00 p.m. Sunday. Paper copies of files relevant to this proceeding (from 1985 to date) are present at that location. (If any of the parties have questions concerning the Local Public Document Room, they may call NRC at 1-800-638-8081.)

#### **D. Limited Appearance Sessions**

The Licensing Board previously announced that it would hold at least two oral limited appearance sessions — a one-hour session on the opening day of the hearing, from approximately 10:00 a.m. to 11:00 a.m. on Monday, May 20, 1996, and a two-hour evening session, tentatively set for 7:00-9:00 on Wednesday, May 22, 1996. At the conference, the Board confirmed that the evening session

would be held on Wednesday, May 22, 1996, from 7:00 to 9:00 p.m., at the Student Center Theatre, Georgia Institute of Technology, Atlanta, Georgia. The Board also announced that, if there appeared to be sufficient interest or demand, it would hold a further session on Wednesday evening, May 29, 1996, from 7:00 to 9:00 p.m., at a location to be announced.

#### **E. Marking of Exhibits**

Exhibits are to be marked, at the time they are first identified for the record, in numerical sequence for each party sponsoring them — e.g., GT [Georgia Tech] Exh. 1, GANE Exh. 1, Staff Exh. 1. Each party should bring eight copies of each exhibit: three for the court reporter and one for each (other) party and Licensing Board member. Parties are encouraged to distribute copies of all exhibits to other parties at the outset of the initial evidentiary hearing session. The Board also encouraged the parties to stipulate to the authenticity and admission of as many exhibits as possible, as well as to past facts, where agreed upon. Such steps could save much hearing time. (Only the Staff, in its list of witnesses, also identified documents it would be presenting in its direct case. The Board had not previously directed the parties to identify documents of this type.)

IT IS SO ORDERED.

FOR THE ATOMIC SAFETY  
AND LICENSING BOARD

Charles Bechhoefer, Chairman  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
April 30, 1996

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

William T. Russell, Director

In the Matter of

ALL REACTOR LICENSEES  
WITH INSTALLED THERMO-LAG  
FIRE BARRIER MATERIAL

April 3, 1996

By petitions dated September 26, 1994, from the Citizens for Fair Utility Regulation and the Nuclear Information and Resource Service, dated October 6, 1994, from the Maryland Safe Energy Coalition, dated October 21, 1994, from the GE Stockholders' Alliance and Dr. D.K. Cinquemani, dated October 25, 1994, from the Toledo Coalition for Safe Energy, dated October 26, 1994, from R. Beujan, dated November 14, 1994, from B. DeBolt, and dated December 8, 1994, from the Nuclear Information and Resource Service and the Oyster Creek Nuclear Watch, Petitioners requested that the U.S. Nuclear Regulatory Commission (NRC) take action with regard to the use of Thermo-Lag material by reactor licensees as fire barriers. Petitioners requested a variety of actions including immediate shutdown of reactors where Thermo-Lag material is used.

In a Director's Decision issued on April 3, 1996, the Director of Nuclear Reactor Regulation denied the relief sought by Petitioners. With regard to the requested shutdown of operating facilities using Thermo-Lag material, the Director concluded that fire watches permitted by the NRC requirements applicable to the facilities in question provided reasonable assurance of adequate protection of public health and safety. With regard to the remaining issues raised by Petitioners, the Director concluded that they are being addressed by licensees in a manner that ensures adequate protection of public health and safety.



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

### I. INTRODUCTION

By letter dated September 26, 1994, the Citizens for Fair Utility Regulation and the Nuclear Information and Resource Service (NIRS), by press release dated October 6, 1994, the Maryland Safe Energy Coalition, by separate letters dated October 21, 1994, the GE Stockholders' Alliance and Dr. D.K. Cinquemani, by letter dated October 25, 1994, the Toledo Coalition for Safe Energy, by letter dated October 26, 1994, R. Benjan, by letter dated November 14, 1994, B. DeBolt, and by letter dated December 8, 1994, NIRS and the Oyster Creek Nuclear Watch (the Petitioners) requested that the U.S. Nuclear Regulatory Commission (NRC) take action with regard to the use of Thermo-Lag by reactor licensees and that their letters be treated as petitions pursuant to section 2.206 of Title 10 of the *Code of Federal Regulations* (10 C.F.R. § 2.206).

The Citizens for Fair Utility Regulation and NIRS requested that

- (1) Texas Utilities Electric Company (TU Electric), licensee of Comanche Peak Steam Electric Station, Unit 1, perform additional destructive analysis for Thermo-Lag configurations in proportion to the total installed amount of Thermo-Lag to determine the degree of "dry joint" occurrence;
- (2) the licensee perform fire tests on upgraded "dry joint" Thermo-Lag configurations for conduit and cable trays to rate the barrier as a tested configuration in compliance with fire protection regulations; and
- (3) the NRC immediately suspend the Comanche Peak Unit 1 license until the above corrective actions are taken.

The Maryland Safe Energy Coalition requested immediate shutdown of both reactors at the Peach Bottom plant until the risk of fire near electrical control cables due to combustible insulation is corrected.<sup>1</sup> Dr. Cinquemani and the Toledo Coalition for Safe Energy requested that the NRC immediately shut down all reactors where Thermo-Lag is used until it has been removed and replaced. The GE Stockholders' Alliance requested shutdown of all reactors where Thermo-Lag is used until it has been removed and replaced with fire-retardant material meeting NRC standards. R. Benjan requested immediate shutdown of all reactors where Thermo-Lag is used. B. DeBolt requested shutdown of all reactors in which Thermo-Lag is used until it has been removed and replaced. NIRS and the Oyster Creek Nuclear Watch requested that NRC immediately suspend GPU Nuclear Corporation's (GPUN's) operating license

<sup>1</sup> The petition submitted by the Maryland Safe Energy Coalition expressed several concerns in addition to the fire hazard issue. These other issues, that is, other than the fire hazard issue, will be the subject of a separate Director's Decision.

for Oyster Creek Nuclear Generating Station (OCNGS) until GPUN removes Thermo-Lag fire barrier material and replaces it with a competitive product that meets current NRC fire protection regulations.

As a basis for their requests concerning Thermo-Lag 330-1 fire barrier upgrades, the Citizens for Fair Utility Regulation and NIRS Petitioners stated that:

- (1) The licensee's records on the original installation of Thermo-Lag fire barriers on conduits and cable trays indicate that its contractor followed specifications for prebuttering all joints.
- (2) NRC Inspection Reports 50-455/93-42 and 50-446/93-42 found, based on destructive analysis documents, that a concern did exist where Thermo-Lag conduit joints fell apart easily and did not appear to have any residual material of a buttered surface, indicative of a joint that had not been prebuttered.
- (3) The "dry joint" deficiency appeared in Room 115A and other areas of the unit.
- (4) The licensee directly contradicts an NRC inspector's findings that were determined in part by destructive analysis.
- (5) The "dry joint" or absence of prebuttering of Thermo-Lag panels can be determined only by destructive analysis and cannot be determined by a walkdown visual inspection.
- (6) The findings reported in the Comanche Peak Unit 1 Region IV Inspection Reports 50-455/93-42 and 50-446/93-42, based on the limited amount of destructive analysis conducted at the unit, constitute a substantial documentation of installation deficiencies found in Thermo-Lag fire barriers as documented in NRC Information Notice (IN) 91-79, "Deficiencies in the Procedures for Installing Thermo-Lag Fire Barrier Materials," December 6, 1991, and IN 91-79, Supplement 1, "Deficiencies Found in Thermo-Lag Fire Barrier Installation," August 4, 1994.
- (7) Neither the NRC nor the industry, by its agent Nuclear Energy Institute (NEI), nor a utility, have conducted fire tests on dry-fitted or "dry joint" upgraded configurations of Thermo-Lag 330-1.
- (8) The presence of "dry joint" upgraded configurations in Comanche Peak Unit 1 constitutes an untested application of Thermo-Lag fire barriers.

As a basis for the requests concerning Thermo-Lag 330-1 fire barrier upgrades, the Maryland Safe Energy Coalition stated that the manufacturer of the flame retardant (Thermo-Lag insulation) was indicted on criminal charges (of falsifying tests of the effectiveness of the insulation as a fire barrier), and fire near the electrical control cables, due to combustible Thermo-Lag insulation, could cause a catastrophic meltdown.

As the bases for their requests, Dr. Cinquemani, the Toledo Coalition for Safe Energy, the GE Stockholders' Alliance, and R. Benjan stated either individually or collectively that:

- (1) The widespread use of Thermo-Lag in more than seventy reactors presents a safety crisis.
- (2) The NRC has known since 1982 that Thermo-Lag fails NRC performance standards for material that protects vital electrical cables for ampacity rating and fire resistance.
- (3) Thermo-Lag has failed not only NRC tests, but almost all other independent tests.
- (4) Thermo-Lag is combustible, contrary to NRC regulations, and is an ineffective fire barrier.
- (5) The use of Thermo-Lag could lead to shorts, to failure of the cables in an emergency, and to fire.
- (6) Thermo-Lag is faulty in that fraudulent ampacity ratings allowed utilities to use smaller cable than permitted by design requirements, causing the cable to overheat and its insulation to deteriorate.
- (7) The NRC has stated that fire at some nuclear power plants can contribute as much as 50% of the risk to a core meltdown, and a typical reactor will have three to four significant fires during its licensed lifetime.
- (8) Thermal Science, Inc. (TSI), the manufacturer of Thermo-Lag, and its President were indicted by a Federal Grand Jury on seven criminal charges related to conspiracy to defraud the U.S. government in regard to the effectiveness of Thermo-Lag.
- (9) The hourly fire watches at the Davis-Besse Nuclear Power Plant operated by Toledo Edison do not replace fire barrier material and do not prevent fires.

As the bases for his request, B. DeBolt stated that Thermo-Lag fails to meet NRC regulations concerning combustibility and that the manufacturer of Thermo-Lag was indicted for defrauding the government and the utilities. Among the many bases for their request, NIRS and the Oyster Creek Nuclear Watch stated that:

- (1) Southwest Research Institute (SwRI) conducted fire tests on Thermo-Lag 330-1 specimens for GPUN and reported that all specimens ignited approximately 2 seconds after being inserted into the furnace and failed specified criteria because of flaming after the first 30 seconds of testing, an outside temperature rise higher than 30°C, and a weight loss of 50%.
- (2) GPUN's operation of OCNGS with knowledge of the SwRI report is an example of GPUN's reckless disregard for fire protection and public safety.

- (3) In the event of fire, Thermo-Lag is likely to fail its intended function of protecting vital electrical cables running from the control room to plant safety systems used to shut down the reactor.
- (4) Current installations of Thermo-Lag are likely to fail in less time than 1 hour (when smoke detectors and automatic sprinkler systems are present) or 3 hours (when there are no fire detection and suppression systems) that NRC regulations require for fire barriers to withstand fire.
- (5) The NRC Inspector General issued a report in August 1992 condemning NRC's handling of the Thermo-Lag issue and documenting the NRC Staff's failure to understand the scope of the problem.
- (6) In April 1994, Industrial Testing Laboratories and its President pleaded guilty to five felony counts of aiding and abetting the distribution of falsified test data.
- (7) On September 29, 1994, the U.S. Department of Justice issued a seven-count indictment against the manufacturer of Thermo-Lag and its Chief Executive Officer for willful violations of the Atomic Energy Act, conspiracy to conceal material facts, and making false statements to defraud the United States in connection with \$58 million in fire barrier material.
- (8) GPUN has known since at least August 11, 1992, that Thermo-Lag 330-1 as a structural base material is combustible and that GPUN was in violation of Appendices A and R to 10 C.F.R. Part 50 and the NRC Standard Review Plan, NUREG-0800.
- (9) GPUN failed to report the SwRI test results in response to a request for additional information regarding Generic Letter (GL) 92-08 ("Thermo-Lag 330-1 Fire Barriers") of February 10, 1994, when asked to describe the Thermo-Lag 330-1 fire barriers installed as required to meet 10 C.F.R. Part 50, Appendix R.
- (10) Continued reliance on fire watches at OCNGS is an unreasonable and unnecessary hazard to the public health and safety because of an inoperable fire protection system for safe shutdown of the reactor and installed combustible material on the shutdown systems.

On November 7, 1994, I informed the Citizens for Fair Utility Regulation and NIRS that the request for an immediate suspension of the Comanche Peak Unit 1 operating license was denied. On December 2, 1994, I informed the Maryland Safe Energy Coalition that the request for an immediate shutdown of the Peach Bottom plant and for an immediate suspension of the Peach Bottom license was denied. On December 15, 1994, I informed the GE Stockholders Alliance, Dr. D.K. Cinquemani, the Toledo Coalition for Safe Energy, and R. Benjan that the immediate suspension of the operating licenses of all reactors where Thermo-Lag is used was denied. On January 3, 1995, I informed NIRS and

the Oyster Creek Nuclear Watch that the immediate suspension of the OCNCS operating license was denied. On January 19, 1995, I informed B. DeBolt that the request for immediate suspension of the operating licenses of all reactors in which Thermo-Lag is used was denied. The decisions were based on the following:

- (1) The Staff is addressing deficiencies in fire barriers constructed with Thermo-Lag material as part of a Commission-approved action plan and has issued several bulletins and a generic letter to the nuclear industry to provide information and guidance.
- (2) Fire barrier systems constructed with Thermo-Lag have been identified and declared inoperable.
- (3) Compensatory measures (fire watches) approved by the NRC have been instituted.

Additionally in the above correspondence, all Petitioners were informed that the petitions were being treated pursuant to section 2.206 and had been referred to this office for action pursuant to section 2.206 of the Commission's regulations and that appropriate action would be taken within a reasonable time.

For the reasons stated below, the petitions have been denied.

## II. BACKGROUND

The picture painted by the Petitioners of inaction by the NRC Staff in responding to the issues presented by the use of Thermo-Lag is at odds with the facts. A review of the chronological development of the issues shows that the NRC Staff has been working diligently to resolve the issues and has consistently sought to ensure that there is adequate protection of the public health and safety. It is also inaccurate to contend that Thermo-Lag generic deficiencies have been known since 1982. As can be seen from the following information, the development of the Thermo-Lag issue has been evolutionary. Reports of problems regarding Thermo-Lag began to surface in the late 1980s when Gulf States Utilities, the licensee for River Bend Station, discovered some cracks and wear damage due to installation deficiencies (Licensee Event Report 87-005, March 25, 1987) and declared the material inoperable as a fire barrier. The licensee further discovered that stress skin was missing on all 3-hour Thermo-Lag fire barriers in the turbine building as a result of an installation error. In a series of plant-specific tests performed by Gulf States Utilities in 1989, Thermo-Lag barriers failed to meet the fire endurance test acceptance criteria. Gulf States Utilities categorized all 1-hour and 3-hour barriers as indeterminate and implemented compensatory measures in the form of fire watches. Other isolated plant-specific fire protection problems had been found during NRC inspections at various utilities as early as 1982 and had been acted on by the NRC Staff.



These problems were treated as plant-specific issues and were not considered as indications of generic problems.

In February 1991, the NRC received allegations that Thermo-Lag did not provide fire protection for electrical cables as claimed by the vendor. In response, in May 1991, the NRC visited River Bend Station to review the installation procedures and the failed fire endurance tests and concluded that a generic concern existed with 30-inch-wide cable trays. The NRC alerted the industry of the results of the test failures in IN 91-47, "Failure of Thermo-Lag Fire Barrier Material to Pass Fire Endurance Test," August 6, 1991.

In June 1991, the Office of Nuclear Reactor Regulation (NRR) established a special review team to investigate the safety significance and generic applicability of technical issues regarding allegations and operating experience concerning Thermo-Lag fire barriers. In its final report, which was issued with IN 92-46, "Thermo-Lag Fire Barrier Material Special Review Team Final Report Findings, Current Fire Endurance Testing, and Ampacity Calculation Errors," June 23, 1992, the special review team reached the following conclusions:

- The fire-resistive ratings and the ampacity derating factors for the Thermo-Lag fire barrier system were indeterminate.
- Some licensees had not reviewed and evaluated the fire endurance test results and the ampacity derating test results used as the licensing basis for their Thermo-Lag barriers to determine the validity of the tests and the applicability of the test results to their plant designs.
- Some licensees had not reviewed the Thermo-Lag fire barriers installed in their plants to ensure that they met NRC requirements and guidance, such as that provided in GL 86-10, "Implementation of Fire Protection Requirements," April 24, 1986.
- Some licensees used inadequate or incomplete installation procedures during the construction of their Thermo-Lag barriers.

After the special review team completed its charter, the NRC Staff prepared an action plan that provided a process to resolve technical issues identified with Thermo-Lag fire barrier systems. The NEI, formerly the Nuclear Management and Resources Council (NUMARC), agreed to coordinate industry efforts to resolve the issues.

In regard to the Petitioners' allegations of NRC's inaction in responding to the issues presented by the use of Thermo-Lag, the significant progress made by the NRC Staff and the nuclear reactor licensees in resolving Thermo-Lag issues speaks to the contrary. The NRC Staff has issued a number of generic communications related to Thermo-Lag, which include the following:

- (1) Two bulletins: BUL 92-01, "Failure of Thermo-Lag 330 Fire Barrier System to Maintain Cabling in Wide Cable Trays and Small Conduits Free from Fire Damage," June 24, 1992; and BUL 92-01,

Supplement 1, "Failure of Thermo-Lag 330 Fire Barrier System to Perform Its Specified Fire Endurance Function," August 28, 1992.

- (2) Two generic letters: GL 92-08, "Thermo-Lag 330-1 Fire Barriers," December 17, 1992, and GL 86-10, Supplement 1, "Fire Endurance Test Acceptance Criteria for Fire Barrier Systems Used to Separate Redundant Safe Shutdown Trains Within the Same Fire Area," March 25, 1994.
- (3) Twelve information notices: IN 91-47; IN 91-79; IN 91-79, Supplement 1; IN 92-46; IN 92-55, "Current Fire Endurance Test Results for Thermo-Lag Fire Barrier Material," July 27, 1992; IN 92-82, "Results of Thermo-Lag 330-1 Combustibility Testing," December 15, 1992; IN 94-22, "Fire Endurance and Ampacity Derating Test Results for 3-Hour Fire-Rated Thermo-Lag 330-1 Fire Barriers," March 16, 1994; IN 94-86, "Legal Actions Against Thermal Science, Inc., Manufacturer of Thermo-Lag," December 22, 1994; IN 95-27, "NRC Review of Nuclear Energy Institute, Thermo-Lag 330-1 Combustibility Evaluation Methodology Plant Screening Guide," May 31, 1995; IN 95-32, "Thermo-Lag 330-1 Flame Spread Test Results," August 10, 1995; IN 95-49, "Seismic Adequacy of Thermo-Lag Panels," October 27, 1995; and IN 94-86, Supplement 1, "Legal Actions Against Thermal Science, Inc., Manufacturer of Thermo-Lag," November 15, 1995.

The NRC Staff, the nuclear industry, and others have expended much time and many resources to address and resolve the Thermo-Lag issues. The NRC Staff developed comprehensive fire test guidance and acceptance criteria and worked with industry to improve existing ampacity test procedures. The NRC Staff and industry performed about 100 fire endurance and ampacity derating tests of Thermo-Lag fire barrier materials and full-scale test assemblies. The fire endurance tests established the limitations and the true fire-resistive capabilities of certain Thermo-Lag fire barrier configurations, without relying on the fire endurance test data supplied by TSI, the manufacturer of Thermo-Lag. On the basis of some of these tests, the NRC Staff concluded that existing Thermo-Lag barriers could be upgraded with some additional Thermo-Lag material to satisfy NRC regulations. Precluding all use of Thermo-Lag materials for current and future fire barrier installations would remove a realistic option for resolving safety issues. Therefore, the NRC Staff does not object to the use of Thermo-Lag in specific applications, where, through upgrades, NRC requirements are satisfied. The NRC Staff issued three requests for additional information (RAIs) regarding GL 92-08 to each licensee using Thermo-Lag to obtain information on the specific Thermo-Lag material installed at each plant. The NRC Staff reviewed and approved comprehensive Thermo-Lag fire barrier programs proposed by TU Electric for Comanche Peak Steam Electric Station,

Unit 2, and by Tennessee Valley Authority (TVA) for Watts Bar Nuclear Plant, Unit 1, which attests to the fact that Thermo-Lag barriers can meet NRC fire protection guidelines and requirements. The NRC Staff completed toxicity tests of Thermo-Lag material. The NRC Staff and the industry completed chemical composition, combustibility, and flame spread tests of Thermo-Lag materials. Finally, the NRC Staff reassessed previous technical conclusions to determine the extent to which the NRC Staff and industry relied on information supplied by TSI to reach these conclusions. The Staff had concerns about the reliability of information and data supplied by TSI that have been or could be used to make judgments regarding Thermo-Lag materials. The NRC Staff identified and categorized the issues and previous conclusions and used the results of the industrywide testing program regarding the chemical composition of Thermo-Lag, as discussed below, to determine if the in-plant Thermo-Lag materials were consistent. The results of this reassessment indicated that previous technical conclusions were valid independent of the information provided by TSI. The Staff therefore concluded that additional action to reassess the issues or reverify the previous conclusions was not needed.

The NEI testing program on the chemical composition of Thermo-Lag analyzed samples from eighteen utilities representing twenty-five nuclear power plants. The samples represented Thermo-Lag material manufactured between 1984 and 1995. NEI performed pyrolysis gas chromatography evaluation of 169 samples to assess organic chemical composition and performed energy-dispersive x-ray spectroscopy of 33 samples to assess inorganic chemical composition. On the basis of the tests, NEI concluded that (1) all of the samples contained the constituents identified by TSI as essential to fire barrier performance; (2) the composition of the samples was consistent, and (3) the test results provided a basis on which to close NRC questions about chemical composition and product consistency and for utility use of generic test data relative to fire endurance ratings, flame spread, heat release, ampacity derating, and other material properties.

The NRC Staff test program on the chemical composition of Thermo-Lag was conducted by the National Institute of Standards and Technology (NIST) during 1992 and 1995. NIST analyzed twenty-one samples that were either collected by the Staff during site visits to plants and test laboratories or provided by TVA, Gulf States Utilities, Commonwealth Edison Company, and NEI. The analysis included elemental and ammonia analysis, pyrolysis, gas chromatography, mass spectrometry, and x-ray fluorescence. These analytical techniques indicated that all of the samples were similar in their bulk chemical composition. These results were consistent with the results of the NEI chemical testing program pertaining to the chemical composition and uniformity of Thermo-Lag.

Industrywide progress has generally been commensurate with the complexity of the plant-specific issues and the amounts of Thermo-Lag installed at the

individual plants. Several licensees have initiated programs to replace Thermo-Lag and are performing plant-specific tests of other fire barrier materials such as Mecatiss (Florida Power & Light for Crystal River Unit 3) and Darmatt KM-1 (Carolina Power & Light for Brunswick, IES Utilities for Duane Arnold Energy Center, Commonwealth Edison Company for LaSalle County Station, and Northern States Power Company for Prairie Island Nuclear Generating Plant). The NRC Staff is reviewing the plant-specific fire endurance test programs and has recently approved the plant-specific application of Darmatt KM-1 fire barrier at the LaSalle plant. The remaining licensees have submitted to the NRC Staff detailed plans and schedules for resolving the issues at their plants. Most licensees are pursuing a combination of such options as upgrading existing Thermo-Lag fire barriers to meet NRC fire barrier requirements, replacing Thermo-Lag fire barriers with another type of fire barrier, reducing or eliminating reliance on Thermo-Lag fire barriers by relocating equipment and cables and by postfire safe-shutdown reanalysis, installing additional fire protection features such as automatic sprinkler systems, and requesting configuration-specific exemptions when such exemptions are allowed by NRC regulations and are technically justified to provide a level of safety equivalent to that prescribed by the regulations. The NRC Staff has completed its review of the plans for resolving fire protection issues that were proposed by most of the licensees. As with any issues as technically complex, challenging, and resource intensive as those presented by Thermo-Lag barriers, some plant-specific questions remain. However, the number of issues has steadily declined. The NRC Staff and the licensees will continue to address the residual questions on a case-by-case basis as they arise, and the NRC Staff will continue to follow up with individual licensees on their corrective actions, as appropriate. Every licensee with Thermo-Lag fire barriers will continue to maintain NRC-approved compensatory measures, such as fire watches, until its permanent corrective actions are implemented. Therefore, the public health and safety are protected.

The NRC's "defense-in-depth" fire protection concept relies on protecting safe shutdown functions by achieving a balance among three echelons or levels of protection, which are (1) fire prevention activities; (2) the ability to rapidly detect, control, and suppress a fire; and (3) physical separation of redundant safe shutdown functions. Weaknesses found in one area may be dealt with by enhancing the protection capabilities of the remaining areas.<sup>2</sup> The NRC foresaw cases in which fire protection features would be inoperable and required licensees, through technical specifications or approved fire protection plans controlled by license conditions, to provide compensation for the deficient condition. The concept of allowing alternative actions to compensate for an

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<sup>2</sup> The "defense-in-depth" concept is detailed in the NUREG-0800, "NRC Standard Review Plan," §9.5.1, "Fire Protection Program," at 9.5.1-10.

inoperable condition or component is used in various programs associated with the operation of nuclear power plants and has long been an integral part of NRC regulatory requirements.<sup>3</sup>

The fire endurance test results contained in NRC BUL 92-01 and NRC BUL 92-01, Supplement 1, confirmed that certain Thermo-Lag fire barrier configurations compromise one facet of the fire protection defense-in-depth concept. In response to NRC BUL 92-01 and its supplement, the licensees for plants using Thermo-Lag fire barriers established fire watches in accordance with their technical specifications or license conditions as a compensatory measure. Fire watches are personnel trained by the licensees to inspect for the control of ignition sources, fire hazards, and combustible materials; to look for signs of incipient fires; to provide prompt notification of fire hazards and fires; and to take appropriate actions to begin fire suppression activities. Generally, therefore, by providing additional fire prevention activities through enhanced detection capabilities to find fire hazards and in the case of a fire, augmented suppression activities before a barrier's ability to endure a fire is challenged, fire watches compensate for degraded fire barriers.

The NRC Staff<sup>4</sup> has carefully evaluated the issues associated with continued use of Thermo-Lag material, including the use of fire watches to compensate for any degradation in the effectiveness of required fire barriers. Such compensatory actions provide an adequate level of fire protection without an undue risk to the health and safety of the public. Licensees have established fire watches to compensate for degraded and possibly inoperable fire barriers. Also, licensees rely on a defense-in-depth concept that incorporates multiple safety measures. Automatic fire detection and suppression systems are provided in most areas that have safe shutdown equipment. Trained fire brigades are required 24 hours a day at all plants. All areas that have safe shutdown equipment have manual fire suppression features. Fuels that can feed a fire and ignition sources to start a fire are controlled. The combination of fire watches and the defense-in-depth fire protection features provides an adequate level of fire protection until licensees implement permanent corrective actions.

Taken together, these factors represent an adequate means of fire protection at the plants using Thermo-Lag to ensure, with margin,<sup>4</sup> that operation can be conducted without an undue risk to the health and safety of the public. Nevertheless, with these considerations in mind, the NRC Staff addressed below the Petitioners' specific concerns to demonstrate that no substantial health and safety issue has been raised.

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<sup>3</sup> NRC GL 91-18, "Information to Licensees Regarding Two NRC Manual Sections on Resolution of Degraded and Nonconforming Conditions and Operability," issued November 7, 1991, and *NRC Inspection Manual*, Part 9900, "Resolution of Degraded and Nonconforming Conditions," issued October 31, 1991.

<sup>4</sup> The fact that Thermo-Lag barriers, as installed, will provide protection for some period of time is supported by, among others, the fire endurance test results documented in IN 92-55.



### III. RESPONSE TO SPECIFIC CONCERNS

The Petitioners alleged that

- (1) The NRC has been slow to enforce its own regulations.
- (2) Fire watches do not replace fire barriers and continued reliance on fire watches is an unreasonable and unnecessary hazard to the public health and safety because of an inoperable fire protection system for safe shutdown of the reactor and installed combustible material on the shutdown systems.
- (3) Utilities are in violation of NRC requirements because Thermo-Lag is combustible and could contribute to a fire instead of protecting from it, and, in spite of the danger, the NRC allows continued use of Thermo-Lag.
- (4) Faulty ampacity ratings could result in the use of inappropriate cables, which, if undersized, could overheat and cause its insulation to deteriorate.
- (5) The licensee for Oyster Creek did not report to the NRC its findings regarding the combustibility of Thermo-Lag.
- (6) The Thermo-Lag barriers have been improperly installed at Comanche Peak Unit 1, which contributes further to the poor performance of Thermo-Lag.

The NRC Staff acknowledged and has stated that certain Thermo-Lag fire barrier configurations have failed to demonstrate the ability to perform their fire resistance functions. In this regard, the NRC Staff, in BUL 92-01, Supplement 1, has stated that Thermo-Lag fire barriers should be treated as inoperable until licensees can declare the fire barriers operable on the basis of successful, applicable tests. Given the foregoing deficiencies identified for Thermo-Lag, the NRC Staff concluded that compensatory measures are necessary until a licensee can declare fire barriers operable on the basis of applicable tests that demonstrate successful barrier performance.

The Petitioners also asserted that (1) the NRC should have protected the public and not Rubin Feldman, the President of the company manufacturing Thermo-Lag, and (2) public safety has been compromised by NRC's seeming complicity with utilities.<sup>5</sup>

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<sup>5</sup> These statements could be interpreted as the appearance of unwarranted favoritism toward the manufacturer of Thermo-Lag and complicity with utilities. Therefore, the petitions were referred to the NRC Office of the Inspector General.

## A. Regulatory Compliance

The NRC Staff acknowledges that certain fire endurance tests have demonstrated that Thermo-Lag barriers may not meet the fire endurance rating criteria set forth in section III.G of Appendix R to 10 C.F.R. Part 50. This acknowledgment does not mean, however, that there no longer is reasonable assurance of protection of the public health and safety or that such actions as the shutdown of all reactors using Thermo-Lag and the suspension of Comanche Peak, Peach Bottom, and Oyster Creek operating licenses are warranted.

It should first be noted that Appendix R, which sets forth criteria for specific fire protection features to protect safe shutdown systems, is applicable only to facilities that commenced operation prior to 1979. Facilities commencing operation on or after January 1, 1979, although not bound by Appendix R, generally are bound by licensing commitments to follow the criteria set forth in Appendix R through license conditions.<sup>6</sup>

Even assuming that all of the plants in which Thermo-Lag is installed and that commenced operation prior to 1979 are not in compliance with Appendix R, it does not follow that the failure to comply with a regulation indicates the absence of adequate protection. The Commission has explained that

[W]hile it is true that compliance with all NRC regulations provides reasonable assurance of adequate protection of the public health and safety, the converse is not correct, that failure to comply with one regulation or another is an indication of the absence of adequate protection, at least in a situation where the Commission has reviewed the noncompliance and found that it does not pose an "undue risk" to the public health and safety.

(*Ohio Citizens for Responsible Energy*, DPRM-88-4, 28 NRC 411 (1988).)

All the plants using Thermo-Lag have instituted fire watches as required by their action statements regarding inoperable barriers contained in their technical specifications or fire protection programs subject to license conditions. Generally, action statements provide alternative remedial actions to shutting down a plant when limiting conditions for operation are not met. Compliance with the required remedial actions provides reasonable assurance that the public health and safety is protected notwithstanding the plant's continued operation and its failure to meet the respective limiting condition for operation. Here, since all of the plants using Thermo-Lag have implemented the required fire watches in accordance with plant-specific requirements, their continued operation does not pose an undue risk to the public health and safety.

<sup>6</sup> In addition, there are a very limited number of plants that commenced operation on or after January 1, 1979, that are not subject to specific license conditions but whose licensees have made commitments to comply with NRC fire protection requirements, including section III.G of Appendix R. The NRC is elevating these commitments to license conditions.

The Petitioners assert that fire watches do not replace fire barriers and continued reliance on fire watches is a hazard to public safety. The NRC Staff acknowledges that fire watches do not replace fire barriers. However, as will be discussed in greater detail later in this Decision, fire watches are judged by the NRC to be acceptable compensatory measures and are legally sanctioned remedial actions based on 10 C.F.R. § 50.36(c)(2).<sup>7</sup>

In sum, notwithstanding the failure to have operable fire barriers meeting the fire endurance rating criteria specified by section III.G of Appendix R, a plant is not necessarily unsafe to continue operation. To the contrary, fire watches are judged by the NRC to be adequate remedial measures that provide reasonable assurance that the public health and safety is protected. By reason of compliance by all facilities using Thermo-Lag with their technical specifications or fire protection program action statements requiring the implementation of fire watches, protection of the public health and safety is still reasonably ensured for such plants. Because the Commission has discretion regarding enforcement of its regulations, and given the circumstances here in which no significant health and safety issues have been raised, enforcement action of the nature requested by the Petitioners is not warranted.

#### **B. Ability of Fire Watches to Compensate for a Degraded Barrier**

One of the Petitioners' allegations is that the measures taken by licensees to compensate for degraded barrier conditions, specifically fire watches, are not adequate to protect the public health and safety. The Petitioners have questioned the continued reliance on fire watches in the light of an inoperable fire protection system for safe plant shutdown and the combustibility of Thermo-Lag. In addition, the Petitioners claim that a fire watch does not replace a fire barrier in that fire watches are not preventive.

Despite the acknowledged shortcomings identified with certain Thermo-Lag fire barriers and after fully considering the arguments presented by the Petitioners regarding the ability of fire watches to provide adequate compensation, the NRC Staff has determined that compensatory measures using fire watches are adequate and acceptable to ensure public health and safety until permanent corrective measures are implemented.

The use of fire watches in instances of degraded or inoperable barriers is an integral part of NRC-approved fire protection programs. In general, these NRC Staff-approved compensatory measures specify the establishment of a continuous fire watch or an hourly fire watch in cases in which automatic detection systems

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<sup>7</sup> In instances in which fire protection programs have been moved from technical specifications and are now subject to license conditions, the NRC's approval of the fire protection programs subject to license conditions provides the legal basis for the implementation of fire watches as a remedial measure.

protect the affected components. Although it is true that Thermo-Lag is intended as a barrier and fire watch personnel cannot act as physical shields, a fire watch provides more than simply a detection function. Personnel assigned to fire watches are trained by the licensee to inspect for the control of ignition sources, fire hazards, and combustible materials; to look for signs of incipient fires; to provide prompt notification of fire hazards and fires; and to take appropriate action to begin fire suppression activities. Fire watch personnel are capable of determining the size, the actual location, the source, and the type of fire — valuable information that cannot be provided by an automatic fire detection system.

During a plant fire, compartment temperatures are likely to be less severe at the early stages. On the basis of enhanced capabilities provided by fire watches and notwithstanding that the level of barrier-type protection may be reduced, the NRC Staff has determined that there is an adequate margin of safety to ensure protection in cases in which fire watches are approved.

The goal of the NRC Staff's Thermo-Lag Action Plan is directed toward restoring the functional capability of fire barriers as soon as practicable. There is not a time limit associated with the use of fire watches as a compensatory measure. Given the margin of safety a fire watch brings to a fire protection program, as discussed above, the NRC Staff has determined that continuing the use of fire watches while barriers are inoperable is acceptable. However, the NRC believes that notwithstanding interim reliance on compensatory measures, appropriate actions must be taken by licensees to restore operability of Thermo-Lag barriers. Individual licensees have provided schedules for restoring operability and these are being tracked by the NRC Staff.

The NRC Staff has carefully evaluated the use of fire watches to compensate for any degradation in the effectiveness of required fire barriers and has concluded that fire watches continue to ensure protection of the public health and safety. Therefore, the Petitioners' assertion that the measures taken by licensees to compensate for degraded fire barrier conditions, specifically fire watches, are a hazard is without merit.

### **C. Combustibility**

The Petitioners alleged that, contrary to NRC regulations, Thermo-Lag is combustible.

The NRC Staff recognizes that Thermo-Lag is combustible. To assess Thermo-Lag combustibility, the NRC Staff conducted a testing program at NIST based on the American Society for Testing and Materials (ASTM) Standard E-136. Under this testing standard, the material is considered to be "combustible" if three out of four samples tested exceed the following criteria: (1) the recorded temperature of the specimen's surface and interior thermocouples,

during the test, rises 54°F (30°C) above the initial furnace temperature; (2) there is flaming from the specimen after the first 30 seconds of irradiance; and (3) the weight loss of the specimen, due to combustion during the testing, exceeds 50%. Of the four Thermo-Lag specimens tested, all experienced a weight loss of greater than 50% and flaming continued in excess of 30 seconds. IN 92-82, which provided licensees with the results of the E-136 tests and confirmed the combustibility of Thermo-Lag, restated the NRC fire protection requirements of section III.G of Appendix R to 10 C.F.R. Part 50 and asked that licensees review the information for applicability to their facilities.

The NRC's basic fire protection regulation for commercial nuclear power plants is section 50.48 of 10 C.F.R. Part 50 "Fire protection." Section 50.48 references General Design Criterion (GDC) 3 of Appendix A to 10 C.F.R. Part 50, "Fire protection," Appendix R to 10 C.F.R. Part 50 "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979," and various NRC fire protection guidance documents. Specifically, 10 C.F.R. § 50.48(a) states that each operating nuclear power plant must have a fire protection plan that satisfies GDC 3, and 10 C.F.R. § 50.48(b) states that Appendix R to 10 C.F.R. Part 50 establishes fire protection features required to satisfy GDC 3 with respect to certain generic issues for nuclear power plants licensed to operate prior to January 1, 1979.<sup>8</sup> These issues are addressed in section III.G, "Fire protection of safe shutdown capability," section III.J, "Emergency lighting," and section III.O, "Oil collection system," of Appendix R. Of these three sections of Appendix R, section III.G addresses the use of fire barriers to protect one train of systems necessary to achieve and maintain hot shutdown conditions in the event of a fire and, therefore, is the regulation of interest here.

Section 50.48(a) notes that fire protection guidance for nuclear power plants is contained in two NRC documents. These are (1) Branch Technical Position (BTP) Auxiliary Power Conversion Systems Branch (APCSB) 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants," for new plants docketed after July 1, 1976; and (2) Appendix A to BTP APCS 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants Docketed Prior to July 1, 1976." These two NRC documents specify preferred methods for fire protection program design including the use of fire barriers to satisfy section III.G of Appendix R. Fire barriers that meet the criteria of section III.G of Appendix R to 10 C.F.R. Part 50 and these NRC guidance documents satisfy GDC 3. NUREG-0800, "Standard Review Plan" (SRP) § 9.5-1, "Fire Protection Program," incorporates the guidance of BTP APCS 9.5-1 and Appendix A to BTP APCS 9.5-1 and the criteria of section III.G of Appendix R to 10 C.F.R. Part 50. Therefore,

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<sup>8</sup> While Appendix R is applicable only to facilities that commenced operation prior to January 1, 1979, as discussed earlier in this Director's Decision, facilities commencing operation on or after January 1, 1979, are bound to satisfy the criteria of Appendix R through license conditions or licensing commitments.



fire barriers that meet the guidelines of SRP section 9.5-1 also satisfy 10 C.F.R. § 50.48 and GDC 3.

As stated in section 50.48(a), the purpose of the fire protection plan is "to limit fire damage to structures, systems, or components important to safety so that the capability to safely shut down the plant is ensured." In general, a fire protection plan consists of administrative controls and procedures, personnel for implementing the plan and for fire prevention and manual fire suppression activities, fire detection systems, automatic and manually operated fire suppression systems and equipment, and fire barriers.

Section III.G of Appendix R to 10 C.F.R. Part 50 is the only part of the fire protection regulations that addresses the use of fire barriers. It addresses the use of fire barriers to protect one train of systems necessary to achieve and maintain hot shutdown conditions in the event of a fire. Fire barriers are required to have either a 1-hour or 3-hour rating depending on the specific requirement. However, section III.G does not provide acceptance criteria for fire barriers, nor does it address the combustibility of fire barrier materials. The criteria are set out in BTP APCSB 9.5-1, Appendix A to BTP APCSB 9.5-1, and SRP § 9.5-1. These NRC documents do not preclude the use of combustible materials for construction of fire barriers required to have a 1-hour or 3-hour rating. On March 25, 1994, the Staff consolidated and clarified in Supplement 1 to Generic Letter (GL) 86-10, the fire barrier criteria specified in the BTPs and the SRP. This GL supplement provides detailed Staff guidelines for assessing the combustibility of fire barrier materials, but it does not preclude the use of combustible materials for fire barriers required to satisfy a 1-hour or 3-hour rating. In fact, the fire barrier criteria are appropriately focused on the performance of the fire barrier and its ability to achieve its intended design function, that is, its ability to limit temperature rise within the barrier enclosure and to prevent the passage of flame or gases hot enough to adversely affect the functionality of the safe shutdown components (e.g., cables) enclosed within the fire barrier.

Thermo-Lag 330-1 is a sacrificial material. When it is exposed to elevated temperatures, such as those experienced during a fully developed room fire, it sublimates and transitions from a solid to a vapor. The vapors go through an endothermic decomposition process (pyrolysis) that absorbs heat from the fire. As a result of the pyrolysis, the unreacted Thermo-Lag material is replaced by an insulating char layer which is composed of small interconnecting cells having a large surface area. The char layer reradiates energy and limits heat transfer through the Thermo-Lag material. The low thermal conductivity of the char layer provides additional thermal insulation. Therefore, even though Thermo-Lag is classified as a combustible material when testing in accordance with the guidance of Supplement 1 to GL 86-10, properly designed, qualified, and installed Thermo-Lag can yield fire barriers with a 1-hour or 3-hour rating that

will protect safe shutdown components from the effects of the fire. Therefore, such barriers can satisfy the requirements of section 50.48 and GDC 3.

To provide reasonable assurance that Thermo-Lag fire barriers installed in the nuclear power plants can meet their intended function, representative Thermo-Lag fire barrier assemblies have been subjected to full-scale qualification-type fire endurance tests conducted in accordance with the guidance of Supplement 1 to GL 86-10. This guidance provides standard and uniform test methods and acceptance criteria for assessing the fire-resistive capabilities of these barriers. The Staff has found the use of Thermo-Lag acceptable as a fire barrier material when it is used in accordance with existing NRC regulations and guidance and where supported by appropriate tests and analyses.

However, there are two types of applications where the use of Thermo-Lag material is not appropriate. These are (1) enclosing combustible materials (e.g., insulated cables) within Thermo-Lag fire barriers to eliminate the combustible materials as a fire hazard and (2) using Thermo-Lag as radiant energy heat shields inside noninerted containments.

Section III.G of Appendix R (and the equivalent SRP guidance) specifies three options for protecting redundant trains of systems necessary to achieve and maintain hot shutdown conditions located within the same fire area outside of containment. Two of the three options (sections III.G.2.a and c) rely on the use of fire barriers with a 1-hour or 3-hour rating, as discussed above. The third option, section III.G.2.b, specifies the separation of redundant safe shutdown trains by a horizontal distance of more than 20 feet with no intervening combustibles or fire hazards. (A typical example of intervening combustibles is a cable tray loaded with cables, because cable jacket materials are combustible.) Therefore, spacial separation, and not fire barriers, are used to meet section III.G.2.b. However, to meet this requirement, some licensees have enclosed combustibles that are installed between redundant shutdown trains within a fire barrier. In theory, the fire barrier prevents an exposure fire from igniting the intervening combustible materials and spreading along them from one redundant train to the other. Thus the fire barrier effectively eliminates the intervening combustible as a fire hazard. If the fire barrier itself is noncombustible and the redundant safe shutdown trains are separated by a horizontal distance of more than 20 feet, then the configuration meets section III.G.2.b of Appendix R. However, if the fire barrier material used to enclose the intervening combustibles is also combustible, such as Thermo-Lag, then the licensee has simply installed one combustible material over another and has not eliminated the intervening fire hazard. In a limited number of cases, licensees have enclosed intervening combustibles within Thermo-Lag fire barriers under the incorrect assumption that the Thermo-Lag fire barrier would eliminate the intervening combustibles as a fire hazard. Corrective actions will be required in these cases.

As an alternative to the three options discussed above, section III.G.2.f of Appendix R (and the equivalent SRP guidance) provides a fourth option for noninerted containments, that is, the separation of redundant safe shutdown components with noncombustible radiant energy heat shields. Thermo-Lag is classified as a combustible material when tested in accordance with the guidance of Supplement 1 to GL 86-10. Therefore, it does not meet the criteria for radiant energy heat shields. Licensees using Thermo-Lag in this fashion will also be required to take corrective action.

To ensure that corrective actions are taken in these cases, the NRC Staff issued IN 95-27. In that IN, the Staff addressed enclosing combustible materials within Thermo-Lag fire barriers in an attempt to eliminate the combustible materials as a fire hazard and using Thermo-Lag to construct radiant energy heat shields inside noninerted containments. The Staff identified such solutions for reevaluating the use of Thermo-Lag for these applications as: (1) reanalyzing postfire safe shutdown circuits inside containment and their separation to determine if the Thermo-Lag radiant energy shields are needed, (2) replacing Thermo-Lag barriers installed inside the containment with noncombustible barrier materials, (3) replacing Thermo-Lag barriers used to create combustible-free zones with noncombustible barrier materials, (4) rerouting cables or relocating other protected components, or (5) requesting plant-specific exemptions where technically justified.

One of the Petitioners also asserted that subsection 5a(3) of section 9.5-1 of the SRP states that fire barrier designs "should utilize only non-combustible materials." This section of the SRP does not apply to fire barriers that are used to separate redundant safe shutdown components located *within* a nuclear power plant fire area. Rather, it applies to fire barrier penetration seals, which are typically installed in fire area boundaries. Thermo-Lag 330-1 is not used in such applications.

The principal consideration for 1-hour and 3-hour rated fire barriers installed to meet NRC fire protection requirements and guidelines is that they can achieve their intended design function. That is, that they can limit temperature rise within the barrier enclosure and prevent the passage of flame or gases hot enough to adversely affect the functionality of the safe shutdown components enclosed within the fire barriers. The fact that Thermo-Lag material is combustible does not preclude Thermo-Lag fire barriers from achieving the intended function of preventing fire damage if the fire barriers are properly designed, qualified, and installed. The Petitioners' contention that Thermo-Lag material should not be used because it is combustible is without basis.

#### D. Ampacity Derating

The Petitioners assert that Thermo-Lag could contribute to starting a fire instead of protecting from it. They further alleged that faulty ampacity derating factors could result in the use of inappropriate cables that, if undersized, could overheat and cause its insulation to deteriorate.

Ampacity derating is the lowering (derating) of the current-carrying capacity of power cables enclosed in electrical raceways protected with fire barrier materials because of the insulating effect of the fire barrier material. This insulating effect may reduce the ability of the cable insulation to dissipate heat. If not accounted for in the plant design, the increased cable insulation temperature could lead to premature insulation failure. Other factors also affect ampacity derating, including the extent of cable fill in the raceway, cable type, raceway construction, and ambient temperature. The National Electrical Code, Insulated Cable Engineers Association (ICEA) publications, and other industry standards provide ampacity derating factors for open-air installations. These standards do not provide derating factors for fire barrier systems. Although a national standard test method is in the process of being developed but has not yet been established, ampacity derating factors for raceways enclosed with fire barrier material are determined by testing for the specific installation configurations.

TSI, the manufacturer of Thermo-Lag, has documented a wide range of ampacity derating factors that were determined by testing, for raceways enclosed within Thermo-Lag fire barrier materials. On October 2, 1986, TSI informed its customers that, while conducting tests in September 1986 at Underwriters Laboratories, Inc. (UL), it found that the ampacity derating factors for Thermo-Lag barriers were greater than previous tests indicated. However, the cable fill and tray configurations were different for each test than those tested previously. In addition, the NRC Staff learned that UL performed a duplicate cable tray test that resulted in an even higher derating factor. The NRC Staff also learned of the determination of other derating factors during its review of other tests conducted at Southwest Research Institute (SwRI).<sup>9</sup>

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<sup>9</sup> The test procedures and test configurations differed among the testing laboratories. Therefore, the results from the different ampacity tests may not be directly comparable to each other.

The NRC Staff is concerned that the ampacity derating factors, as determined in UL tests for Thermo-Lag barrier designs, are inconsistent with TSI results for similar designs because different times were allowed for the temperature to stabilize before taking current measurements. Inconsistent stabilization times would call into question the validity of previous TSI results. The NRC also noticed during the review of the Industrial Testing Laboratories (ITL) test reports that ambient temperature and maximum cable temperature were allowed to vary widely for some tests. Therefore, those tests in which the ambient and maximum cable temperatures were not maintained within specified limits may be questionable. Additionally, a licensee discovered a mathematical error for the ampacity derating factor published in an ITL test report. A preliminary assessment of the use of a lower-than-actual ampacity derating factor indicates that higher-than-rated cable temperatures are possible for Thermo-Lag installations. Higher-than-rated cable temperatures could accelerate the aging effects experienced by the cable.



The NRC special review team concluded that the ampacity derating test results completed at the time of the review, including the UL test results, were indeterminate. This conclusion was based on observed inconsistencies in the derating test results of the various testing laboratories. The special review team found that there was no national consensus test standard (e.g., Institute of Electrical and Electronics Engineers (IEEE) or American National Standards Institute (ANSI)) for conducting these tests, and that some licensees had not adequately reviewed ampacity derating test results to determine the validity of the tests and the applicability of those test results to their plant design. The special review team recognized that, in hypothetical cases, nonconservative ampacity derating factors could have been instrumental in the installation of inappropriate cables, which as a result, could suffer premature cable jacket and cable insulation failures over a period of time. However, since that time, the NRC Staff has determined that in practice the ampacity derating factor resulting from Thermo-Lag insulating properties represents only one of many variables used in determining the design ampacity for power cable systems and that, as discussed below, sufficient margin exists in this area to preclude any immediate safety concerns.

For actual installations, various derating factors are typically applied to the ICEA ampacity values provided for each cable size. In general, the cables typically used in actual installations have higher current-carrying capacity than the ICEA ampacity values.<sup>10</sup> Also, cables are sized based on full-load current plus a 25% margin to account for starting current requirements of the load. Given the short duration of typical equipment starts, this margin is available to compensate for any errors in ampacity derating. Further, use of a cable size larger than normal may be required as a result of voltage drop considerations for long circuit lengths. In typical applications this also provides additional current-carrying capacity. Given these conservatisms inherent in the design ampacity of cable systems and in addition the fact that most power cables required for safe shutdown are not normally energized, but are typically operated during surveillance testing for short time periods, the likelihood that cables could ignite as a result of Thermo-Lag ampacity derating errors has been judged by the NRC Staff to be unlikely. In addition, based on these conservatisms and the currently available information on existing plants, ampacity design, and operating history, the NRC Staff believes that the ampacity derating issue is not an immediate safety issue but rather is an aging issue to be resolved over the long term.<sup>11</sup>

<sup>10</sup> ICEA ampacity values include conservatisms to compensate for skin and proximity effects and shield and/or sheath losses that may or may not apply in specific situations.

<sup>11</sup> Generic Letter 92-08 requires licensees to review the ampacity derating factors used for all raceways protected by Thermo-Lag 330-1 (for fire protection of safe shutdown capability or to achieve physical independence of electrical

(Continued)



#### **E. Oyster Creek Failed to Report Test Results on Combustibility to the NRC**

The Petitioners requested that Oyster Creek's license be suspended based on the following:

- (1) SwRI conducted fire tests on Thermo-Lag 330-1 specimens for GPUN, the licensee for Oyster Creek, and reported that all specimens ignited approximately 2 seconds after they were inserted into the furnace and failed specified criteria because of flaming after the first 30 seconds of testing, an outside temperature rise higher than 30°C, and a weight loss of 50%.
- (2) GPUN's operation of Oyster Creek with knowledge of the SwRI report is an example of GPUN's reckless disregard for fire protection and public safety.
- (3) In the event of fire, Thermo-Lag is likely to fail its intended function of protecting vital electrical cables running from the control room to plant safety systems used to shut down the reactor.
- (4) Current installations of Thermo-Lag are likely to fail in less time than the 1 hour (when smoke detectors and automatic sprinkler systems are present) or 3 hours (when there are no fire detection and suppression systems) that NRC regulations require for fire barriers to withstand fire.
- (5) The NRC Inspector General issued a report in August 1992 condemning NRC's handling of the Thermo-Lag issue and documenting the NRC Staff's failure to understand the scope of the problem.
- (6) In April 1994, IITL and its President pleaded guilty to five felony counts of aiding and abetting the distribution of falsified test data.
- (7) On September 29, 1994, the U.S. Department of Justice issued a seven-count indictment against the manufacturer of Thermo-Lag and its Chief Executive Officer for willful violations of the Atomic Energy Act, conspiracy to conceal material facts, and making false statements to defraud the United States, in connection with \$58 million in fire barrier material.
- (8) GPUN has known since at least August 11, 1992, that Thermo-Lag 330-1 as a structural base material is combustible and that it was in violation of Appendices A and R to Part 50 of Title 10 of the *Code of Federal Regulations* (10 C.F.R.) and the NRC Standard Review Plan, NUREG-0800.

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systems) and to determine whether the ampacity derating test results relied upon are correct and applicable to the plant design. Presently, the Staff is conducting reviews of followup actions to close out ampacity derating concerns with licensees pursuant to GL 92-08.

- (9) GPUN failed to report the SwRI test results in response to GL 92-08 of February 10, 1994, when asked to describe the Thermo-Lag 330-1 fire barriers installed as required to meet 10 C.F.R. Part 50, Appendix R.
- (10) Continued reliance on fire watches at Oyster Creek is an unreasonable and unnecessary hazard to the public health and safety because of an inoperable fire protection system for safe shutdown of the reactor and installed combustible material on the shutdown systems.

Several of the issues listed above have been addressed earlier in this decision. Therefore, the NRC Staff will only address below the remaining plant-specific issues. As discussed earlier in this Decision, the NRC issued IN 92-82 to inform the industry of the results of combustibility tests performed by NIST in early August 1992. These tests confirmed the combustibility of Thermo-Lag. As a result of discussions with the NRC Staff on the subject of Thermo-Lag combustibility, GPUN decided to independently verify the results of the E-136 tests performed by NIST and contracted SwRI to perform the E-136 tests. The results of these tests, as documented by the telecopy transmittal sheet submitted with the petition, confirmed the combustibility of Thermo-Lag. Contrary to the Petitioners' allegations, the NRC Staff does not require that licensees report the results of their independent testing. It should be noted here that, prior to the SwRI testing that confirmed combustibility, the NRC was aware of the combustibility of Thermo-Lag and that the NRC was also well aware of the results of the E-136 tests performed by GPUN through telephone conversations with GPUN personnel, even though there was no requirement for GPUN to report these test results.

The Petitioners also alleged that GPUN did not report to NRC its findings of the SwRI test results in its "Response to Request for Additional Information Regarding Generic Letter 92-08, 'Thermo-Lag Fire Barriers,'" (RAI) dated February 10, 1994.

The RAI quoted by the Petitioners did not request that GPUN report to NRC its findings of the SwRI test results and, in addition, the NRC Staff does not require that licensees report the results of their independent testing. Therefore, the NRC Staff has concluded that, contrary to the Petitioners' allegation, GPUN did not have to report to the NRC its findings of the SwRI test results.

For the reasons stated above, the suspension of Oyster Creek's license, as requested by the Petitioners, is not warranted.

#### **F. Dry-Joint Issue at Comanche Peak Unit 1**

The Petitioners requested that

- (a) the Comanche Peak Unit 1 license be suspended,

- (b) the licensee perform additional destructive analysis for Thermo-Lag configurations, and
- (c) the licensee perform fire tests on upgraded "dry-joint" Thermo-Lag configurations based on the following:
  - (1) The licensee's records on the original installation of Thermo-Lag fire barriers on conduits and cable trays indicate that its contractor followed specifications for prebuttering all joints.
  - (2) NRC Inspection Report Nos. 50-445/93-42, 50-446/93-42 found, based on destructive analysis documents, that a concern did exist where Thermo-Lag conduit joints fell apart easily and did not appear to have any residual material of a buttered surface, indicative of a joint that had not been prebuttered.
  - (3) The "dry joint" deficiency appeared in Room 115A and other areas of the unit.
  - (4) The licensee directly contradicts an NRC inspector's findings that were determined in part by destructive analysis.
  - (5) The "dry joint" or absence of prebuttering of Thermo-Lag panels can be determined only by destructive analysis and cannot be determined by a walkdown visual inspection.
  - (6) The findings reported in the Comanche Peak Unit 1 Region IV Inspection Reports 50-445/93-42 and 50-446/93-42, based on the limited amount of destructive analysis conducted at the unit, constitute a substantial documentation of installation deficiencies found in Thermo-Lag fire barriers as documented in NRC IN 91-79 and Supplement 1.
  - (7) Neither the NRC nor the industry, by its agent NEI, nor a utility, have conducted fire tests on dry fitted or "dry joint" upgraded configurations of Thermo-Lag 330-1.
  - (8) The presence of "dry joint" upgraded configurations in Comanche Peak Unit 1 constitutes an untested application of Thermo-Lag fire barriers.

These allegations were based on the Petitioners' interpretation of NRC Inspection Report 93-42 issued on February 21, 1994. By letter of November 29, 1994, TU Electric, the licensee for Comanche Peak Unit 1, sent a letter to the NRC Staff responding to the Petition.

The term "joint" refers to the interface between two adjacent Thermo-Lag surfaces. Comanche Peak Unit 1 installation procedures for Thermo-Lag fire barriers specify that, during the initial installation process, the joints should be prebuttered (or covered) with Thermo-Lag trowel-grade material before the adjoining surfaces are joined to ensure adhesion of the surfaces. The term "dry joint" refers to the lack of Thermo-Lag trowel-grade material in a joint. The failure to prebutter a joint with trowel-grade Thermo-Lag could result in a

weakening of the joint during a potential fire exposure and could provide an exposure path in the fire barrier envelope. The NRC performed an inspection at Comanche Peak Unit 1 on November 2-5 and 23-24, 1993, and January 26-28, 1994, to compare the Thermo-Lag test specimens with the upgraded Thermo-Lag configurations on site. The results of this inspection are documented in NRC Inspection Report 93-42. The report stated that there appeared to be a large number of deficiencies with the installed fire barriers and that an example of these deficiencies involved dry joints on conduit overlays installed on pedestal hangers. The NRC inspector did not personally observe the dry joints in question. His statements were based on observations made by TU Electric and documented in an Operations Notification and Evaluation (ONE) form. However, the ONE form in question did not identify a dry joint. Instead, the ONE form identified a condition that was conservatively reported as an apparent dry joint. Upon further evaluation of the ONE form, TU Electric determined that the joint in question had in fact been prebuttered with trowel-grade Thermo-Lag. These facts are discussed in more detail below.

On November 25, 1992, a speed memo was written by a TU Electric contractor identifying "apparent unsatisfactory conditions on Unit 1 commodities." This memorandum identified "an apparent" dry joint on an oversize coupling section (on top of a pedestal hanger). The speed memo also stated that, "we have decided that the best vehicle to call attention to these apparent deficiencies would be a letter to your attention for further evaluation of the situation. . . ." The letter was forwarded to the appropriate TU Electric engineering section.

The cognizant TU Electric engineer performed a walkdown of the described areas and evaluated the commodities. He conservatively initiated a ONE form (the process used by TU Electric to report problems and develop resolution for the identified problems). A comprehensive evaluation of this condition determined that the joint had been prebuttered. Therefore, the engineering resolution for this condition was that "this is not a deficient condition, and there are no generic implications."

The originator of the speed memo initially believed that the condition in question was a dry joint because of the appearance of the joint. During alignment of Thermo-Lag panels, the leading edge of one panel contacts the outer edge of a preceding panel and forces most of the trowel grade along the initial contact edge toward the inside of the Thermo-Lag envelope. Subsequent shrinkage of the trowel grade in the joint can give the appearance of a dry joint because the trowel-grade material is not visible. Therefore, contrary to the Petitioners' allegation, there was no "dry joint" deficiency on the pedestal hanger.

The Petitioners also alleged that dry joints appear in other Thermo-Lag installations at Comanche Peak Unit 1. In response to the petition, TU Electric performed an electronic search of its ONE-form data base. The search did identify additional ONE forms related to dry joints. However, Thermo-Lag

rework crews and the quality control inspectors at Comanche Peak Unit 1 have used the term "dry joints" and "no visible trowel-grade material" synonymously. Upon further investigation of these ONE forms, it was determined that trowel-grade material had in fact been applied to the joints in question. Therefore, these ONE forms were also dispositioned as "not a nonconforming condition." These findings support the NRC Staff's conclusion that, contrary to the Petitioners' allegations, there is no evidence of dry joints at Comanche Peak Unit 1. The Petitioners' allegations regarding dry joints at Comanche Peak Unit 1 are based on premises that are faulty and contrary to the information contained in Inspection Report 93-42.

In regard to the Petitioners' request that the licensee perform fire tests on upgraded "dry joint" Thermo-Lag configurations and additional destructive analysis, the NRC Staff has reviewed the documentation provided by the licensee in response to the RAIs regarding GL 92-08 and concluded that the licensee's quality assurance program gave adequate confidence that the as-installed Thermo-Lag configurations at Comanche Peak Unit 1 conform with NRC specification requirements for both material and installation attributes.

Accordingly, suspension of the Comanche Peak Unit 1 license, as requested by the Petitioners, is not warranted.

#### **G. Protection of Rubin Feldman**

The Petitioners assert that, rather than protecting the public, the NRC is protecting Rubin Feldman, President of the company that manufactures Thermo-Lag.

As discussed earlier, the NRC received allegations in 1991 that questioned the adequacy of Thermo-Lag fire barriers. In response, (1) the Office of the Inspector General (OIG) and the Office of Investigations (OI) formed a joint task force to investigate the allegations, and (2) the Office of Nuclear Reactor Regulation (NRR) established a special team to review the safety issues raised by the allegations. Throughout its review, the special team gave expert technical advice and assistance to the OIG/OI task force. The Director of NRR tasked the NRR Staff to resolve the technical issues raised by the special team. The NRC Staff continued to cooperate fully with the investigative task force. Further, the NRR Staff carried out a full-scale test program and developed other technical data and information for the investigative task force. These NRC Staff efforts contributed significantly to a referral to the Department of Justice of possible wrongdoing by TSI. The referral resulted in a seven-count criminal indictment of TSI, the manufacturer and supplier of Thermo-Lag fire barriers and of its President, Rubin Feldman, by a Federal Grand Jury. The NRC Staff continued



to support the Department of Justice throughout the criminal case.<sup>12</sup> In addition, throughout the trial, the NRC Staff continued to pursue corrective actions consistent with its action plan for the resolution of the Thermo-Lag issues. The above facts contradict the Petitioners' assertion that the NRC was protecting Rubin Feldman.

#### **H. NRC Seeming Complicity with Utilities**

The Petitioners also assert that there is seeming complicity between the NRC and the licensees and that licensees seek to avoid costly replacement of the Thermo-Lag.

In May 1991, the NRC Office of the Inspector General performed an inspection of the NRC's Staff performance in regard to Thermo-Lag barriers and found indications of inadequate performance by the NRC Staff in the acceptance and review of Thermo-Lag barriers. Subsequently, the NRC Staff initiated an aggressive program of corrective actions to rectify the deficiencies identified in the review and response process, as summarized earlier in this decision.

In addition, the Staff has expended considerable time and effort to address and resolve Thermo-Lag issues to ensure that licensees return to compliance with existing NRC fire protection requirements. The NRC Staff issued three requests for additional information regarding GL 92-08 to each licensee using Thermo-Lag to obtain information on the specific Thermo-Lag material installed at each plant, details about the corrective actions each licensee intended to take to return to compliance with NRC fire protection requirements, and schedules for the implementation of these corrective actions. The response of each licensee was evaluated by the NRC Staff. As a consequence of this substantial NRC Staff effort, a number of licensees have already returned to compliance with NRC requirements by a variety of means which include replacing, rerouting, or upgrading existing Thermo-Lag barriers, performing postfire safe shutdown reanalysis, and installing additional fire detection and suppression features. All of these measures involve some burden on licensees. In addition, some licensees have initiated costly programs to perform plant-specific fire endurance tests of other fire barriers with the intention of replacing Thermo-Lag with these barriers. All licensees who utilize Thermo-Lag will need to expend resources commensurate with their reliance on Thermo-Lag to come into compliance with NRC fire protection requirements. NRC Staff oversight will ensure that this is the case.

The Petitioners' assertion of seeming complicity with utilities on the part of the NRC Staff is unfounded in the light of the significant NRC Staff efforts

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<sup>12</sup> The jury returned a verdict of "not guilty" on all counts of the indictment against TSI and Mr. Feldman.

to ensure that licensees expend the resources necessary to return to compliance with NRC requirements.

#### IV. CONCLUSION

The Petitioners request that the NRC order the immediate shutdown of all reactors using Thermo-Lag and the suspension of Oyster Creek, Peach Bottom Units 1 and 2, and Comanche Peak Unit 1 operating licenses.

For the reasons discussed above, I find no basis for taking such actions. Rather, on the basis of the review efforts by the NRC Staff, I conclude that the issues raised by the Petitioners are being addressed by licensees in a manner that ensures adequate protection of the public health and safety. Accordingly, the Petitioners' requests for action pursuant to section 2.206 are denied.

A copy of this Decision will be placed in the Commission's Public Document Room, Gelman Building, 2120 L Street, NW, Washington, DC, and at the Local Public Document Room for the named facilities. A copy of this Decision will also be filed with the Secretary for the Commission's review as provided in 10 C.F.R. § 2.206(c) of the Commission's regulations.

As provided by this regulation, the Decision will constitute the final action of the Commission 25 days after issuance, unless the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE NUCLEAR  
REGULATORY COMMISSION

William T. Russell, Director  
Office of Nuclear Reactor  
Regulation

Dated at Rockville, Maryland,  
this 3rd day of April 1996.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman  
Dr. Charles N. Kelber  
Dr. Richard F. Foster

In the Matter of

Docket Nos. 030-05373-EA  
030-32163-EA  
(ASLBP No. 96-714-02-EA)  
(EA 96-085)  
(Order Suspending Byproduct  
Material License Nos.  
29-09814-01 and 29-09814-02)

EASTERN TESTING AND  
INSPECTION, INC.

May 10, 1996

Ruling on a Licensee request to rescind an NRC Staff determination to make immediately effective an enforcement order suspending two Licensee byproduct materials licenses, the Licensing Board denies the Licensee's motion, concluding that for certain bases in the order, the Staff had met its burden under 10 C.F.R. § 2.202(c)(2)(i) to establish by "adequate evidence" that (1) those charges are not based on "mere suspicion, unfounded allegations, or error," and (2) there is a need to make the order effective immediately.

**ENFORCEMENT ACTIONS: IMMEDIATE EFFECTIVENESS  
REVIEW (BURDEN OF GOING FORWARD; BURDEN OF PROOF)**

**RULES OF PRACTICE: BURDEN OF GOING FORWARD  
(IMMEDIATE EFFECTIVENESS REVIEW FOR ENFORCEMENT  
ORDERS); BURDEN OF PROOF (IMMEDIATE EFFECTIVENESS  
REVIEW FOR ENFORCEMENT ORDERS); IMMEDIATE  
EFFECTIVENESS REVIEW FOR ENFORCEMENT ORDERS  
(BURDEN OF GOING FORWARD; BURDEN OF PROOF)**

The movant challenging a Staff determination to make an enforcement order immediately effective bears the burden of going forward to demonstrate that the order, and the Staff's determination that it is necessary to make the order immediately effective, are not supported by "adequate evidence" within the meaning of 10 C.F.R. § 2.202(c)(2)(i), but the Staff has the ultimate burden of persuasion on whether this standard has been met. *See* 55 Fed Reg. 27,645, 27,646 (1990). *See also St. Joseph Radiology Associates, Inc. (d.b.a. St. Joseph Radiology Associates, Inc., and Fisher Radiological Clinic), LBP-92-34, 36 NRC 317, 321-22 (1992).*

**ENFORCEMENT ACTIONS: IMMEDIATE EFFECTIVENESS  
REVIEW (CORROBORATING ALLEGATIONS OF UNRELIABLE  
SOURCE)**

**RULES OF PRACTICE: IMMEDIATE EFFECTIVENESS REVIEW  
FOR ENFORCEMENT ORDERS (CORROBORATING ALLEGATIONS  
OF UNRELIABLE SOURCE)**

When the character and veracity of the source for a Staff allegation are in doubt, a presiding officer will be unable to credit the source's information as sufficiently reliable to provide "adequate evidence" for that allegation absent sufficient independent corroborating information.

**ENFORCEMENT ACTIONS: IMMEDIATE EFFECTIVENESS  
REVIEW (CORROBORATING ALLEGATIONS OF UNRELIABLE  
SOURCE)**

**RULES OF PRACTICE: IMMEDIATE EFFECTIVENESS REVIEW  
FOR ENFORCEMENT ORDERS (CORROBORATING ALLEGATIONS  
OF UNRELIABLE SOURCE)**

In considering whether there is probable cause for an arrest, courts have held that information supplied by an identified ordinary citizen witness may

be presumed reliable. *See, e.g., McKinney v. George*, 556 F. Supp. 645, 648 (N.D. Ill. 1983) (citing cases), *aff'd*, 726 F.2d 1183 (7th Cir. 1984). In determining whether there is "adequate evidence" within the meaning of 10 C.F.R. § 2.202(c)(2)(i) to support the immediate effectiveness of an enforcement order, applying this presumption to a witness who is corroborating a family member's allegations may be inappropriate because that relationship creates a possible bias that also brings the corroborating witness' reliability into substantial question.

#### **REGULATIONS: INTERPRETATION (10 C.F.R. § 30.10(a), (c))**

Under 10 C.F.R. § 30.10(c)(2), an intentional act that a person knows causes a violation of a licensee procedure is considered "deliberate misconduct" actionable under section 30.10(a)(1). As a consequence, an assertion that a person who created a document containing false information did not intend to mislead the agency (or did not actually mislead the agency) appears irrelevant. Instead, the focus is on whether the person's action was a knowing violation of a licensee procedure that could have resulted in a regulatory violation by the submission to the agency of materially incomplete or inaccurate information. *See* 56 Fed. Reg. 40,664, 40,670 (1991) (stating that "[f]or situations that do not actually result in a violation by a licensee, anyone with the requisite knowledge who engages in deliberate misconduct as defined in the rule has the requisite intent to act in a manner that falls within the NRC's area of regulatory concern. The fact that the action may have been intercepted or corrected prior to the occurrence of an actual violation has no bearing on whether, from a health and safety standpoint, that person should be involved in nuclear activities.").

#### **ENFORCEMENT ACTIONS: IMMEDIATE EFFECTIVENESS REVIEW (RELIABILITY OF AGENCY INSPECTOR'S OBSERVATIONS)**

#### **RULES OF PRACTICE: IMMEDIATE EFFECTIVENESS REVIEW FOR ENFORCEMENT ORDERS (RELIABILITY OF AGENCY INSPECTOR'S OBSERVATIONS)**

Absent a showing that provides some reasonable cause to believe that, because of bias or mistake, an agency inspector cannot be considered a credible observer, inspector's direct personal observations should be credited in considering whether allegations based on those observations are supported by "adequate evidence" within the meaning of 10 C.F.R. § 2.202(c)(2)(i). This is based on the accepted presumption that a government officer can be expected faithfully to execute his or her official duties. *See United States v. Chemical Foundation, Inc.*, 272 U.S. 1, 14-15 (1926).



**ENFORCEMENT ACTIONS: IMMEDIATE EFFECTIVENESS  
REVIEW (NEED FOR IMMEDIATE EFFECTIVENESS)**

**RULES OF PRACTICE: IMMEDIATE EFFECTIVENESS REVIEW  
FOR ENFORCEMENT ORDERS (NEED FOR IMMEDIATE  
EFFECTIVENESS)**

Under 10 C.F.R. § 2.202(c)(2)(i), to support an immediate effectiveness determination for an enforcement order, besides showing that the bases for the order are supported by "adequate evidence," the Staff must show there is a need for immediate effectiveness that is supported by "adequate evidence." That need can be established by showing either that the alleged violations or the conduct supporting the violations is willful or that the public health, safety, or interest requires immediate effectiveness.

**MEMORANDUM AND ORDER**

**(Denying Licensee Motion to Set Aside Immediate Effectiveness)**

By a March 29, 1996 enforcement order effective on the date of issuance, the NRC Staff suspended two byproduct material licenses held by Eastern Testing and Inspection, Inc. (ETI). *See* 61 Fed. Reg. 15,836 (1996). In a letter dated April 1, 1996, as supplemented on April 19, 1996, ETI requests that we set aside the Staff's immediate effectiveness determination.<sup>1</sup> *See* Letter from H. Soni, ETI President, and J. Badiali, ETI Radiation Safety Officer (RSO), to J. Lieberman, Director, NRC Office of Enforcement (Apr. 1, 1996); Letter from Daniel F. Stenger and Robert E. Helfrich, Winston and Strawn, to the Licensing Board (Apr. 19, 1996) [hereinafter ETI Supplement]. In responsive filings dated April 8, 1996, and April 25, 1996, the Staff opposes ETI's immediate effectiveness rescission motion. *See* NRC Staff's Response to Request to Set Aside Immediate Effectiveness of Order Suspending Licenses (Apr. 8, 1996) [hereinafter Staff Response]; NRC Staff's Response to Supplemental Information in Support of Licensee's Request to Set Aside Immediate Effectiveness of Order Suspending Licenses (Apr. 25, 1996) [hereinafter Staff Supplement Response]. Thereafter, on April 30, 1996, the Board conducted an oral argument to provide an opportunity for the parties to further explain their positions on ETI's request

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<sup>1</sup> Besides requesting that the Staff's immediate effectiveness determination be set aside, on April 16, 1996, ETI filed a timely demand for a hearing on the merits of the Staff's March 29, 1996 license suspension order. *See* [ETI's] Demand for a Hearing on Order Suspending Licenses (Apr. 16, 1996) at 1. Further, in accordance with 10 C.F.R. § 2.202(b), ETI later submitted a written answer responding to the allegations in the Staff's order. *See* [ETI's] Answer to Order Suspending Licenses (Effective Immediately) (May 2, 1996).

and for the Board to obtain clarification regarding the information submitted by the parties. See Tr. at 1-127.

For the reasons set forth below, we deny ETT's request to set aside the immediate effectiveness of the Staff's suspension order.

## I BACKGROUND

### A. Regulatory Scheme for Immediately Effective Enforcement Orders

Section 2.202(a)(5) of 10 C.F.R. declares that an enforcement order instituting a proceeding to modify, suspend, or revoke a license will state "the effective date of the order." That subsection also provides that if there is a finding, with stated reasons, that "the public health, safety, or interest so requires" or if the regulatory violation or conduct that causes the enforcement order to be issued is "willful," the order may be made immediately effective. Further, if an enforcement order is made immediately effective, under section 2.202(c)(2)(i) the licensee or other person to whom the order was issued may move to set aside the immediate effectiveness on the ground that the order, including the need for immediate effectiveness, "is not based on adequate evidence but on mere suspicion, unfounded allegations, or error." Section 2.202(c)(2)(i) also provides that a motion challenging an immediate effectiveness determination must "state with particularity the reasons why the order is not based on adequate evidence and must be accompanied by affidavits or other evidence relied on."

The Commission adopted the immediate effectiveness provisions of section 2.202 in their present form in a 1992 rulemaking. See 57 Fed. Reg. 20,194 (1992). In adopting the "adequate evidence" test — as opposed to a "preponderance of the evidence" standard suggested by some commenters on the rule — the Commission described the adequate evidence test as follows:

The test may be likened to the probable cause necessary for an arrest, a search warrant, or a preliminary hearing. This is less than must be shown at the trial, but must be more than uncorroborated suspicion or accusation. "Probable cause is deemed to exist where the facts and circumstances within the affiant's knowledge, and of which he has reasonably trustworthy information, are sufficient unto themselves to warrant a man of reasonable caution to believe that an offense has been or is being committed." Thus, in the context of the rule, adequate evidence is deemed to exist when facts and circumstances within the NRC staff's knowledge, of which it has reasonably trustworthy information, are sufficient to warrant a person of reasonable caution to believe that the charges specified in the order are true and that the order is necessary to protect the public health, safety, or interest.

57 Fed. Reg. at 20,196 (quoting *United States v. Hill*, 500 F.2d 315, 317 (5th Cir. 1974)) (citation omitted).

The movant challenging the Staff's order bears the burden of going forward to demonstrate that the order, and the Staff's determination that making the order immediately effective is necessary, are not supported by "adequate evidence," but the Staff has the ultimate burden of persuasion on whether this standard has been met. *See* Tr. at 69. *See also* *St. Joseph Radiology Associates, Inc.* (d.b.a. *St. Joseph Radiology Associates, Inc.*, and *Fisher Radiological Clinic*), LBP-92-34, 36 NRC 317, 321-22 (1992).

## **B. Immediately Effective Suspension of ETI's Licenses**

Under Byproduct Material License No. 29-09814-01 (the radiography license), ETI is authorized to possess and use iridium-192 and cobalt-60 in a compatible radiographic exposure device for performing industrial radiography. ETI also holds Byproduct Material License No. 29-09814-02 (the portable gauge license), which authorizes it to possess and use cesium-137 and americium-241 in specified portable gauges. The Staff's March 29 order suspending ETI's authority under both these licenses also requires that (1) all activities involving licensed materials be halted (except for prenoticed transfers of materials to authorized recipients); (2) all NRC-licensed materials be placed in locked storage; (3) no other NRC-licensed materials be received by ETI; and (4) all ETI records of licensed activities be maintained in their original form without alteration or removal. *See* 61 Fed. Reg. at 15,838.

In its March 29 order, the Staff provides several bases for its suspension action and its determination to make that suspension immediately effective. Citing an NRC Office of Investigations (OI) investigation of ETI, the Staff asserts as an initial basis (which we will refer to as Basis A) that with respect to the radiography license:

(1) In violation of 10 C.F.R. §§ 30.9, 30.10, ETI President Himat Soni deliberately caused ETI to create an inaccurate record by signing a June 16, 1996 radiographer's card certifying that an employee, Mr. David Bhatt, met applicable requirements and was authorized to perform Level I radiographer duties per ETI procedures despite being told by Mr. Bhatt that he had received substantially less than the forty hours of formal classroom training required under ETI Radiation Safety Procedure (RSP) No. RS-1, incorporated by reference in Condition 17 of the ETI radiography license;

(2) In violation of sections 30.9 and 30.10, ETI RSO Joseph Badiali deliberately caused ETI to create an inaccurate record of Mr. Bhatt's June 20, 1996 radiation safety examination for assistant radiographer by providing Mr. Bhatt with examination answers;

(3) In violation of sections 30.9 and 30.10, the ETI RSO deliberately caused ETI to create an inaccurate record of Mr. Bhatt's training by signing a June 20, 1995 document falsely representing that the RSO had given Mr. Bhatt an oral exam as part of a practical exam;

(4) In violation of 10 C.F.R. § 34.31, ETI deliberately directed Mr. Bhatt, an unqualified and untrained employee, to perform radiography between June 15 and July 26, 1995;

(5) In violation of 10 C.F.R. § 34.27, ETI personnel failed to complete utilization records on ninety-seven occasions between January 1, 1994, and August 31, 1995; and

(6) On September 29, 1995, ETI president Himat Soni threatened Mr. Bhatt with physical harm because he believed Mr. Bhatt may have cooperated with an NRC investigation and/or inspection of ETI.

See 61 Fed. Reg. at 15,836. Further, based on May 1994 and July and August 1995 inspections at ETI's Thorofare, New Jersey facility and at a temporary job site in Deepwater, New Jersey, the Staff maintains that the following additional violations of the radiography license were identified (which we will refer to as Basis B):

(1) In violation of 10 C.F.R. § 34.31(b) and RSP No. RS-1, Revision 4, incorporated by reference in Condition 17 of the radiography license, ETI provided significantly less than forty hours of formal classroom instruction to Mr. Bhatt, who acted as a radiographer's assistant during June and July 1995;

(2) In violation of 10 C.F.R. § 20.2102(a)(2), ETI failed to maintain radiation program content and implementation audit records for 1994 and 1995;

(3) In violation of 10 C.F.R. § 34.33(a) and RSP No. ETI-1, Revision G, incorporated by reference in Condition 17 of the radiography license, ETI failed to "rezero" pocket dosimeters before the start of each work shift on eight specified dates between April 1994 and August 1995;

(4) In violation of 10 C.F.R. § 34.24, ETI failed on three specified dates in January and August 1995 to use survey meters calibrated within three months and to maintain survey meter calibration records;

(5) In violation of 10 C.F.R. § 20.2106(c), during June and July 1995 ETI failed to maintain complete dosimetry records that included the names, social security numbers, and birth dates of individuals;

(6) In violation of RSP No. ETI-1, Revision G, incorporated by reference in Condition 17 of the radiography license, between June 1994 and August 1995, ETI personnel failed to complete utilization logs and return completed utilization logs to the RSO;

(7) In violation of RSP No. ETI-1, Revision G, incorporated by reference in Condition 17 of the radiography license, on August 23, 1995, ETI personnel failed to perform physical radiation surveys to ensure readings to roped-off boundaries did not exceed two millirem in an hour;

(8) In violation of 10 C.F.R. § 34.43(b), on August 23, 1995, while making radiographic exposures ETI personnel failed to perform a survey after each exposure to determine that the sealed source was returned to its shielded position;

(9) In violation of 10 C.F.R. § 71.5(a) and 49 C.F.R. § 177.817(a), on July 12, 1995, ETI personnel failed to complete a shipping paper prior to transporting licensed material outside the licensee's facility;

(10) In violation of 10 C.F.R. § 71.5(a) and 49 C.F.R. § 172.403, on July 12, 1995, ETI personnel failed to identify the activity or transport index on the "RADIOACTIVE" label

attached to a package containing licensed material that was transported outside the licensee's facility; and

(11) In violation of 10 C.F.R. § 71.5(a) and 49 C.F.R. § 177.842(d), on August 23, 1995, ETI personnel failed to block and brace packages containing licensed material that were transported outside the licensee's facility.

*See id.* at 15,836-37.

A third basis for the Staff's order (which we will refer to as Basis C) purportedly flows from a March 14, 1996 safety requirement compliance followup inspection regarding the radiography license. The Staff declares that this inspection revealed a deliberate Licensee falsification of radiographer examination documents. As evidence of such falsification, the Staff alleges that (1) a radiographer's purported responses to the twenty-two questions on the January 16, 1996 examination given during an eight-hour annual refresher training course at the ETI facility were identical to those of ETI's President, while other individual's responses were markedly different, and (2) an ETI invoice and work order for that date indicated the radiographer worked from 6:00 a.m. to 2:00 p.m. at a job site some 3 hours drive from the ETI facility where the course and test were given. *See id.* at 15,837.

Finally, as a basis for the March 29 order (which we will refer to as Basis D) the Staff references the Licensee's supposedly poor enforcement history. This includes (1) civil penalties of \$6500 and \$5000 in 1987 and 1992, respectively, the latter of which was based on some admitted violations that were found to be in a careless disregard for NRC requirements, and thus willful; and (2) a 1994 notice of violation that is repetitive of the current allegation in Basis A(4) that an unqualified employee was directed to perform radiography. *See id.* at 15,837 & nn.1-4.

In its March 29 order, after outlining these bases, the Staff declares that ETI "has violated numerous NRC requirements, some willfully, and has failed to take appropriate actions to prevent the recurrence of past violations." *Id.* at 15,837. Further, while noting the importance of Commission reliance on licensees to provide complete and accurate licensee information, to comply with NRC requirements, and to refrain from conduct that could impede agency safety inspections or investigations, the Staff further states that ETI President Soni and RSO Badiali have demonstrated "an unwillingness to comply with NRC requirements" and that the actions of ETI and its senior employees "have raised serious doubts as to whether the Licensee and its employees can be relied upon in the future to comply with NRC requirements and to maintain complete and accurate records of licensed activities." *Id.* The Staff thus concludes that it lacks the requisite reasonable assurance that ETI's current operations under both its radiography and portable gauge licenses can be conducted in compliance with agency requirements and that health and safety of the public,



including ETT's employees, can be protected. This, the Staff asserts, requires that ETT's radiography and portable gauge licenses be suspended, pending further investigation, and that the significance of the alleged violations and willfulness of the purported conduct require that the suspension (and the accompanying terms) be made effective immediately. *See id.* at 15,837-38.

## II. ANALYSIS

The parties have placed a great deal of information and a variety of factual and legal disputes before the Board relative to ETT's April 1, 1996 request to set aside the immediate effectiveness of the Staff's March 29, 1996 license suspension order. Nonetheless, the resolution of ETT's request does not require that we delve into most of that information or definitively resolve all those controversies. During the April 30 oral argument, in response to a Board question about the "crux" of the Staff's concerns about ETI that led the Staff to suspend ETT's radiography and portable gauge licenses, counsel indicated that the Staff's central concern was with the "willful violations regarding the training of individuals who will be going out into the public, and performing radiography with sources." Tr. at 99. Also mentioned by counsel as important to the Staff's immediate effectiveness determination was the purported physical threat to Mr. Bhatt because of his cooperation with NRC investigators and the "failure [of ETI employees] to survey certain boundary areas." Tr. at 99-100.

After reviewing the corresponding bases set forth in the March 29 order relating to (1) deliberate, training-related violations — Bases A(1)-(4) and C; (2) the threat to Mr. Bhatt — Basis A(6); and (3) the failure to perform job site surveys — Bases B(7)-(8), we conclude we are unable to sustain a "probable cause" finding relative to Bases A(2)-(4) and A(6). We do find, however, with respect to Bases A(1), (B)(7)-(8), and C, that the Staff has provided "adequate evidence" to support its allegations and the need for immediate effectiveness of its suspension order relative to those allegations.

### A. Bases A(2)-(4), (6)

Regarding the allegations of deliberate misconduct set forth in Bases A(2)-(4) and (6), ETI has denied that any wrongdoing took place. *See* ETI Supplement, Affidavit of Himat J. Soni in Support of [ETT's] Request of April 1, 1996 to Set Aside Immediate Effectiveness of Order Suspending Licenses (Apr. 18, 1996) at 6, 8 [hereinafter Soni Affidavit]; *id.* Affidavit of Joseph Badiali in Support of [ETT's] Request of April 1, 1996 to Set Aside Immediate Effectiveness of Order Suspending Licenses (Apr. 18, 1996) at 2-3 [hereinafter Badiali Affidavit]. As

presented by the Staff, the central evidentiary support for these bases is the testimony of David Bhatt.

As the record now stands, however, Mr. Bhatt's reliability is in considerable doubt. In their affidavits, ETI President Soni and RSO Badiali state that Mr. Bhatt was fired from his position with the company for an apparent act of dishonesty. See ETI Supplement, Soni Affidavit at 7; *id.* Badiali Affidavit at 3-4. The affidavit of ETI employee Matthew Varroni, who worked with Mr. Bhatt on several occasions, also describes the circumstances surrounding Mr. Bhatt's dismissal and indicates Mr. Bhatt was involved in other questionable conduct that would cast doubt on his character and veracity. See *id.* Statement of Matthew Varroni (Apr. 18, 1996) at 1-3 (describing circumstances relating to alleged misuse and theft of client property by Mr. Bhatt).

For its part, the Staff has presented nothing from Mr. Bhatt or any other source that refutes ETI's description of the circumstances surrounding his dismissal and other questionable activities. This raises serious questions about Mr. Bhatt's reliability both in terms of his general trustworthiness and his specific motivation to fabricate information regarding ETI. Consequently, we find we are unable to credit Mr. Bhatt's testimony as sufficiently reliable to provide "adequate evidence" for these allegations absent sufficient independent corroborating information.

The Staff, however, has failed to provide such information. The allegations in Bases A(3) and (4) that Mr. Bhatt did not take an oral exam and engaged in radiographic operations for which he was not properly qualified and trained are, by the Staff's own admission, essentially based on the testimony of Mr. Bhatt. See Tr. at 78-80.<sup>2</sup> Regarding Basis A(2), to establish there is adequate evidence for the allegation that RSO Badiali provided examination answers to Mr. Bhatt, as support for Mr. Bhatt's statement that Mr. Badiali helped him at the time he took the exam the Staff has presented the statement of an inspector indicating that one blank answer on the exam apparently was filled in after Mr. Bhatt left ETI. See Tr. at 74. During the oral argument, however, Staff counsel was able to represent with respect to the exam only that "some answers appeared to be written in ink, some were written in pencil . . . answers were erased, and crossed out" and "there might be some different handwriting." Tr. at 74-75, 76. This does not provide any tangible link to actions by RSO Badiali that are sufficient to corroborate Mr. Bhatt's statements that Staff asserts support its

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<sup>2</sup> For Basis A(4), the Staff does refer to documentation that shows Mr. Bhatt was at certain job sites on days he stated he was there. See Tr. at 80. Standing alone, evidence that he was at a particular job site is hardly adequate to corroborate his statements on the critical issue of whether he undertook radiographic operations he was not permitted to perform while at the job site.

allegation regarding Mr. Badiali's purported improper activities while Mr. Bhatt was taking the exam.<sup>3</sup>

Concerning Basis A(6), the testimony of other witnesses could provide sufficient corroboration to Mr. Bhatt's account of the events on September 29, 1995, when during a community cultural function Mr. Soni allegedly threatened him for cooperating with NRC investigators. The Staff does proffer additional witnesses — whom Staff counsel identified as Mr. Bhatt's wife and cousin — albeit without providing any detail regarding the nature or extent of their knowledge about the alleged incident. *See* Tr. at 88; Staff Response, Exh. 3, at 4 [hereinafter Teator Affidavit].

Courts have recognized in the context of considering whether there is probable cause for an arrest that information supplied by an identified ordinary citizen witness may be presumed reliable. *See, e.g., McKinney v. George*, 556 F. Supp. 645, 648 (N.D. Ill. 1983) (citing cases), *aff'd*, 726 F.2d 1183 (7th Cir. 1984). The corroborating witnesses offered by Staff do not fall into this category, however. Because they are members of Mr. Bhatt's family, by reason of that relationship they also have a possible bias that brings their reliability into substantial question as well.<sup>4</sup> Therefore, based on the information now before us, we find that those witnesses are not sufficient to corroborate Mr. Bhatt's account of events on September 29, 1995.

Because the record in its current state fails to provide sufficient information for us to conclude that the testimony of Mr. Bhatt has the degree of reliability the Commission has decreed must be present, *see* 57 Fed. Reg. at 20,197 (section 2.202(c)(2)(i) review process is designed to safeguard against Staff immediate effectiveness decisions based on "unreliable evidence"), we also are unable to find that Bases A(2)-(4) and (6) are supported by "adequate evidence" so as to support immediate effectiveness.

#### B. Basis (A)(1)

We turn next to Basis A(1), which is the Staff allegation that ETI violated 10 C.F.R. §§ 30.9, 30.10,<sup>5</sup> when ETI president Soni gave Mr. Bhatt a card

<sup>3</sup> Because the Board was never given this document by the parties, we are unable to make any independent assessment in this regard.

<sup>4</sup> The Staff also suggests that corroboration comes from the fact that Mr. Bhatt swore out a criminal complaint against Mr. Soni concerning the alleged threat and ultimately entered into a mutual "stay away" settlement agreement with Mr. Soni through a community dispute resolution program. *See* Tr. at 87-88. In our view, whatever weight might be given to Mr. Bhatt's criminal complaint is counterbalanced by the consensual nature of the settlement, which apparently did not involve any resolution of the merits of Mr. Bhatt's complaint.

<sup>5</sup> As it is pertinent to the Staff's allegations under this basis, section 30.9(a) of 10 C.F.R. provides:

Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

(Continued)

identifying him as a Radiographer Level I. As described in the affidavits that accompanied the Staff's April 8, 1996 response and other supporting information supplied by counsel,<sup>6</sup> the card was issued to Mr. Bhatt on June 16, 1995, the day after he began work at ETI. On the card, which was signed by Mr. Soni, is a handwritten inscription certifying that Mr. Bhatt is a Radiographer Level I per ETI procedures and meets the applicable American Society for Nondestructive Testing SNT-TC-1A requirements. See Staff Response, Teator Affidavit at 2; Tr. at 71. See also Tr. at 24. Mr. Bhatt apparently retained this card throughout his six-week employment with ETI, which ended on July 27, 1995, and was expected by ETI to provide it as identification. See Tr. at 19, 21.

Concerning Basis A(1), in his affidavit, ETI president Soni indicates that Mr. Bhatt was hired mainly to work at a Brooklyn, New York job site. Mr. Soni admits that Mr. Bhatt was supplied with a card, but declares the card was intended only to give him job site identification, as is required by the New York State Department of Labor. According to Mr. Soni, the card was not a deliberate attempt to qualify or authorize Mr. Bhatt to perform radiography before he was properly trained. The only thing the card may have shown, Mr. Soni declares, is that Mr. Bhatt would perform the duties of a trainee or radiographer's assistant, although under appropriate supervision. See ETI Supplement, Soni Affidavit at 4-5. In addition, at the oral argument ETI counsel suggested that any problem with the card may have arisen because RSO Badiali was not present at the time the card was issued because of the recent death of his son. See Tr. at 20.

In support of its allegations in this basis, the Staff relies on the affidavit of OI Investigator Jeffrey A. Teator supplied with its April 8, 1996 response. Mr. Teator states that this charge is based on (1) interviews with Mr. Bhatt, who stated that he did not receive 40 hours of classroom training and told ETI president Soni of this fact; (2) an NRC inspector's determination, based on an interview with Mr. Bhatt, that he was not knowledgeable about radiation safety or ETI's operating or emergency procedures; and (3) statements by Mr. Soni

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Under 10 C.F.R. § 30.10(a), which is cited by the Staff as the other regulation ETI violates under Basis A(1), a licensee or licensee employee may not:

(1) Engage in deliberate misconduct that causes or, but for detection, would have caused, a licensee to be in violation of any rule, regulation, or order, or any term, condition, or limitation of any license, issued by the Commission, or

(2) Deliberately submit to the NRC, a licensee, or a licensee's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

Further, subsection (c) of this section provides:

(c) For purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional action or omission that the person knows:

(1) Would cause a licensee to be in violation of any rule, regulation, or order, or any term, condition, or limitation of any license issued by the Commission, or

(2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order or policy of a licensee, contractor, or subcontractor.

<sup>6</sup> Neither party supplied the Board with a copy of the card.

and RSO Badiali that the employee was a trainee who never used radiography equipment. See Staff Response, Teator Affidavit at 2.

ETI procedures make it clear that a certification card is to be issued only after an individual has fulfilled the applicable training and experience requirements. See Board Memorandum (Party Submissions in Response to Board Request at Oral Argument) (May 1, 1996), Attach. 2, at 8 (ETI Procedure No. CP-101, Rev. 9 (Mar. 12, 1990)) [hereinafter Board Memorandum]. To be a Radiographer's Assistant, one must have a minimum of 40 hours of "formal classroom training" and 3 months of "on-the-job training," while the higher-level Radiographer must have a minimum of 40 hours of "formal classroom training" and 9 months of "on-the-job training" as a Radiographer's Assistant. *Id.* Attach. 3, at 50-51 (ETI RSP No. RS-1, Rev. 4 (Mar. 14, 1994)). See also *id.* Attach. 2, at 11-12. Under these provisions, it seems apparent that Mr. Bhatt did not have sufficient training or experience to qualify as a Radiographer or even a lower-level Radiographer's Assistant at the time the card was issued or, apparently, anytime thereafter.<sup>7</sup>

Pointing to this deficiency, the Staff maintains that issuance of the card to Mr. Bhatt violated sections 30.9 and 30.10 because (1) the information in the card is incomplete or inaccurate by reason of the fact that a person who examined the card at any time during Mr. Bhatt's employment, including an NRC or agreement state official, clearly could have misapprehended his level of training and experience; and (2) such incorrect information about an individual's training and experience level would be information that (a) is incomplete or inaccurate in some respect material to the agency within the meaning of section 30.10(a)(2) and (b) would not be complete in all material respects as is required by section 30.9(a). See Tr. at 72-74. ETI, on the other hand, maintains all this is irrelevant because there was no NRC regulatory requirement that ETI employees carry such a card and, in any event, there has been no showing of "scienter" by establishing any deliberate attempt by ETI to violate any regulatory requirement. See Tr. 14-15, 21-22.

ETI is correct that there apparently is no NRC regulation that requires ETI to prepare certification cards for its employees. Yet, as we have noted above,

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<sup>7</sup> The record before us does not make entirely clear the correlation between a radiographer's assistant and a radiographer, as defined in the agency's regulations, 10 C.F.R. § 34.2, and the three radiographer certification levels set forth in ETI's qualification and certification procedures, see Board Memorandum, Attach. 2, at 3. Nonetheless, Mr. Bhatt apparently was never able to meet the requirements to be a radiographer or a radiographer's assistant under either NRC regulations or ETI procedures during his tenure at ETI. See Letter from Daniel F. Stenger and Robert E. Helfrich, Winston and Strawn, to the Licensing Board at 1 (May 7, 1996).

With regard to Mr. Bhatt's training, ETI has provided the Board with a copy of a document entitled "Statement of Educational Background Nondestructive Examination Training and Certification in Accordance with ASNT-TC-1A & ETI CP Procedures" on which Mr. Badiali allegedly recorded that Mr. Bhatt received 40 hours of "classroom" training in radiation safety in accordance with ETI and NRC specifications. See Board Memorandum, Attach. 1. See also Tr. at 113-14. To what degree this instruction would have fulfilled the training requirements for a radiographer's assistant is unclear, however, because ETI appears to be under the impression that on-the-job training can be credited toward fulfilling the license-imposed requirements for "formal classroom training," a proposition that is not self-evident. Compare Tr. at 55, 112 with Board Memorandum, Attach. 3, at 50.



ETI's own procedures indicate that radiographer certification cards are to be issued only to those who have fulfilled the applicable requirements. Under section 30.10(c)(2) an intentional act that the person knows causes a violation of a licensee procedure is considered "deliberate misconduct" actionable under section 30.10(a)(1). As a consequence, ETI's contention that Mr. Soni did not intend to mislead the agency (or did not actually mislead the agency) appears irrelevant. Instead, the focus is on whether his action was a knowing violation of ETI's procedure that could have resulted in a regulatory violation by the submission to the agency of materially incomplete or inaccurate information.<sup>8</sup> See 56 Fed. Reg. 40,664, 40,670 (1991) (stating that "[f]or situations that do not actually result in a violation by a licensee, anyone with the requisite knowledge who engages in deliberate misconduct as defined in the rule has the requisite intent to act in a manner that falls within the NRC's area of regulatory concern. The fact that the action may have been intercepted or corrected prior to the occurrence of an actual violation has no bearing on whether, from a health and safety standpoint, that person should be involved in nuclear activities.").

Because ETI has not presented any evidence suggesting that Mr. Soni was not aware of ETI's own procedures regarding such certifications, it appears that his action in signing and issuing the card would, in fact, amount to a deliberate contravention of one or both of the regulations cited. Thus, based on the record and the arguments before us, we find the Staff's position relative to Basis (A)(1) is supported by "adequate evidence."

### C. Bases (B)(7)-(8)

Bases B(7)-(8) involve allegations of a failure of ETI personnel on August 23, 1995, to conduct proper surveys during radiographic operations to ensure that (1) readings at roped-off boundaries did not exceed levels mandated by ETI procedures, and (2) a sealed source had been returned to its shielded position as required by 10 C.F.R. § 34.43(b). The support for these purported violations is the personal observations of an NRC inspector. See Staff Response, Exh. 4, at 5 [hereinafter Costello Affidavit]; Tr. at 105. ETI responds that its own investigation indicates there were no such violations by the team involved, which included ETI president Soni and ETI employee Matthew Varroni. See ETI Supplement, Badiali Affidavit at 5-6. Indeed, ETI asserts its employees at the site were aware that NRC inspectors were watching them. See Tr. at 106.

<sup>8</sup> At this juncture, we have been presented with nothing that would lead us to quarrel with the proposition that a certification card containing false information regarding an individual's training and experience to perform radiographic operations (1) would not be considered "complete and accurate in all material respects" within the meaning of section 30.9, and (2) would be "incomplete or inaccurate in some respect material to the NRC" as defined in section 30.10(a)(2).

For present purposes, the resolution of this dispute over what occurred on August 23, 1995, turns on an assessment of whether the Staff's evidence is "unreliable." 57 Fed. Reg. at 20,197. The allegations are based on the direct personal observations of an NRC inspection official. Other than a declaration flatly denying the allegations, which clearly would serve ETI's interests, ETI has not provided us with any reasonable cause to believe that, because of bias or mistake, the government official involved cannot be considered a credible observer.<sup>9</sup> Absent such a showing, we conclude that Bases A(7)-(8) are supported by "adequate evidence."

#### D. Basis C

We come finally to Basis C, which concerns the test given to ETI Radiographer's Assistant Ram Lubhaya on January 16, 1996, as part of a course being conducted that same day by RSO Badiali. Based on the parties' submissions, it appears that their dispute over this allegation is not so much what happened as the significance of the events that transpired.

After performing soil compaction testing in Queens, New York, under ETI's portable gauge license during the morning of January 16, that afternoon Mr. Lubhaya returned to ETI's New Jersey facility to attend the refresher course being conducted by RSO Badiali. See ETI Supplement, Affidavit of Ram Lubhaya (Apr. 12, 1996); Tr. at 48. He also took a twenty-two-question examination. His answers, the Staff alleges and the Licensee apparently admits, are essentially identical to those found on the examination of ETI president Soni. See Staff Response, Costello Affidavit at 6; ETI Supplement, Soni Affidavit at 10. See also Tr. at 49.

Under applicable ETI procedures, annually all radiographers and radiographer's assistants must "receive an eight (8) hour refresher course in Radiation Safety Training from the [RSO] or his designated representative" and "[u]pon completion of this training all personnel will be administered a written examination with a minimum passing grade of 80% required." Board Memorandum,

<sup>9</sup> In its April 25 response to ETI's April 19 supplement, quoting the statement of considerations for the proposed rule that was later adopted as section 2.205, the Staff declares that in considering a challenge to an immediate effectiveness determination a presiding officer "must view the evidence presented in a light most favorable to the Staff and resolve all inferences in the Staff's favor." Staff Supplement Response at 5 (quoting 55 Fed. Reg. 27,645, 27,646 (1990)). ETI challenges that assertion, declaring that statements in the Office of General Counsel analysis paper that accompanied the final rule suggest that this presumption was rejected in favor a standard that allows the presiding officer to evaluate and balance the entire body of the evidence without giving a particular preference to either party's information. See Tr. at 8-13 (citing Memorandum from William C. Parler, General Counsel, to the NRC Commissioners, SECY-92-089, at 7 (Mar. 16, 1992)). In ruling that for purposes of deciding an immediate effectiveness challenge, absent evidence of bias or mistake an NRC inspector's direct personnel observations should be treated as reliable, we need not decide whether the Staff's "inference" standard is acceptable. Our ruling here is founded on the accepted presumption that a government officer can be expected faithfully to execute his or her official duties. See *United States v. Chemical Foundation, Inc.*, 272 U.S. 1, 14-15 (1926).

Attach. 3, at 51. In his April 18 affidavit, Mr. Soni states that the January 16 training was "an annual radiation safety lecture" and that "[a] refresher test was administered after the lecture and discussion." ETI Supplement, Soni Affidavit at 10. See also *id.* Badiali Affidavit at 7 (states that Mr. Lubhaya "attended the radiation safety refresher training on January 16, 1996 and took a test"); *id.* Lubhaya Affidavit at 1 (declares that on January 16, 1996 "I attended Radiation Safety Refresher and took a test."). Mr. Soni also notes that "[d]uring the course of refresher instruction" he observed Mr. Lubhaya having difficulty in understanding the discussion. *Id.* Soni Affidavit at 10. This caused him to explain the test material in detail to Mr. Lubhaya in his native Hindi, an action he suggests explains the similarity in their answers. See *id.* The Staff also maintains that RSO Badiali told an NRC inspector that the January 16 training was the annual 8-hour refresher course. See Tr. at 90. See also Staff Response, Costello Affidavit at 7.

At the April 30 oral argument, however, ETI counsel and Mr. Soni (in an unsworn statement) declared for the first time that the January 16 examination was designed for an experienced radiographer. Further, they asserted that for Mr. Lubhaya, the January 16 examination was no more than a practice exam from which he gained nothing. See Tr. at 49-52.

ETI's attempt to establish that the Staff's allegation in Basis C is "unfounded" is not compelling. For example, ETI's suggestion that Mr. Lubhaya had nothing to gain by taking the January 16 test is an overstatement. By passing the test, Mr. Lubhaya would have fulfilled the annual refresher training requirement and would have relieved ETI from having to provide him any additional refresher training for another year.<sup>10</sup> Also untoward is the shifting nature of ETI's explanation about the scope and nature of the January 16 training/exam. As the Staff counsel noted during the oral argument, while an annual refresher course and an exam are required for ETI radiographers and radiographer's assistants, the requirement does not distinguish between radiographers and radiographer's assistants in terms of the level of the training or the exam that is to be given. See Tr. at 91-92.

All this leads us to conclude that the Staff's allegation that the circumstances surrounding Mr. Lubhaya's examination denote a deliberate violation of sections 30.9 and 30.10 is supported by "adequate evidence" in accordance with section 2.202(c)(2)(i).

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<sup>10</sup> Of course, this assumes Mr. Lubhaya also took the appropriate amount of refresher training before the exam, which he apparently did not. See Board Memorandum, Attach. 3, at 51.

#### **E. Need for Immediate Effectiveness of the Radiography and Portable Gauge License Suspensions**

As was noted earlier, to support an immediate effectiveness determination, besides showing that bases for the order are supported by adequate evidence, the Staff must show there is a need for immediate effectiveness that is supported by adequate evidence. That need can be established by showing either that the alleged violations or the conduct supporting the violations is willful or that the public health, safety, or interest requires immediate effectiveness.

Regarding the suspension of ETI's radiography license, taken together the Staff's "crux" allegations that we have found are supported by adequate evidence also demonstrate a need for immediate effectiveness in accordance with this standard. As we have already explained, there is adequate evidence to support Staff's claim that Bases A(1) and C involve deliberate, i.e., willful, regulatory violations within the meaning of section 2.202(a)(5). As to Bases B(7)-(8), while the Staff had not sought to label these violations as willful, they have asserted that they involve a potential for serious injury to the public health and safety. As was noted in several of the affidavits accompanying the Staff's response, industrial radiography involves the use of high-activity sources that can cause high radiation doses if mishandled. Further, the failure to perform a survey after each exposure to ensure that a sealed source has been returned to its shielded position, as is alleged in Basis B(8), has the potential for causing a significant radiation exposure to individuals using the exposure device and to members of the public. See Staff Response, Costello Affidavit at 7; *id.* Exh. 5, at 2 (Affidavit of James Lieberman in Support of NRC Staff's Response to Request to Set Aside Immediate Effectiveness of Order Suspending Licenses). We find this sufficient to meet the Staff's burden relative to ETI's radiography license.

With respect to ETI's portable gauge license, ETI asserts that the weak sources used in the gauges create only a very minor possibility that activities under this license will have any impact on the public health and safety, thereby establishing there is no effective support for immediate suspension of this license. See ETI Supplement at 2; Tr. at 62-64. During the oral argument, Staff counsel disagreed, contending that the nature of the training violations in this instance support the need for immediate effectiveness. See Tr. at 94-95.

Bases C and A(1) are sufficient to establish the need for immediate effectiveness of the suspension of ETI's portable gauge license. Basis C questions the adequacy of training for Mr. Lubhaya, who just before taking the January 16, 1996 refresher course and exam was doing soil compaction gauge work under ETI's portable gauge license. Basis A(1) raises concerns about the circumstances under which Mr. Bhatt was being trained. As the Staff observed, there is a greater possibility that untrained or improperly trained personnel will

lose such a source, which then could result in exposures in excess of 10 C.F.R. Part 20 limitations and an increased likelihood of cancer development. See Staff Response, Costello Affidavit at 2; Tr at 94-95.

Thus, we find that considering Bases A(1) and (C) together, the Staff has provided sufficient reliable information to establish "adequate evidence" to support the public health and safety need for immediate suspension of ETI's portable gauge license.

### III. CONCLUSION

Under 10 C.F.R. § 2.202(c)(2)(i), in the face of a licensee challenge we are to uphold a Staff immediate effectiveness determination if the order, and the Staff's determination that it should be made immediately effective, are supported by "adequate evidence." In this instance, looking to those allegations identified by the Staff as central to immediate effectiveness for its March 29, 1996 license suspension order, we find that with respect to Bases A(1), B(7)-(8), and C, the Staff has met its burden to establish by "adequate evidence" that (1) those charges are not based on "mere suspicion, unfounded allegations, or error," and (2) there is a need to make the order effective immediately.

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For the foregoing reasons, it is, this tenth day of May 1996, ORDERED that:

1. ETI's April 1, 1996 request to set aside the immediate effectiveness of the Staff's March 29, 1996 order suspending ETI Byproduct Material License Nos. 29-09814-01 and 29-09814-02 is *denied*.



2. In accordance with 10 C.F.R. § 2.202(c)(2)(i), this order upholding immediate effectiveness is final agency action.<sup>11</sup>

THE ATOMIC SAFETY AND  
LICENSING BOARD

G. Paul Bollwerk, III, Chairman  
ADMINISTRATIVE JUDGE

Charles N. Kelber  
ADMINISTRATIVE JUDGE

Richard F. Foster  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
May 10, 1996

**ADDITIONAL VIEWS OF BOLLWERK, J.**

I write separately to express my concern about an apparent procedural limitation that exists under current regulations on a presiding officer's ability to clarify the information supplied by the parties during a challenge to an NRC Staff immediate effectiveness determination. Based on my experience in this proceeding, that limitation does not appear to serve the immediate effectiveness review process particularly well.

The statement of considerations supporting the final rule adopting 10 C.F.R. § 2.202 with its immediate effectiveness provisions indicates that after receiving the parties' written submissions the Board may conduct an "oral argument" if it wishes to gain additional insight or information regarding the parties' positions supporting or opposing an immediate effectiveness challenge. 57 Fed. Reg. 20,194, 20,196 (1992). Nonetheless, as with a criminal preliminary hearing, which is cited in the final rule in conjunction with the proper application of the "adequate evidence" standard, or a civil temporary restraining order or preliminary injunction proceeding, there undoubtedly are instances when convening a limited evidentiary hearing to ensure that the record is fully

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<sup>11</sup> Copies of this memorandum and order have been sent this date to counsel for ETI by facsimile transmission and to Staff counsel by E-Mail transmission through the agency's wide area network.

developed is useful. Arguably one of those instances would be when, as here, there are significant questions regarding the reliability of a central witness.

Through the ongoing National Performance Review and other agency initiatives, the adjudicatory procedures in 10 C.F.R. Part 2 are likely to come under scrutiny in the near future. I would urge that as part of any such review, consideration be given to clarifying the authority of a presiding officer to hold an evidentiary hearing when a licensee or other person subject to an enforcement order challenges a Staff immediate effectiveness decision.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Charles Bechhoefer, Chairman  
Dr. Jerry R. Kline  
Dr. Peter S. Lam

In the Matter of

Docket No. 50-160-Ren  
(ASLBP No. 95-704-01-Ren)  
(Renewal of Facility  
License No. R-97)

GEORGIA INSTITUTE OF  
TECHNOLOGY  
(Georgia Tech Research Reactor,  
Atlanta, Georgia)

May 16, 1996

In a Memorandum and Order setting forth rulings of the Atomic Safety and Licensing Board during a telephone conference call on May 15, 1996, the Licensing Board granted (with one limited exception) the NRC Staff's motion to exclude the prepared testimony of Ms. Glenn Carroll, the Intervenor's representative. The Board determined that Ms. Carroll lacked personal knowledge of the matters in the testimony (with one exception), as well as expertise to discuss matters in her testimony (which for the most part had been derived from documentary evidence). The Board concluded in this regard that the underlying documents themselves were the "best evidence" of what they stated. The Board ruled that the Intervenor could seek to introduce the underlying documents to the extent relevant and that the testimony could be entered into the record as an opening statement of position.

The Licensing Board also denied Georgia Tech's motion to bar Ms. Carroll as a witness for any purpose but granted Georgia Tech's motion to exclude Ms.

Carroll's prepared testimony to the same extent as it had excluded this testimony in response to the Staff motion.

#### **RULES OF PRACTICE: PREPARED TESTIMONY**

Prepared testimony may be struck where the witness lacks personal knowledge of the matters in the testimony and lacks expertise to interpret facts contained therein.

### **MEMORANDUM AND ORDER**

**(Telephone Conference Call, 5/15/96)**

On Wednesday afternoon, May 15, 1996, the Atomic Safety and Licensing Board conducted a telephone conference call with the parties to this proceeding. The call was transcribed (Tr. 915-62). Participating, in addition to the Licensing Board members, were Alfred Evans, Jr., Esq., for Georgia Institute of Technology (Georgia Tech), Ms. Glenn Carroll, for Georgians Against Nuclear Energy (GANE), and Sherwin E. Turk, Esq. and Colleen Woodhead, Esq., for the NRC Staff.

Primary topic of the call was the Staff's Motion *In Limine* to Exclude the Testimony of Glenn Carroll, dated May 10, 1996. The Board and all parties had received this motion. Georgia Tech advised that it was in the process of preparing and would file by fax (later that afternoon) a motion to bar the appearance and to strike the testimony of Ms. Glenn Carroll. (The motion was in fact filed by fax and received by the Board today, May 16, 1996.) The primary basis of Georgia Tech's motion was the alleged failure of Ms. Carroll to comply with previous Board orders concerning the filing of prepared testimony, as well as the lack of expertise of Ms. Carroll to sponsor the testimony in question.

After some discussion, the Board determined that it would exclude the prepared testimony of Ms. Carroll (with the limited exception of the statements concerning a videotape of a program on FOX-TV (see p. 233) GANE wishes to introduce into evidence). The Board stated that it was prepared to grant the Staff's motion (with the one limited exception) but would permit Ms. Carroll to read the testimony into the record as an opening statement. Although her opening statement would not have evidentiary status, it would be useful to alert the Board and parties to the points GANE wishes to raise.

The basis for this ruling was Ms. Carroll's lack of expertise together with her lack of personal knowledge of the events relied on (except with respect to GANE's preparation of a copy of the FOX-TV tape). Most of the testimony (which had initially been prepared as a discovery response) consisted of a

recitation of historical events, derived from specified reports. The Board believes the "best evidence" of what the reports say is the reports themselves, and we indicated that Ms. Carroll could seek to introduce the documents on which she was relying for her testimony through other witnesses — appearing either on behalf of GANE or through the other parties.

The single exception to our overall ruling was our determination that Ms. Carroll could testify as a witness concerning a videotape she had prepared and was seeking to introduce. The Board rejected the Staff's claim of lack of relevance of the tape. The Board also indicated it would consider issuing a subpoena for a FOX-TV representative if questions were raised as to the manner of preparation, contents, completeness, or authenticity of such tape.

The Board notes that, in support of its motion to bar the appearance of Ms. Carroll as a witness, Georgia Tech asserts that the "most appropriate" format for prefiled written testimony is "manifestly the traditional question and answer approach which courts routinely require." No such requirement appears either in NRC rules or in orders that we have issued. Those rules instead require only that testimony be "relevant, material, and reliable." 10 C.F.R. § 2.743(c).

Ms. Carroll raised a question as to the possible modification of the hearing schedule that we previously had approved (*see* Third Prehearing Conference Order, LBP-96-8, 43 NRC 178 (1996)). Ms. A.R. Long, the Staff member who is to testify for GANE, had travel plans that would make her unavailable on May 24, 1996, the date for which she previously was scheduled. The Board indicated that, at the outset of the hearing on May 20, 1996, the Board would revisit the witness schedule to the extent necessary. (The Board had no objection to the suggested alternate date for Ms. Long, Tuesday, May 21, 1996.)

Accordingly, for the foregoing reasons, the Staff's motion to exclude the testimony of Ms. Glenn Carroll is *granted*. Georgia Tech's motion to bar Ms. Glenn Carroll's appearance as a witness is *denied*. To the extent that Georgia Tech seeks to exclude GANE's testimony for lack of expertise (parallel to the Staff's motion), Georgia Tech's motion is likewise *granted*. GANE will be permitted to read the substance of its testimony (except for portions not relevant



to the proceeding, such as claims with respect to Cobalt-60 and x-ray machines)  
into the record as an opening statement.

IT IS SO ORDERED.

FOR THE ATOMIC SAFETY  
AND LICENSING BOARD

Charles Bechhoefer, Chairman  
ADMINISTRATIVE JUDGE

Rockville, MD  
May 16, 1996

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Shirley Ann Jackson, Chairman  
Kenneth C. Rogers  
Greta J. Dicus

In the Matter of

Docket No. 50-029-DCOM  
(Decommissioning Plan)

YANKEE ATOMIC ELECTRIC  
COMPANY  
(Yankee Nuclear Power Station)

June 18, 1996

In LBP-96-2, 43 NRC 61 (1996), the Board granted standing to two Petitioners but declined to admit any of their contentions, denied their request for an administrative hearing, and terminated the instant proceeding. Petitioners appealed, and sought reversal of the Board's rejection of their contentions, and also challenged for a third time certain guidance given by the Commission in CLI-96-1, 43 NRC 1 (1996), earlier in this proceeding. YAEC and the NRC Staff opposed Petitioners' arguments on appeal and urged affirmance of LBP-96-2. Alternatively, YAEC challenged Petitioners' standing to seek a hearing. The Commission grants in part and denies in part Petitioners' appeal, rejects YAEC's arguments regarding standing, and remands the case to the Licensing Board for further proceedings consistent with this opinion.

**RULES OF PRACTICE: STANDING TO INTERVENE;  
INTERVENTION (STANDING)**

Once a party demonstrates that it has standing to intervene on its own accord, that party may then raise any contention that, if proved, will afford the party relief from the injury it relies upon for standing.

**RULES OF PRACTICE: STANDING TO INTERVENE;  
INTERVENTION (STANDING)**

Under Commission jurisprudence, proximity alone normally does not establish standing (outside the nuclear power reactor construction permit or operating license context) absent an obvious potential for offsite consequences.

**RULES OF PRACTICE: STANDING TO INTERVENE;  
INTERVENTION (STANDING)**

Where the Licensing Board rests its finding of standing on a combination of (a) the petitioners' proximity to the licensed facility, (b) petitioners' everyday use of the area near the reactor, and (c) the decommissioning effects described in the Commission's 1988 GEIS, the Commission defers to the Board's finding "that some, even if minor, public exposures can be anticipated" and "will be visited" on petitioners' members.

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

Under the Commission's "Contention Rule," 10 C.F.R. § 2.714, a petitioner not only must demonstrate standing but also must proffer with specificity at least one admissible contention. For a contention to be admissible, a petitioner must refer to the specific portion of the license application being challenged, state the issue of fact or law associated with that portion, and provide a "basis" of alleged facts or expert opinions, together with references to specific sources and documents that establish those facts or expert opinions. The basis must be sufficient to show that a genuine dispute exists on a material issue of fact or law.

**RULES OF PRACTICE: BURDEN OF PROOF; BURDEN OF GOING  
FORWARD**

Although 10 C.F.R. § 2.714 imposes on a petitioner the burden of going forward with a sufficient factual basis, it does not shift the ultimate burden of proof from the applicant to the petitioner.

**REGULATIONS: DECOMMISSIONING; INTERPRETATION  
(10 C.F.R. § 50.82); RADIATION PROTECTION  
STANDARDS (ALARA)**

Section 50.82(e) of 10 C.F.R. expressly requires that decommissioning be performed in accordance with the regulations, including the ALARA rule in 10 C.F.R. § 20.1101.

**REGULATIONS: DECOMMISSIONING; RADIATION PROTECTION  
STANDARDS (ALARA)**

ALARA may not be invoked to restrict licensee decisions on, for example, whether to decommission an operating nuclear power reactor or whether to build one in the first place (as opposed, say, to a coal plant). ALARA comes into play only after such basic choices are made and requires a licensee to carry out its activity in a manner calculated to minimize radiation exposures as much as is practical consistent with the purpose for which the licensed activity is undertaken.

**REGULATIONS: DECOMMISSIONING; RADIATION PROTECTION  
STANDARDS (ALARA)**

A licensee's choice between DECON and SAFSTOR (or their variants) is presumptively reasonable under the ALARA principle.

**RULEMAKING: EFFECT ON ADJUDICATION**

**NEPA: REQUIREMENT FOR HEARING; GENERIC ISSUES**

It would be unreasonable to require the Commission continually to relitigate issues that may be established fairly and efficiently in a single rulemaking proceeding. This principle applies also to environmental issues raised under the National Environmental Policy Act.

**REGULATIONS: DECOMMISSIONING**

The fact that a very small portion of a site may not be releasable does not preclude the release of the overwhelming remainder of the site.

#### **RULES OF PRACTICE: BURDEN OF PROOF**

#### **REGULATIONS: DECOMMISSIONING; RADIATION PROTECTION STANDARDS (ALARA)**

Petitioners are not absolutely barred from litigating the DECON-SAFSTOR choice on ALARA grounds. It is, however, petitioners' burden to show "extraordinary circumstances" rebutting the presumption that the licensee's choice is reasonable.

#### **RULES OF PRACTICE: CONTENTIONS (NEW INFORMATION, UNTIMELY FILING); NEW MATERIAL; NONTIMELY SUBMISSION OF CONTENTIONS**

The fact that petitioners raise an argument for the first time late in a proceeding is not necessarily fatal where the argument rests significantly on a document prepared only shortly before the argument is proffered and where petitioners promptly bring it to the adjudicator's attention.

#### **ADMINISTRATIVE TRIBUNALS**

#### **ADJUDICATORY BOARDS: ROLE**

#### **ADJUDICATORY HEARINGS: RESOLUTION OF FACTUAL ISSUES**

#### **NRC: ADJUDICATORY RESPONSIBILITIES**

#### **LICENSING BOARD: RESPONSIBILITIES (DEVELOPMENT OF RECORD)**

The Licensing Board, rather than the Commission itself, traditionally develops the factual record in the first instance.

#### **REGULATIONS: DECOMMISSIONING PLAN**

A decommissioning plan by its very nature deals with a myriad of uncertainties, and the Commission's regulations cannot be construed to require the plan to predict the future with precision.

#### **REGULATIONS: DECOMMISSIONING PLAN**

The Commission's regulations do not require a licensee, at the time it seeks approval of its decommissioning plan, to decide whether it will move spent fuel into dry cask storage.



#### **REGULATIONS: DECOMMISSIONING FUNDING**

A contention challenging the reasonableness of a decommissioning plan's cost estimate is not litigable if reasonable assurance of decommissioning costs is not in serious doubt and if the only available relief would be a formalistic redraft of the plan with a new estimate.

#### **RULES OF PRACTICE: HEARING ON CONTENTIONS**

To obtain a hearing on the adequacy of the decommissioning plan, petitioners must show some specific, tangible link between the alleged errors in the plan and the health and safety impacts they invoke.

#### **REGULATIONS: DECOMMISSIONING FUNDING**

The standard for determining that the funds for decommissioning the plant will be forthcoming is whether there is "reasonable assurance" of adequate funding, not whether that assurance is "ironclad."

#### **REGULATIONS: DECOMMISSIONING FUNDING**

A decommissioning funding mechanism is external in nature where its collections are made through Power Contracts and are deposited in an independent and irrevocable trust at a commercial bank and where the trust is executed in compliance with 10 C.F.R. § 50.75(e)(1)(ii).

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

Petitioners must submit more than speculation in order for a contention to be admitted for litigation.

#### **COMMISSION PROCEEDING: CLAIMS FOR DAMAGES**

##### **REMEDY**

Although the Commission has a general responsibility to ensure that decommissioning operations do not jeopardize public health and safety, no statute or regulation grants the Commission authority to require the licensee to pay (in effect) compensatory damages to private individuals.

## **RULES OF PRACTICE: SCOPE AND TYPE OF PROCEEDING**

Completed decommissioning activities are beyond the scope of a decommissioning proceeding that deals solely with the propriety of a decommissioning plan and future decommissioning activities.

## **NEPA: SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT**

## **ADJUDICATION: SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT**

The standard for issuing an SEIS is set forth in 10 C.F.R. § 51.92: There must be either substantial changes in the proposed action that are relevant to environmental concerns, or significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

## **RULES OF PRACTICE: CHALLENGE TO COMMISSION'S REGULATIONS; CONTENTIONS (CHALLENGE OF COMMISSION RULE); GENERIC ISSUES; LITIGABILITY OF ISSUES (GENERIC ISSUE); RULEMAKING (EFFECT ON ADJUDICATION)**

If parties believe that the agency's prior generic review reached the wrong conclusions, the proper remedy is a petition for rulemaking, not a litigation contention challenging the basis for a Commission rule.

## **RULES OF PRACTICE: OFFICIAL NOTICE**

Pursuant to 10 C.F.R. § 2.743(i), the Commission may take official notice of publicly available documents filed in the docket of a Federal Energy Regulatory Commission proceeding.

## **TECHNICAL ISSUES**

The following technical issues are discussed: Decommissioning; ALARA.

# **MEMORANDUM AND ORDER**

## **I. INTRODUCTION**

On March 1, 1996, the Atomic Safety and Licensing Board ("Licensing Board" or "Board") issued LBP-96-2, 43 NRC 61, in this proceeding involving

the decommissioning of the Yankee Nuclear Power Station near Rowe, Massachusetts ("Yankee Rowe facility" or "Yankee Rowe"). The Yankee Rowe facility was a 185-MWe nuclear power plant owned and operated by Yankee Atomic Electric Company ("YAEC" or "Licensee"). It is the Licensee's only power plant and its principal asset. YAEC is in turn owned by ten New England utilities ("Purchaser/Co-owners") which purchased electricity from the facility pursuant to ten identical "Power Contracts." Despite the shutdown of the Yankee Rowe facility, these contracts remain in full force and effect.

In LBP-96-2, the Board granted standing to the New England Coalition on Nuclear Pollution and the Citizens Awareness Network (collectively "Petitioners"), but declined to admit any of their contentions, denied their request for an administrative hearing, and terminated the instant proceeding. Petitioners appeal, and seek reversal of the Board's rejection of their contentions, and also challenge for a third time certain guidance given by the Commission in CLI-96-1, 43 NRC 1 (1996), earlier in this proceeding. (Petitioners had previously sought reconsideration and partial rescission of CLI-96-1 on January 26 and March 7, 1996.) YAEC and the NRC Staff oppose Petitioners' arguments on appeal and urge affirmance of LBP-96-2. Alternatively, YAEC challenges Petitioners' standing to seek a hearing.

For the reasons set forth below, the Commission grants in part and denies in part Petitioners' appeal, rejects YAEC's arguments regarding standing, and remands the case to the Licensing Board for further proceedings consistent with this opinion.

## **II. BACKGROUND**

### **A. First Circuit's Decision and Commission Response**

On October 1, 1991, YAEC ceased operation of its Yankee Rowe facility. In February 1992, the Licensee removed all fuel from the reactor vessel at that facility; notified the Commission that the plant was permanently shut down and that decommissioning would commence; and applied for a possession-only license ("POL") from the Commission. On August 5, 1992, the Commission granted the POL, but stated that the NRC must approve any major structural changes to the radioactive components of the Yankee Rowe facility. This statement was consistent with the Commission's then-effective interpretation of 10 C.F.R. § 50.82, that a power reactor licensee was prohibited from conducting major decommissioning activities prior to final Commission approval of a decommissioning plan.

In early 1993, however, the Commission announced a new policy interpreting its decommissioning rule to allow NRC licensees to initiate substantial decommissioning of their facilities prior to plan approval if they met certain conditions.

Having met those conditions, YAEC initiated a "Component Removal Project" or "CRP," during which many radioactive components of the Yankee Rowe facility, including large components like the reactor's steam generators and pressurizer, were removed and sent to a low-level radioactive waste ("LLRW") disposal facility in Barnwell, South Carolina. The Citizens Awareness Network ("CAN"), one of the Petitioners in this proceeding, asked the Commission to provide an opportunity for a hearing regarding the CRP. The Commission refused and CAN filed a petition for review of that decision in the United States Court of Appeals for the First Circuit.

On July 20, 1995, the First Circuit ruled that: (1) the Commission had improperly changed its regulatory interpretation, (2) it should have offered a hearing on the CRP, and (3) it should have performed a NEPA evaluation of the CRP. *See CAN v. NRC*, 59 F.3d 284 (1st Cir. 1995), *referring to* National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 *et seq.* The First Circuit held that CAN was entitled to a hearing opportunity because the original Commission policy "required NRC approval of a decommissioning plan before a licensee undertook any major structural changes to a facility" and could not be altered "without complying with [the Atomic Energy Act's] notice and hearing provisions." 59 F.3d at 291-92. Similarly, the First Circuit held that "YAEC's original license did not authorize it to implement major-component disassembly . . .," without a hearing opportunity. 59 F.3d at 294.

The Commission subsequently announced in the *Federal Register* that it would not seek further review of the First Circuit's decision, and requested public comment on what sort of hearing the Commission should offer on remand. *See* 60 Fed. Reg. 46,317 (Sept. 6, 1995). After reviewing the public comments, the Commission on October 12, 1995, issued an Order announcing its decision. *Yankee Atomic Electric Co. (Yankee Nuclear Power Station)*, CLI-95-14, 42 NRC 130 (1995). The Commission decided, over YAEC's vigorous objection, that it must offer a hearing on YAEC's decommissioning plan and order a halt to major YAEC decommissioning activities in the meantime.<sup>1</sup>

## B. The Hearing Opportunity

In February 1995, during the pendency of the First Circuit litigation, the NRC Staff approved YAEC's decommissioning plan, which became part of the Licensee's Final Safety Analysis Report ("FSAR"). *See* 60 Fed. Reg. 9870

<sup>1</sup>To implement the Commission's decision, the NRC Staff issued a letter, dated November 2, 1995, containing strict guidelines describing the scope of prohibited activities. Those guidelines expressly prohibited YAEC from dismantling major systems, structures, or components still remaining at the Yankee Rowe reactor, such as the main reactor coolant system, the lower neutron shield tank, the vapor container, the reactor vessel itself, and other systems with significant radioactive contamination. *See* Letter from Morton B. Fairlie, NRC, to James A. Kay, YAEC, dated Nov. 2, 1995, at 3.

(Feb. 22, 1995). The Staff also approved both an Environmental Assessment ("EA") and a Finding of No Significant Impact ("FONSI"). *Id.* But in October 1995, when the Commission decided that *CAN v. NRC* necessitated an offer of a hearing on the Yankee decommissioning plan, the Commission indicated that the prior Staff approval of the plan "cannot be accorded further legal effect, pending a hearing opportunity." See CLI-95-14, 42 NRC at 134.

YAEC's plan, first submitted in late 1993, proposed an approach that would enable YAEC to complete its decommissioning of the Yankee Rowe facility more slowly than under the pure DECON alternative but more quickly than under the other decommissioning alternative, SAFSTOR.<sup>2</sup> More specifically, the plan provided that YAEC would dismantle the plant (except for those systems that are required for safe maintenance of the spent fuel pool), dismantle the spent fuel pool when other options for fuel and high-level radioactive waste ("HLRW") storage and/or removal become available, ship contaminated radioactive materials to an LLRW facility, and decontaminate the site to a sufficiently low radioactive level that it can be released for unrestricted use. See 60 Fed. Reg. 55,069 (Oct. 27, 1995).

On October 23, 1995, the Commission issued the notice of hearing opportunity promised in CLI-95-14, stating that the NRC was considering the issuance of an order under 10 C.F.R. § 50.82(e) to YAEC approving its decommissioning plan as it related to the decommissioning of the remaining portions of the Yankee Rowe facility. Also, the Commission in its October 23rd notice required any petitioners to submit all their contentions simultaneously with their petitions to intervene. 60 Fed. Reg. 55,069 (Oct. 27, 1995).

On November 30, 1995, Petitioners sought to intervene in this proceeding. In that pleading, they argued that they had standing to participate in this proceeding and proffered five contentions:

- A. YAEC's proposed decommissioning plan violates 10 C.F.R. § 20.1101 by failing to maintain occupational and public radiation doses as low as reasonably achievable ("ALARA");

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<sup>2</sup> DECON and SAFSTOR are two alternatives that the NRC Staff set forth in its final Generic Environmental Impact Statement on the decommissioning of nuclear facilities. Under the DECON alternative, the licensee removes or decontaminates the onsite radioactive contaminants to a level that permits the site to be released for unrestricted use shortly after the licensee concludes plant operation. By contrast, under SAFSTOR, the licensee maintains the facility in such a way that allows the facility to be safely "stored" (hence the acronym SAFSTOR) for an extended period of time (e.g., 30 years) and then decontaminated to levels that would permit the site to be released for unrestricted use. See NUREG-0586, "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities" at p. 2-6 (Aug. 1988) ("GEIS"), prepared in support of Final Rule, "General Requirements for Decommissioning Nuclear Facilities," 53 Fed. Reg. 24,018 (June 27, 1988) ("Final Decommissioning Rule"). Like the Board, we will refer to the YAEC's modified DECON approach simply as "DECON."



- B. The proposed decommissioning plan violates 10 C.F.R. § 50.82(b)(1) and (2) by inadequately describing both YAEC's planned decommissioning activities and its controls and limits on procedures and equipment;
- C. The decommissioning plan does not comply with the decommissioning funding requirements of 10 C.F.R. § 50.82(b)(4) or (c);
- D. The decommissioning plan fails to include measures necessary to ensure that workers and the public are adequately protected from health damage caused by the excessive radiation doses they received during the "unlawful" CRP; and
- E. The NRC Staff violated NEPA by failing to prepare a supplemental EIS for the decommissioning of Yankee Rowe.

### C. Commission Guidance

On January 16, 1996, we issued CLI-96-1, referring the intervention petition and hearing request to the Licensing Board, establishing an expedited schedule for the proceeding, and providing guidance to the Board regarding the following four issues presented in this proceeding.

First, we addressed the relationship between standing and contentions. We pointed out that although a prospective intervenor cannot derive standing to participate in a proceeding from another person who is neither a party to the action nor a member of the prospective intervenor (if the latter is an organization), the prospective intervenor who becomes a party may nevertheless raise *any* contention that, if proven, will afford the party relief from the injury on which it relies for standing. CLI-96-1, 43 NRC at 6. This observation pertained to this case because Petitioners, consisting of local citizens' groups, raised "contentions related to *occupational* dose issues." *Id.* (emphasis added).

Second, regarding Petitioners' Contention A, the Commission stated that the ALARA standards are now "mandatory requirements" rather than merely "hortatory suggestions" and that "[w]e assume . . . an ALARA challenge can properly be made against a Licensee's decommissioning alternative choice, if an adequate basis for the challenge is offered." 43 NRC at 7 & n.4. However, we also concluded that under "a fair reading of our decommissioning rules . . . , it is for the Licensee in the first instance to choose the decommissioning option and that neither DECON nor SAFSTOR can be deemed unacceptable *a priori*." 43 NRC at 7 (footnote omitted). We ruled out challenges to the DECON-SAFSTOR choice if they rest solely on the generic 900 person-rem estimated difference between these options used in the 1988 GEIS underlying our decommissioning rule. 43 NRC at 8. We reasoned that the GEIS found both options acceptable, "despite the acknowledged likelihood of reduced occupational dose under SAFSTOR." *Id.* We therefore saw no point to case-by-case litigation over dose differentials "on the order of magnitude of the estimate in the GEIS" — barring

some "extraordinary aspect to the case not apparent to us from the pleadings." 43 NRC at 8-9.

Third, regarding Contention C, we considered Petitioners' argument that YAEC's updated cost estimate was not reasonable. We found that the "essential purpose" of the estimate requirement "is to provide 'reasonable assurance' of adequate funding for decommissioning." 43 NRC at 9. We therefore concluded that, to receive relief, Petitioners would need to demonstrate "not only that the estimate is in error but that there is not reasonable assurance that the amount will be paid." *Id.* "Thus, a contention that a licensee's estimate is not 'reasonable,' standing alone, would not be sufficient in and of itself because the potential relief would be the formalistic redraft of the plan with a new estimate." *Id.*

Fourth, regarding Contention D, we ruled that Petitioners' allegations of "illegal" past conduct by YAEC were not relevant in a decommissioning proceeding where the "focus . . . is prospective only." 43 NRC at 9. The Commission viewed Petitioners' "past conduct" allegations as "more properly the subject of separate enforcement action." *Id.*<sup>3</sup>

#### D. The Licensing Board Decision

On February 21, 1996, the Licensing Board held a prehearing conference at which the Board heard oral argument on the issues of standing and contentions. At the conclusion of this hearing, the Board indicated that it intended to issue an order by March 1 concluding that Petitioners had standing to participate in this proceeding, that they had failed to raise any admissible contentions, and that the proceeding would therefore be dismissed. In anticipation of the Board's promised order, the Commission on February 27, 1996, issued an unpublished order staying the effectiveness of any Licensing Board order dismissing this case.

On March 1, 1996, the Licensing Board issued LBP-96-2. In that order, the Board first concluded that the two intervenor organizations had established standing to intervene and seek relief regarding alleged health and safety or

<sup>3</sup>On the same day as the Commission issued its guidance (Jan. 16, 1996), the Commission also issued a separate document, entitled "Notice of Appointment of Adjudicatory Employee and of Communication Covered by 10 C.F.R. § 2.781(c)" ("Notice"), which advised the parties: (1) that a member of the NRC Staff had been appointed as an adjudicatory employee; and (2) that there had been a communication in violation of the separation-of-functions restrictions contained in 10 C.F.R. § 2.781(a) and that this communication was being placed on the record in accordance with the requirements of 10 C.F.R. § 2.781(c).

The Notice also indicated that the prohibited communication had not involved the Commission itself and had not affected the Commission's guidance. This Notice led to a motion by Petitioners for reconsideration of the Commission's guidance and for disqualification of certain Commissioners and the NRC Staff. Petitioners argued that the guidance was incorrect, that it resulted from an improper Staff communication, and thus rested on factual prejudgments. On March 7, 1996, the Commission rejected Petitioners' motion except insofar as it challenged the substance of the Commission guidance — an issue the Commission reserved for this appeal. CLI-96-5, 43 NRC 53.

environmental injuries to their members who reside and/or engage in various activities near Yankee Rowe. Next, the Board examined each of Petitioners' five contentions. Applying both the Commission's guidance from CLI-96-1 and the Commission's standards for acceptance of contentions as set forth in its case law and 10 C.F.R. § 2.714(b)(2)(iii), (d)(2)(i)-(ii), the Board concluded that none merited acceptance. Consequently, the Board denied Petitioners' motion to intervene and their request for hearing, and terminated the proceeding.

On March 18, 1996, Petitioners appealed LBP-96-2, challenging the Board's rejection of their five contentions and reasserting their prior arguments challenging the Commission's guidance in CLI-96-1.<sup>4</sup> On April 2, 1996, YAEC and Staff each filed a brief in opposition to Petitioners' appeal. YAEC also challenged the Board's grant of standing to Petitioners. On April 10, 1996, Petitioners filed a brief responding to these two reply briefs.<sup>5</sup>

### III. DESCRIPTION AND ANALYSIS OF PARTIES' POSITIONS REGARDING STANDING AND CONTENTIONS

To place in context the following discussion of the parties' positions, we note that the radiological effects of decommissioning a power plant are far less than those associated with the operation of a plant. Although the licensee must continue to control the contaminated areas of the plant to minimize radiation exposure to personnel, the situation during decommissioning is more similar to that of a contaminated materials facility than to that of an operating reactor. Also, both the maintenance of spent fuel in the spent fuel pool and the containment of residual contamination in the facility are far simpler tasks than operating a nuclear reactor. As a result, the decommissioning activities have considerably less potential to impact public health and safety.

#### A. Standing

Petitioners allege that they have organizational standing to intervene in this proceeding because their membership includes individuals living between 4 and 10 miles from the Yankee Rowe facility, participating in recreational activities along local waterways that receive effluent discharges from the facility, and using roadways that may be employed by trucks to carry waste away from the facility.

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<sup>4</sup>On March 7, 1996, Petitioners had submitted a document styled "Supplement to Motion for Reconsideration and Partial Rescission of CLI-96-01." In this pleading, Petitioners again urged the Commission to revisit the ALARA issue in general as well as the Commission's specific assumptions regarding the level of radiation doses that can be expected from YAEC's decommissioning activities. The Commission has considered this pleading in connection with this appeal. See note 3, *supra*.

<sup>5</sup>The Commission grants Petitioners' motion for leave to file its April 10th brief.

These individuals have expressed concern about the impact of the Yankee Rowe decommissioning upon their health and safety and upon the local environment, and have authorized Petitioners to represent them in this proceeding.

Although neither YAEC nor the Staff contested Petitioners' standing to raise public health, safety, and environmental challenges to the decommissioning plan, both of these parties initially objected to Petitioners' standing to raise arguments based on the health and safety of workers at the plant. As noted above, the Commission in CLI-96-1 took the position that "once a party demonstrates that it has standing to intervene on its own accord, that party may then raise any contention that, if proved, will afford the party relief from the injury it relies upon for standing." CLI-96-1, 43 NRC at 6.

Interpreting this ruling in CLI-96-1, YAEC argued to the Board that Petitioners' reliance on public exposure doses (which were substantially less than occupational doses) is insufficient to give them standing to intervene as to any aspect of their contentions, including radiological impacts on workers at the facility. By contrast, Petitioners and Staff interpreted CLI-96-1 to support Petitioners' standing to pursue all their contentions, including those related to occupational impacts.

The Board in LBP-96-2 ruled that Petitioners had standing to intervene in this proceeding. The Board reasoned that "some, even if minor, public exposure can be anticipated from the decommissioning process" (citing the GEIS) and the Board was therefore not

"in a position at this threshold stage to rule out as a matter of certainty the existence of a reasonable possibility" that decommissioning might have an adverse impact to those, such as Petitioners' members, who live or recreate in such close proximity to the facility, or use local waste transportation routes.

LBP-96-2, 43 NRC at 70, quoting *Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-522, 9 NRC 54, 56 (1979).

YAEC, in its Brief opposing Petitioners' appeal ("YAEC's Brief"), argues that Petitioners' mere proximity to the Yankee Rowe reactor does not give them standing to challenge YAEC's decommissioning plan.<sup>6</sup> YAEC is correct that, under Commission jurisprudence, proximity alone normally does not establish standing (outside the nuclear power reactor construction permit or operating license context) absent an "obvious potential for offsite consequences." See *Florida Power and Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2),

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<sup>6</sup> Although YAEC did not itself appeal the Board's ruling on standing, YAEC was nevertheless entitled as the prevailing party below to argue any ground that would defend the ultimate result reached by the Board — including arguments that the Board had rejected, such as those regarding standing. See, e.g., *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-832, 23 NRC 135, 141 (1986).

CLI-89-21, 30 NRC 325, 329-30 ('989); cf. *Georgia Institute of Technology* (Georgia Tech Research Reactor), CLI-95-12 42 NRC 111, 116-17 (1995).

Here, however, the Licensing Board did not rest its finding of standing on proximity alone. Pointing to Petitioners' description of their everyday use of the area near the reactor and to the decommissioning effects described in the Commission's 1988 GEIS, the Board reasonably found "that some, even if minor, public exposures can be anticipated" and "will be visited" on Petitioners' members. LBP-95-2, 43 NRC at 69-70. We defer to the Board's resolution of the standing issue. See *Georgia Tech Research Reactor*, 42 NRC at 116.

## B. Contentions

In 1989, the Commission issued a new "rule heightening the specificity requirements for pleadings filed by parties seeking to intervene in [formal] licensing proceedings." *Union of Concerned Scientists v. NRC*, 920 F.2d 50, 51-52 (D.C. Cir. 1990). Under this "Contention Rule," 10 C.F.R. § 2.714,<sup>7</sup> a petitioner must not only demonstrate standing but also must proffer with specificity at least one admissible contention. For a contention to be admissible, a petitioner must refer to the specific portion of the license application being challenged, state the issue of fact or law associated with that portion, and provide a "basis" of alleged facts or expert opinions, together with references to specific sources and documents that establish those facts or expert opinions. 10 C.F.R. §§ 2.714(b)(2), (d)(2). The basis must be sufficient to show that a genuine

<sup>7</sup> See Final Rule, "Rules of Practice for Domestic Licensing Proceedings — Procedural Changes in the Hearing Process," 54 Fed. Reg. 33,168 (Aug. 11, 1989). A petitioner's burden of going forward at one time was lighter than under the current version of section 2.714, and was more similar to the "notice pleading" approach generally taken by the courts. From 1968 to 1972, the Commission required only that a petitioner's contention be set forth "in reasonably specific detail" (33 Fed. Reg. 8587, 8588 (June 12, 1968)) — a standard analogous to the test applied in civil cases. Licensing and Regulation of Nuclear Reactors, Hearings before the Joint Committee on Atomic Energy, 90th Cong., 1st Sess., pt. 1, at 471 (1967), cited in *Business and Professional People for the Public Interest v. Atomic Energy Commission*, 502 F.2d 424, 428 (D.C. Cir. 1974).

From 1972 until 1989, petitioners needed to proffer no evidentiary foundation whatever for their contentions, so long as those contentions themselves were stated with basis and specificity. See *Mississippi Power and Light Co.* (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 426 (1973); *Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542 (1980). *Pro se* litigants' contentions were held to even lower standards of clarity and precision. See, e.g., *Public Service Electric and Gas Co.* (Salem Nuclear Generating Station, Units 1 and 2), ALAB-136, 6 AEC 487, 489 (1973).

The result of this pre-1989 approach was that the actual hearings were delayed by months and even years of prehearing conferences, negotiations and rulings on motions for summary disposition. See, e.g., *Carolina Power and Light Co.* (Shearon Harris Nuclear Power Plant), LBP-85-5, 21 NRC 410, 413 (1985) (500 contentions proposed, 60 admitted for discovery, and approximately 10 actually litigated after 2 1/2 years of negotiation). This problem drove the Commission to revise its rules by promulgating the current version of section 2.714, which was designed "to raise the threshold for the admission of contentions." 54 Fed. Reg. at 33,168.



dispute exists on a material issue of fact or law. 10 C.F.R. § 2.714(b)(2).<sup>8</sup> "A contention may be refused if it does not meet the requirements of section 2.714(b) or if the contention, even if proven, would 'be of no consequence in the proceeding because it would not entitle the petitioner to relief.' 10 C.F.R. § 2.714(d)(2)(ii)." *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-93-3, 37 NRC 135, 142 (1993).

Although section 2.714 imposes on a petitioner the burden of going forward with a sufficient factual basis, it does not shift the ultimate burden of proof from the applicant to the petitioner. Final Rule, *supra* note 7, 54 Fed. Reg. at 33,171. Nor does section 2.714 require a petitioner to prove its case at the contention stage. For factual disputes, a petitioner need not proffer facts in "formal affidavit or evidentiary form," sufficient "to withstand a summary disposition motion." *Georgia Tech Research Reactor*, 42 NRC at 118. On the other hand, a petitioner "must present sufficient information to shew a genuine dispute" and reasonably "indicating that a further inquiry is appropriate." *Id.*<sup>9</sup>

We assess Petitioners' contentions under these standards.

***1. Contention A: YAEC's Decommissioning Plan Violates 10 C.F.R. § 20.1101 by Failing to Maintain Occupational and Public Radiation Doses as Low as Reasonably Achievable***

***a. Background***

In Contention A, Petitioners asserted that the Licensee is required under 10 C.F.R. § 20.1101(b) to maintain radiation doses as low as reasonably achievable. That section provides that each licensee

shall use, to the extent practicable, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable (ALARA).

"ALARA" is in turn defined in 10 C.F.R. § 20.1003 as

making every reasonable effort to maintain exposures to radiation as far below the dose limits in this part as is practical consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to

<sup>8</sup> The rules for contentions under NEPA are slightly different. See 10 C.F.R. § 2.714(b)(2)(iii) (requiring NEPA contentions to be based on the applicant's environmental report, but permitting Petitioners to amend their contentions if the data or conclusions in subsequent Commission environmental documents differ significantly from the data or conclusions in the applicant's environmental report).

<sup>9</sup> See also Final Rule, *supra* note 7, 54 Fed. Reg. at 33,171 (requiring "some factual basis" for the contention); *Costle v. Pacific Legal Foundation*, 445 U.S. 198, 204 (1980); *Vermont Yankee Nuclear Power Corp. v. NRC*, 435 U.S. 519, 554 (1978).

the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest

According to Petitioners, if an alternative is available that reduces radiation exposure and lowers cost, then 10 C.F.R. § 20.1101(b) requires the licensee to use that alternative. They further argued that, even where a dose-saving alternative costs more than the other alternatives, the Licensee must still determine whether the health and safety benefits associated with the reduction in exposure outweigh the additional cost. Petitioners asserted that YAEC's selection of a DECON approach violates these principles by ignoring SAFSTOR's capability of achieving significant dose reductions in a cost-effective manner.

In CLI-96-1, the Commission ruled that a challenge to YAEC's choice of the DECON rather than the SAFSTOR option for Yankee Rowe cannot be based solely on dose differences on the order of 900 person-rem — barring some "extraordinary aspect to the case not apparent to us from the pleadings." *Id.* at 8-9. We reasoned that our 1988 decommissioning rule, and its supporting GEIS, had already found both DECON and SAFSTOR acceptable, despite the recognized potential for a 900 person-rem differential in occupational dose. *Id.* The Commission concluded that its approach was "entirely consistent with the ALARA concept," which focuses not only on radiation exposure but also on costs and "other societal and socioeconomic considerations." *Id.*

Given the Board's nearly exclusive reliance on CLI-96-1 regarding Contention A, Petitioners' Appeal Brief focuses on the Commission's rather than the Board's order and, in many respects, repeats the arguments previously proffered in their January 26th and March 7th pleadings seeking Commission reconsideration of its guidance. In these three pleadings, Petitioners claim that the Commission, in discussing the relative merits of DECON and SAFSTOR, improperly prejudged the facts, relied on communications prohibited by the Commission's separation-of-functions regulation, misperceived the meaning of Petitioners' Contention A, and provided erroneous guidance.

*b. YAEC's Threshold ALARA Argument*

At the outset, to clear away a preliminary matter, we deal with a fresh proposition urged by YAEC as a ground for affirming the dismissal of Petitioners' ALARA contention. YAEC asserts that, in this proceeding, it is a license applicant rather than a licensee and that section 20.1101 (the ALARA regulation), "[b]y its terms, . . . only applies to licensees, not applicants for licenses." YAEC Brief at 5. The simple answer to YAEC's argument is found in 10 C.F.R. § 50.82(e) — which expressly requires decommissioning to "be performed in

accordance with the regulations in this chapter." These regulations include, of course, the ALARA rule in 10 C.F.R. Part 20.<sup>10</sup>

c. *Soundness of Commission Guidance*

In our view, the Commission guidance on Contention A remains sound. The guidance means, in essence, that a licensee's choice between DECON and SAFSTOR (or their variants) is presumptively reasonable under the ALARA principle. This presumption does no more than restate what the Commission found in its 1988 decommissioning rulemaking: that no likely cost or dose differential between DECON or SAFSTOR made one or the other option preferable from a safety or environmental perspective. See 1988 GEIS § 4.5, at 4-17 through 4-20. Notably, the 1988 rule forces no choice on licensees, stating only that a licensee-chosen "alternative is acceptable if it provides for completion of decommissioning within 60 years." 10 C.F.R. § 50.82(b)(1)(i).

Despite the NRC's 1988 generic review of the DECON-SAFSTOR choice, Petitioners seek to revisit that choice case-by-case, basing their objections on essentially the same factors that the Commission weighed when concluding that either SAFSTOR or DECON was a reasonable decommissioning choice.<sup>11</sup> But Petitioners' approach unreasonably "would require the agency continually to relitigate issues that may be established fairly and efficiently in a single rulemaking proceeding." *Heckler v. Campbell*, 461 U.S. 458, 467 (1983). *Accord Nuclear Information and Resource Service v. NRC*, 969 F.2d 1169, 1174-77 (D.C. Cir. 1992) (*en banc*). "Significantly, the Supreme Court has found agency reliance on prior determinations to be perfectly acceptable, even when the statute before it plainly calls for individualized hearings and findings." *Id.* at 1175 (citing cases). See *Kelley v. Selin*, 42 F.3d 1501, 1513, 1518-20 (6th Cir.), *cert. denied*, 115 S. Ct. 2611 (1995).

Petitioners argue that the likely unavailability of spent fuel disposal facilities in the near future renders illusory the early site release advantage of DECON (which would offset the disadvantage of DECON's somewhat higher radiation doses). This argument, however, raises a generic issue affecting the decommissioning plans for *all* reactors in this country. Petitioners' position amounts to an argument that SAFSTOR is always preferable to DECON, especially until

<sup>10</sup> Contrary to the concern expressed in YAEC's appellate brief (e.g., at p. 5-6 n.5), our guidance does not suggest that ALARA may be invoked to restrict licensee decisions on, for example, whether to decommission an operating nuclear power reactor or whether to build one in the first place (or, opposed, say, to a coal plant). ALARA comes into play only, after such basic choices are made and requires a licensee to carry out its activity in a manner calculated to minimize radiation exposures as much "as is practical consistent with the purpose for which the licensed activity is undertaken." 10 C.F.R. § 20.1003.

<sup>11</sup> The 1988 rulemaking considered the same questions as Petitioners raise in this lawsuit — e.g., the availability and costs of waste disposal, the possibility that spent fuel may require long-term on-site storage, and the cost and dose exposure trade-offs between SAFSTOR and DECON. See GEIS § 4.5, at 4-17 through 4-20.

the completion of an HLRW repository — an argument that flies in the face of what the Commission concluded in its 1988 rule and GEIS. An adjudication of a single case is not the place to consider Petitioners' across-the-board challenge to the Commission's 1988 decision generically approving both SAFSTOR and DECON.

Petitioners' argument fails for two other reasons as well. The fact that a very small portion of the 2000-acre site may not be releasable does not preclude the release of the overwhelming remainder of the site. In addition, early site release was only one of a number of benefits to DECON cited in the GEIS. *See pp. 275-76, supra.*

This is not to say that Petitioners are absolutely barred from litigating the DECON-SAFSTOR choice at Yankee Rowe on ALARA grounds. But, as the Commission's guidance suggests, it is Petitioners' burden to show "extraordinary circumstances" rebutting the presumption established in the 1988 rulemaking that the Licensee's choice is reasonable. With one exception — the claim that occupational exposures during the Yankee Rowe reactor's decommissioning have been much higher than what the 1988 GEIS anticipated — Petitioners' various arguments on appeal do not persuade us that further ALARA litigation is necessary in this case. Petitioners also advance no good reason for the Commission to reconsider its guidance.

Petitioners first assert that the 900 person-rem dose savings discussed in the GEIS equates to the avoidance of between 0.6 and 2.4 deaths, plus the same number of other health and genetic effects. According to Petitioners, the Commission errs in considering this level "trivial," and the ALARA regulation (10 C.F.R. § 20.1101) therefore requires YAEC to take reasonable mitigation measures — i.e., to shift to the SAFSTOR option. Appeal at 16-17. But the Commission and its Licensing Board nowhere suggested that the health effects of 900 person-rem were "trivial." The Commission's guidance means only that it would not permit case-by-case litigation over health effects already considered acceptable in the 1988 decommissioning rulemaking. This deference to prior generic findings reflects a sensible allocation of the Commission's decisional resources.

Petitioners also claim to have demonstrated (with sufficient specificity to require a hearing) that significant dose savings can be accomplished at a lower cost under SAFSTOR than under DECON. Petitioners point to evidence, based on the GEIS, that the use of SAFSTOR over a 50-year period will result in a 90% reduction of LLRW volumes. Appeal at 17.

This argument fails for two reasons. First, Petitioners point essentially to the same facts and policy choices already considered in the Commission's 1988 decommissioning rulemaking. This conclusion is supported by the very fact that the information on which Petitioners rely for their argument comes from the Commission's own GEIS. Second, although Petitioners are correct that, due

to radioactive decay, the volume of LLRW at Yankee Rowe will be less in 50 years than now, this does not necessarily or logically require the conclusion that decommissioning costs will be lower. It is just as likely that site availability or pricing concerns will raise costs substantially, even for lower volumes. Petitioners' argument also ignores expenses associated with maintenance of the site during the 50-year waiting period. Petitioners' contention, therefore, shows no such obvious cost advantage to SAFSTOR over DECON that the Commission's generic approval of both options in 1988 is seriously brought into question.

*d. Alleged Prejudgment of Facts*

Petitioners focus most of their appellate arguments regarding Contention A on several instances in which, according to Petitioners, the Commission's guidance prejudged the facts regarding the comparative doses and costs associated with DECON and SAFSTOR. We already have ruled that the Commission statements to which Petitioners refer are not prejudgments of the facts but are instead "regulatory interpretations and policy judgments, and tentative observations about dose estimates that are derived from the public record." CLI-96-5, 43 NRC at 59. We will reiterate briefly why Petitioners' charge of improper "prejudgment" cannot be sustained and does not require further Licensing Board litigation.<sup>12</sup>

Petitioners' reargument of the "prejudgment" issue overlooks two key points. First, as the Commission stressed in CLI-96-5, the Commission statements singled out by Petitioners resolved no facts and simply pointed to a number of salient features in the record and in Commission policy that might bear on Contention A. Second, none of the alleged factual prejudgments was necessary to the Commission's guidance, which rested on the Commission's generic inquiry into the DECON vs. SAFSTOR question in its 1988 decommissioning rulemaking.

Petitioners question in particular the Commission's comment that, under its current policy, the "value" of avoiding 900 person-rem is relatively low — about \$2000 per person-rem or \$2 million — particularly in relation to a project costing hundreds of millions of dollars over many years. Petitioners are quite correct that the \$2000 figure does not reflect a binding legal rule, but simply an NRC policy judgment, albeit a recent and well-considered one. See SECY-95-028 (Feb. 7, 1995); SRM 95-028 (June 30, 1995). The "value" of an avoided

<sup>12</sup> Similarly, the Commission sees no reason to revisit the "separation of functions" question raised by Petitioners on appeal, but resolved by the Commission in CLI-96-5. Petitioners fail to come to grips with the decisive finding of the Commission and its independent Inspector General that the prohibited communication did not affect the Commission's "guidance" decision, CLI-96-1. See generally CLI-96-5, 43 NRC 53.



person-rem, of course, is by nature a fairly subjective judgment and Petitioners themselves have not proffered or justified any specific alternative value. We need not, in any event, definitively resolve the value of avoided person-rem in this adjudication.

*e. New Dose Information*

Petitioners, in their pleadings pending before us, bring to our attention the following two new pieces of information relevant to the level of radiation doses that can be expected from YAEC's decommissioning activities. First, YAEC wrote the Commission staff on February 28, 1996, proposing to conduct eleven "minor" decommissioning activities which the Licensee expects to result (at least according to Petitioners) in 82 person-rem of occupational dose.<sup>13</sup> Petitioners note that this is fully half of the dose (160 person-rem) that YAEC predicted from the entire CRP, and more than 10% of the total remaining radiation dose projected for the rest of YAEC's decommissioning activities. Second, according to Petitioners, NRC Inspection Reports reveal that, in 1994 alone, the occupational doses for the CRP (197 person-rem) exceeded the total CRP dose estimate (160 person-rem) in the FSAR and that, as of October 10/11, 1995, workers at Yankee Rowe had received additional doses of between 21 and 57 person-rem.<sup>14</sup>

Based on these two pieces of information, Petitioners assert that the total occupational radiation dosage from the CRP is hundreds of rems higher than the Licensee's latest (1995 FSAR) estimated level of 160 person-rem for the CRP, drawing into question the accuracy of not only the CRP dose estimate but also YAEC's dose estimates for all decommissioning activity at the Yankee Rowe facility. See Petitioners' Supplement to Motion for Reconsideration at 4-11; Appeal at 11, 17-18; Reply Brief at 3-5.

In addition, Petitioners have raised the following argument: According to YAEC, 99% of the plant's remaining nonfuel and non-Greater-Than-Class-C radioactivity is in the reactor vessel and lower neutron shield. Consequently, according to Petitioners, the radioactivity in all of the components found in the eleven activities discussed in YAEC's February 28th letter (none of which involves the vessel or shield) necessarily totals less than 1% of the plant's remaining radioactivity. Petitioners go on to argue that, assuming some

<sup>13</sup> Petitioners' Supplement to Motion for Reconsideration of CLI-96-1, dated March 7, 1996, at 4-5, referring to YAEC Letter from Russell A. Mellor, YAEC, to Morton B. Furtile, NRC, dated Feb. 28, 1996, appended as Attachment 1 to Petitioners' March 7th Supplement.

<sup>14</sup> Referring to Inspection Report No. 50-29/95-05 at 5 (Dec. 5, 1995) (total 1995 effective dose assignments to all workers through October 10th was 57 rems, and the 1995 dose to workers for reactor vessel removal preparations was approximately 21 rems as of Oct. 11th). Petitioners' Supplement to Motion for Reconsideration and Partial Rescission of CLI-96-1, filed March 7, 1996, at 7.

proportionality between the level of radioactivity in these components and the radiation dose to workers involved in decommissioning these components, then 82 person-rem is a very small proportion of the total occupational dose that workers will receive from the decommissioning of Yankee Rowe, and the total DECON dose would be far above the 1215 person-rem postulated in Table 4.3-2 of the GEIS for the decommissioning of a 1175-MWe pressurized water reactor. GEIS at 4-1 and 4-5 to 4-6. Consequently, Petitioners' theory goes, the dose differential between DECON and SAFSTOR is likely to exceed greatly the 900 person-rem assumed by the Commission in CLI-96-1. See Petitioners' Supplement to Motion for Reconsideration and Partial Rescission of CLI-96-01, dated March 7, 1996, at 9-10.

This recently proffered information and new argument, if substantiated, may constitute "extraordinary circumstances" justifying further litigation on whether YAEC's DECON approach meets the ALARA standard. The NRC Staff and YAEC do not counter Petitioners' argument on its merits, but contend only that the argument comes too late and should not be considered for the first time on appeal. Staff Brief at 11; YAEC Brief at 10-11. However, on the current record, we cannot say that Petitioners' lateness is fatal, as their argument rests significantly on a document dated February 28, 1996, and Petitioners promptly (on March 7) brought it to the Commission's attention.

The current record does not provide enough information for us to assess whether Petitioners meet the standard for late-filed contentions set forth in 10 C.F.R. § 2.714(a)(1)<sup>15</sup> or to evaluate fully the substance of their new dose argument. "In Commission practice the Licensing Board, rather than the Commission itself, traditionally develops the factual record in the first instance." *Georgia Institute of Technology* (Georgia Tech Research Reactor), CLI-95-10, 42 NRC 1, 2 (1995). We therefore remand to the Board the questions whether Petitioners' new dose argument satisfies the "late-filed contention" standards set forth in 10 C.F.R. § 2.714(a)(1) and, if so, whether it provides a sufficient basis for the ALARA challenge to YAEC's choice of a decommissioning alternative. The Board may well be able to resolve these questions by our original anticipated mid-July endpoint to the Board proceeding. See CLI-96-1, 43 NRC at 10. But if the remanded questions prove too complex for final resolution by July 31, 1996, we ask the Board to establish a fresh expedited schedule and to refer it to the Commission for approval.

<sup>15</sup> It appears that the Commission has not previously ruled on the standards for consideration of late-filed bases and information submitted in support of an unadmitted contention prior to the termination of the proceeding. However, we consider Petitioners' new dose information to be, in essence, a supplement to their petition to intervene. The information is therefore subject to the following language in 10 C.F.R. § 2.714(b)(1) — "[a]dditional time for filing the supplement may be granted based on a balancing of the factors in paragraph (a)(1) of this section."

**2. Contention B: The Proposed Decommissioning Plan Violates 10 C.F.R. § 50.82(b)(1) and (2) by Inadequately Describing Both YAEC's Planned Decommissioning Activities and Its Controls and Limits on Procedures and Equipment**

Section 50.82(b)(1) and (2) of 10 C.F.R. provides that a proposed decommissioning plan must include, *inter alia*, a description of the decommissioning "activities" and also a description of the "controls and limits on procedures and equipment to protect occupational and public health and safety." Petitioners in their second contention assert that the Licensee's plan satisfies neither of these regulatory requirements, and that this failure raises significant safety questions regarding the storage of both LLRW and HLRW at Yankee Rowe.

In evaluating this contention in LBP-96-2, the Board initially noted that this regulatory language is quite broad and appears to leave considerable discretion to both the Licensee and the Commission regarding what the plan must contain. The Board also pointed out that the Commission has not issued a Regulatory Guide or standard review plan to provide specific criteria for an acceptable plan. LBP-96-2, 43 NRC at 74-75.

The Board turned for direction to the Commission's guidance on Petitioners' Contention C, where the Commission ruled that challenges to the reasonableness or accuracy of a decommissioning plan's cost estimate would be insufficient if the potential relief would be nothing more than "the formalistic redraft of the plan." LBP-96-2, 43 NRC at 75, *quoting* CLI-96-1, 43 NRC at 9. From this guidance, the Board concluded that "an allegation about the plan's completeness or accuracy is worthy of further inquiry only if it is coupled with a showing that the alleged deficiency has some independent health and safety significance." LBP-96-2, 43 NRC at 75. Applying this test to the LLRW and HLRW arguments that Petitioners proffered in support of Contention B, the Board concluded that the contention was inadmissible.

On appeal, Petitioners agree with the Board's conclusion that the claimed deficiencies in a decommissioning plan must have health and safety significance in order to be admissible as contentions. Appeal at 21-22. However, according to Petitioners, the Board failed to comprehend the fundamental health and safety significance of the relief sought in Contention B, i.e., "reasonable accuracy regarding the nature and timing of basic steps in the planned decommissioning process for Yankee Rowe." *Id.* at 22. In support of this position, Petitioners do not directly challenge the rulings in which the Board rejected their LLRW and HLRW arguments. Rather, they proffer the three general arguments set forth and discussed below.

*a. Distortion of Cost-Benefit Analysis*

Petitioners assert that YAEC's decommissioning plan fails to provide a reasonably accurate description of the nature and timing of waste disposal and therefore distorts the ALARA cost-benefit calculation. As an example, Petitioners point to YAEC's claim that DECON is preferable because "the site is remediated as soon as possible after cessation of power operations, allowing unrestricted use of the site." According to Petitioners, this assertion is based on the unreasonable assumptions that HLRW will be removed from the site by the year 2025 and that, by transferring spent fuel from the spent fuel pit to dry casks by the year 2000, YAEC can complete decommissioning activities that cannot otherwise precede closure of the pit. Appeal at 22-23, *referring to* FSAR at 4.

We cannot agree with this argument. The factors cited by Petitioners, of course, represent uncertainties. However, that fact does not, without more, make the plan unsound. A decommissioning plan by its very nature deals with a myriad of uncertainties, and our regulations cannot be construed to require the plan to do the impossible, i.e., predict the future with precision.

Also, Petitioners inappropriately assume that YAEC plans to move the spent fuel from the pool into dry cask storage. The Commission has not approved any license amendment authorizing YAEC to do so, nor has the Licensee submitted an application for such an amendment. Indeed, YAEC has indicated several times in this proceeding that it has not yet made any decision whether to seek such an amendment.<sup>16</sup> Our regulations do not require YAEC at the time it seeks approval of its decommissioning plan to decide whether it will move spent fuel into dry cask storage. Again, YAEC is dealing with uncertainties, and YAEC's inclination to defer this decision is hardly unreasonable.

*b. Effect on Basis for Cost Estimate*

Petitioners next contend that the absence of reasonably accurate and reliable strategies and schedules in YAEC's decommissioning plan deprives the Licensee of an adequate basis for a reasonably accurate decommissioning cost estimate. Appeal at 23-24.

This argument runs afoul of the Commission's ruling in CLI-96-1 that a contention challenging the reasonableness of a decommissioning plan's cost estimate should not be deemed litigable if reasonable assurance of decommissioning costs is not in serious doubt and the only available relief would be a "formalistic redraft of the plan with a new estimate." CLI-96-1, 43 NRC at 9. We discuss

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<sup>16</sup> YAEC recently announced that it has selected a company to design an interim dry cask storage facility for Yankee Rowe's spent fuel. However, YAEC indicated that it had "not yet made the decision to actually build a dry cask storage facility at the Rowe site." YAEC Press Release, issued May 16, 1996.

the cost estimate issue at length in connection with our analysis of Petitioners' Contention C, *infra*.

*c. Public Accountability*

According to Petitioners, the Licensing Board improperly discounts the importance of requiring a reasonably accurate and reliable decommissioning plan so as to maintain Licensee accountability to the public regarding both the impacts of decommissioning on their health and safety and the nature of Licensee's and Commission's cost-benefit judgments. Petitioners also argue in the abstract that Commission approval of a flawed plan would somehow implicate the government in a deception of the public that directly affects their health and safety. Appeal at 24-25.

We find this argument unpersuasive. Petitioners appear to believe that an allegation of errors in a decommissioning plan should be sufficient in and of itself to entitle them to a hearing on the plan. The NRC adjudicatory process requires more than that. To obtain a hearing, Petitioners must show some specific, tangible link between the alleged errors in the plan and the health and safety impacts they invoke. (Elsewhere in their appeal, e.g., at 22, they appear to acknowledge this.) For all their heated rhetoric, Petitioners have not attempted to make such a showing.

**3. Contention C: The Decommissioning Plan Does Not Comply with the Decommissioning Funding Requirements of 10 C.F.R. § 50.82(b)(4) or (c)**

Section 50.82(b)(4) requires that a decommissioning plan contain

[a]n updated cost estimate for the chosen alternative for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and a plan for assuring the availability of adequate funds for completion of decommissioning.

Section 50.82(c)(1) provides that plans that "propose an alternative that delays completion of decommissioning by including a period of storage or long-term surveillance" must either provide that the decommissioning funds are placed "into an account segregated from licensee assets and outside the licensee's administrative control during the storage or surveillance period" or maintain "a surety method or fund statement of intent" in accordance with the criteria in 10 C.F.R. § 50.75(e). Finally, pursuant to section 50.85(c)(2), the decommissioning plan must include means for "adjusting cost estimates and associated funding levels over the storage or surveillance period." Petitioners argued in Contention C that YAEC had satisfied none of these requirements.



The Commission ruled in CLI-96-1 that to prevail on this contention, Petitioners would need to demonstrate not only that YAEC's decommissioning cost estimate was incorrect, but also that there was no reasonable assurance that the decommissioning costs would be paid. The Commission explained that a contention challenging the reasonableness of a decommissioning plan's cost estimate provisions should not be litigable if the only relief available would be a "formalistic redraft of the plan with a new estimate." CLI-96-1, 43 NRC at 9. Petitioners responded at the prehearing conference that they were entitled under section 50.85(b)(4) to have the decommissioning plan changed to include a "reasonable number" for the decommissioning costs. Transcript of Prehearing Conference, Feb. 21, 1996 ("Tr."), at 128.

The Board applied the guidance from CLI-96-1 to Contention C and found that Petitioners had failed to make the required showing. LBP-96-2, 43 NRC at 83-84.

On appeal, Petitioners question the legality of the Commission's ruling in CLI-96-1 and argue that their challenge to YAEC's ability to pay the decommissioning expenses is sufficiently strong to merit a hearing.

They claim that the ruling was an effort to "amend by fiat the unconditional language of the 1988 decommissioning funding rule which requires decommissioning plans to include an 'updated cost estimate for the chosen [decommissioning] alternative.'" Appeal at 28, *quoting* 10 C.F.R. § 50.82(b)(4). Petitioners describe this as an improper rule change, accomplished without notice and the opportunity for comment guaranteed by the Administrative Procedure Act, 5 U.S.C. § 553, and the Atomic Energy Act, 42 U.S.C. § 2239(a). Appeal at 28. According to Petitioners, the guidance means that the Licensee need not produce an updated cost estimate for the chosen alternative unless Petitioners can demonstrate that the Licensee lacks reasonable assurance of its ability to pay the decommissioning costs; this, Petitioners say, shifts to them the burden of proving compliance with the decommissioning funding regulations. Appeal at 28, *citing* 10 C.F.R. § 2.732.

Petitioners have misconstrued the Commission's guidance, which was intended neither to rewrite the decommissioning rule nor to add new and higher hurdles for Petitioners to meet. Rather, its purpose was to make clear that the decommissioning rule, like all other NRC rules, does not stand in a vacuum, but needs to be read in conjunction with other pertinent regulations, including, in this case, the contention rule. For it should be evident that not all actual or alleged errors in a decommissioning plan are of equal significance; to be significant enough to be "material," within the meaning of the contention rule, there needs to be some indication that an alleged flaw in a plan will result in a shortfall of the funds actually needed for decommissioning.

In the present case, however, Petitioners have made only a perfunctory effort, relying heavily on speculation, to show why the alleged flaws could lead to an

insufficiency of necessary funds. Moreover, the "Power Contracts" on which the Licensee is relying are not mere unsupported promises, but firm contractual agreements, and offer solid evidence that the necessary funds will be available when needed. A recent decision by the Federal Energy Regulatory Commission, as we shall describe below, has further confirmed the very high level of assurance that the funds for decommissioning the plant will be forthcoming. Again, the standard to be applied is whether there is "reasonable assurance" of adequate funding, not, as Petitioners suggest, whether that assurance is "ironclad." Appeal at 31. We see no reason to disagree with the Licensing Board's judgment that though a "gross discrepancy" in the decommissioning cost estimate might suffice to establish a litigable issue, nothing presented by the Petitioners suggested that such a discrepancy existed. See LBP-96-2, at 41 n.19.<sup>17</sup> Accordingly, Petitioners have failed to meet the burden of coming forward that the NRC's contention rule requires;<sup>18</sup> contrary to their reading of the Commission's January 1996 guidance, the burden of persuasion remains, as always, with the Licensee applicant.

We now turn to Petitioners' specific challenges to the Licensing Board's decision on Contention C.

*a. YAEC's Power Contracts as Alleged "Internal Reserves"*

Petitioners assert that the Commission has stood the decommissioning rule on its head by permitting reliance on YAEC's Power Contracts to excuse YAEC from the requirement to provide an updated and reasonable cost estimate. According to Petitioners, such contracts constitute an "internal reserves" financing mechanism to satisfy YAEC's decommissioning obligations — a mechanism expressly rejected in the decommissioning rulemaking. Appeal 28-31, *referring to* Final Decommissioning Rule, *supra* note 2, 53 Fed. Reg. at 24,033. This challenge fails for both procedural and substantive reasons.

First, Petitioners improperly raise this argument for the first time on appeal<sup>19</sup> and fail to address the five balancing factors for admission of late-filed contentions, as required in 10 C.F.R. § 2.714(b)(1), *incorporating* 10 C.F.R. § 2.714(a)(1)(i)-(v). We reject the argument for that reason alone.

Moreover, Petitioners are incorrect in characterizing YAEC's funding mechanism as involving "internal reserves." As explained in the Statement of Consid-

<sup>17</sup> On appeal, Petitioners offer almost no challenge to YAEC's cost estimate as such. Their appellate brief lists — but does not argue or explain — various alleged inadequacies in YAEC's cost estimate. See Petitioners' Appeal Brief at 26.

<sup>18</sup> See the Statement of Consideration accompanying the 1989 contention rule. 54 Fed. Reg. at 33,171.

<sup>19</sup> See, e.g., *Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-582, 11 NRC 239, 242 (1980); *Puerto Rico Electric Power Authority* (North Coast Nuclear Power Plant, Unit 1), ALAB-648, 14 NRC 34, 37 (1981); *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-813, 22 NRC 59, 83 (1985).

eration for the Final Decommissioning Rule, "[i]n an internal reserve, funds are placed into an account or reserve which is not segregated from Licensee assets and is within the licensee's administrative control." 53 Fed. Reg. at 24,031. By contrast, YAEC's mechanism is external in nature. As described in the decommissioning plan, "[t]he decommissioning collections are made through YAEC's Power Contracts and are deposited in an independent and irrevocable trust at a commercial bank" and the trust is executed in compliance with 10 C.F.R. § 50.75(e)(1)(ii).<sup>20</sup> The Licensee provided the Commission with copies of those trust documents (*see id.*) and they have also been publicly available at the Federal Energy Regulatory Commission ("FERC") since at least March 31, 1995.<sup>21</sup> Petitioners provide no evidence that would call into question the external nature of the trust fund.

In their Reply Brief on appeal, Petitioners belatedly contend for the first time that YAEC's failure to collect all the necessary funds renders the uncollected funds a *de facto* internal sinking fund that is both subject to Purchaser/Co-owners' revocation and vulnerable to their creditors in the event of bankruptcy. Petitioners' Reply Brief on Appeal, dated April 10, 1996, at 14-15. This argument (like Petitioners' other "internal reserves" argument) comes too late in the day to save Petitioners' Contention C. *See* cases cited in note 19, *supra*. Moreover, the argument is based on pure speculation; Petitioners offer no evidence whatever suggesting that a Purchaser/Co-owner will either default on its obligations under the Purchase Contract or go bankrupt. Petitioners must submit more than this in order for a contention to be admitted for litigation.<sup>22</sup>

*b. Alleged Lack of Reasonable Assurance*

Petitioners argue that, even accepting the Commission's guidance that cost estimates are litigable only to the extent Petitioners can show a lack of reasonable assurance of payment, Petitioners have still raised a sufficient challenge to YAEC's ability to pay the decommissioning expenses. Petitioners claim to have demonstrated that (i) YAEC's Purchaser/Co-owners' ability to pay decommis-

<sup>20</sup> Decommissioning Plan at 1.3-2. *See also id.* at 5.2-1. The trust fund's balance as of October 1, 1995, was \$115 million. Letter from Andrew C. Kadak, YAEC, to Mr. James M. Taylor, NRC dated Jan. 29, 1996, attached as Exhibit 1 to Petitioners' Motion for Exercise of Plenary Commission Authority to Reverse NRC Staff 2.206 Decision, and Renewed Emergency Request for Compliance with Circuit Court Opinion, dated Feb. 9, 1996.

<sup>21</sup> *See* Indenture of Trust between Yankee Atomic Electric Company & Mellon Bank, N.A., dated Aug. 1, 1990, submitted as Exhibit No. YA-104 in support of YAEC's rate application in FERC Docket No. ER-95-835-000. Pursuant to 10 C.F.R. § 2.743(i), we take official notice of these trust documents and various other publicly available documents filed in that FERC docket.

<sup>22</sup> Moreover, Petitioners ignore the fact (pointed out in our Final Decommissioning Rule) that external reserves sinking funds such as the one at issue in this proceeding are, by their nature, "accumulated over a period of time," and that the Commission in that Rule expressly rejected Petitioners' preferred mandatory lump-sum advance-payment approach to financing a sinking fund, noting that such "prepayment generally has a cost too high for the benefit that would be realized." Final Decommissioning Rule, 53 Fed. Reg. at 24,033, 24,034.

sioning costs is not ironclad, and that at least one Purchaser/Co-owner (Public Service Company of New Hampshire, or "PSCNH") has defaulted on its financial obligations to YAEC; (ii) the FSAR shows that YAEC intends to rely not only on the Power Contracts but also on tax loss carrybacks and the earnings realized from the investment of contributions (but YAEC provides none of the required information regarding these two other sources);<sup>23</sup> (iii) the premature shutdown of Yankee Rowe and YAEC's consequent inability to meet its own contractual obligation to produce electricity from Yankee Rowe for the full term of the plant's operating anticipated life raises a reasonable inference that the Purchaser/Co-owners will not meet their obligations; and (iv) experience at other nuclear facilities such as those of the Washington Public Power Supply System ("WPPSS") shows that cancellation of a project may have a devastating effect on nuclear financing contracts. See Appeal at 31-32.

#### I. ABILITY OF PURCHASER/CO-OWNERS TO FUND DECOMMISSIONING

We find (as did the Board) that the first of these four arguments is insufficient for acceptance of Contention C. Petitioners' argument regarding the absence of an ironclad funding guarantee is based on a misreading of our decommissioning funding regulation. That regulation was intended only to require "*reasonable assurance* of funds for decommissioning," not an absolute guarantee of such funds. *Id.* at 24,031 (emphasis added). See also *id.* at 24,034 (the funding methods listed in the rule are adequate, given "the unlikely nature of the various events and the cost and practicality of providing more absolute assurance by certain methods"). Indeed, in the case of prematurely shutdown reactors like Yankee Rowe, our rules provide that "the collection period for any shortfall of funds" may be assessed on a "case-by-case basis taking into account the specific financial situation of each licensee." 10 C.F.R. § 50.82(a). This rule obviously does not contemplate the sort of ironclad guarantee that Petitioners envision.

Moreover, as we have stressed throughout this opinion, our Contention Rule (10 C.F.R. § 2.714) places an initial burden on Petitioners to come forward with reasonably precise claims rooted in fact, documents, or expert opinion in order to proceed past the initial stage and toward a hearing. On their face, the Power Contracts commit YAEC's Purchaser/Co-owners to full decommissioning funding. Petitioners say that the Power Contracts are nonetheless insufficient to provide reasonable assurance of decommissioning funding, but Petitioners offer no contract language, case law, or expert opinion justifying their view. Instead, they merely argue, based primarily on the prior (and now resolved) bankruptcy

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<sup>23</sup> As presented on appeal, this second argument included only the portion preceding the parentheses. However, we have reviewed Petitioners' earlier iterations of the argument and have added the parenthetical language to reflect our understanding of its intended meaning.



of PSCNH, that the YAEC plan may not be fully funded because of possible contract breaches. Petitioners not only offer no supporting evidence for their conjecture, but they also ignore the fact that PSCNH continued payments to Yankee while under bankruptcy protection. See *Yankee Atomic Electric Co.*, Op. No. 390, 67 FERC ¶61,318, 1994 WL 270437 (F.E.R.C.) at \*17 (1994).

We conclude that Petitioners' conclusory fears of contract breach do not justify a challenge to the reasonable assurance provided in the Power Contracts. Our conclusion is reinforced by a look at rate proceedings conducted by our sister federal agency, the FERC, which recently studied the decommissioning funding issue at Yankee Rowe in some depth. The FERC concluded that the Yankee Rowe decommissioning contracts were binding and would require full decommissioning funding. An understanding of the FERC conclusions requires a digression of some length.

The FERC has repeatedly found that the Purchaser/Co-owners of YAEC are obligated under their Power Contracts to pay for the entire costs of decommissioning Yankee Rowe.<sup>24</sup> We have reviewed the Power Contracts and agree with the FERC's reading of their language. We rely specifically on sections 2 and 6 of the Power Contracts' composite conformed version, which state, respectively, that

the applicable provisions of this contract shall continue in effect after any termination hereof to the extent necessary (i) to complete the billings and payments required hereunder with respect to the Customer's obligation to pay its power percentage of the full cost of decommissioning the plant . . . .

[T]he customer will pay . . . an amount equal to the Customer's power percentage of the total cost of service . . . . 1. "total cost of service" . . . shall [include] Yankee's operating expenses . . . . [O]perating expenses shall include . . . (iv) costs incurred in connection with decommissioning the plant, including (a) the direct and indirect costs of operating, maintaining, or dismantling the spent fuel storage facilities and other plant facilities after the cessation of electricity production and (b) the accruals to any reserve established by Yankee's board of directors to provide for physical decommissioning of the plant over the estimated remaining useful life of the plant, provided, however, that if a decision is made to cease electricity production at the plant prior to July 9, 2000, then the accruals to the reserve referred to in clause (b) shall be made over a period extending to July 9, 2000.<sup>25</sup>

<sup>24</sup> See *Yankee Atomic Electric Co.*, 71 FERC ¶61,200, 1995 WL 308632 (F.E.R.C.) at \*1 (1995); *Yankee Atomic Electric Co.*, Op. No. 390, 67 FERC ¶61,318, 1994 WL 270437 (F.E.R.C.) at \*2, \*3, \*18 (1994); *Yankee Atomic Electric Co.*, Op. No. 285, 40 FERC ¶61,372, 1987 WL 118208 (F.E.R.C.) at \*8, \*19-21 (1987). See also *Town of Norwood v. Federal Energy Regulatory Commission*, No. 94-1710, slip op. at 7-8, 14-15 (D.C. Cir. April 9, 1996); *Yankee Atomic Electric Co.*, 65 FERC ¶63,001, 1993 WL 390545 (F.E.R.C.) at \*23 (ALJ, Initial Decision, 1993).

<sup>25</sup> Composite Conformed Copy of Power Contract, submitted as YAEC's Exhibit No. YA-102 in support of YAEC's 3/31/95 rate application in FERC Docket No. ER-95-835-000, at 3, 5-6.



Although Petitioners correctly point out that the mere obligation to pay does not ensure the actual payment, we find no reason to conclude that the Purchaser/Co-owners will shirk their decommissioning obligations. Indeed, the evidence supports the contrary conclusion. We initially note that, pursuant to a FERC-approved 1992 settlement of a rate proceeding, YAEC is "contractually guaranteed recovery" of \$235 million in decommissioning costs.<sup>26</sup> The FERC has authorized YAEC's Purchaser/Co-owners to pass through this entire amount to their own customers<sup>27</sup> and, with the exception of one small customer,<sup>28</sup> those customers have agreed to pay the pass-through amounts. Those obligations cannot be overruled by state public service commissions, so the \$235 million in payments to YAEC are essentially guaranteed.<sup>29</sup>

The FERC rejected the argument (similar to that proffered by Petitioners in the instant proceeding) that the increase in decommissioning costs (to \$235 million) will increase the possibility of default by one or more of the Purchaser/Co-owners. The FERC reasoned that the Co-owners are entitled to pass the cost of purchased power through to their own customers and that this reimbursement of costs would result in the Co-owners paying the FERC-approved rate to Yankee rather than defaulting on their obligation and losing their investment in the Yankee Rowe facility.<sup>30</sup> We agree that it is unlikely that a financially troubled

<sup>26</sup> *Yankee Atomic Electric Co.*, Op. No. 390, 67 FERC ¶61,318, 1994 WL 270437 (F.E.R.C.) at \*17 (1994). On December 17, 1992, Yankee filed with the FERC a settlement to which all parties except one to a FERC electric rate proceeding had agreed. As to the consenting parties, the settlement authorized Yankee to collect decommissioning funds based on a cost estimate of \$235 million (as compared with Yankee's proposed decommissioning estimate of \$247.1 million in 1992 dollars). *Id.* at \*4 and n.19; *Yankee Atomic Electric Co.*, 65 FERC ¶63,001, 1993 WL 390545 (F.E.R.C.) at \*3 (ALJ, Initial Decision, 1993). The Commission approved the settlement in Opinion No. 390, *supra*.

<sup>27</sup> As previously noted, the FERC considers decommissioning expenses to be a business expense for which utilities are entitled to reimbursement from their ratepayers. FERC Trust Fund Guidelines, 60 Fed. Reg. 34,109, 34,117 (June 30, 1995).

<sup>28</sup> The customer, the Town of Norwood, Mass., pays only 0.413% of YAEC's cost of service. *Yankee Atomic Electric Co.*, 65 FERC ¶63,001, 1993 WL 390545 (F.E.R.C.) (ALJ, Initial Decision, 1993) at \*1, \*3, \*4, \*8, \*17, \*18, \*20, \*26, \*27, \*29, \*31, *aff'd in relevant part*, Op. No. 390, 67 FERC ¶61,318, 1994 WL 270437 (F.E.R.C.), *reh'g denied*, Op. No. 390-A, 68 FERC ¶61,364, 1994 WL 518969 (F.E.R.C.) (1994), *rev'd on other grounds sub nom. Town of Norwood v. Federal Energy Regulatory Commission*, No. 94-1710, (D.C. Cir. April 9, 1996), FSAR at p. 501-2, § 501.2 (rev. 6/95), attached to Licensee's Answer to Petition to Intervene, dated Dec. 15, 1995.

<sup>29</sup> *Yankee Atomic Electric Co.*, Op. No. 390, 67 FERC ¶61,318, 1994 WL 270437 (F.E.R.C.) at \*18 (1994) ("the recovery permitted through the Commission's approval of the settlement and in this Opinion and Order cannot be barred by state regulators"). See also *Yankee Atomic Electric Co.*, Op. No. 390-A, 68 FERC ¶61,364, 1994 WL 518969 (F.E.R.C.) at \*6 (1994) (ruling that a customer of one of YAEC's Purchaser/Co-owners "can reasonably be required to bear, through pass-through in rates of [the Co-owner's] costs, the risks and costs associated with the premature shutdown of the Rowe plant").

<sup>30</sup> *Yankee Atomic Electric Co.*, Op. No. 390, 67 FERC ¶61,318, 1994 WL 270437 (F.E.R.C.) at n.115 (1994), stating that "[w]hile it is possible that the Purchaser/[Co-owner]s could default on their contractual obligations by choice, or through bankruptcy, we find that possibility remote for the reasons enunciated by Trial Staff" (emphasis added, referring with approval to FERC staff's arguments which were described at \*16 and which we paraphrase in the text associated with this footnote). See also *Yankee Atomic Electric Co.*, Op. No. 285-A, 43 FERC ¶61,232, 1988 WL 244955 (F.E.R.C.) at \*6 (1988) ("the likelihood of a purchaser/[co-owner] defaulting on its obligation is minimal") (emphasis added).

Purchaser/Co-owner would default and thereby lose the opportunity to pass through to its own customers so large a debt.

Regarding the decommissioning costs in excess of \$235 million, the Power Contract imposes a general obligation on each Purchaser/Co-owner to pay its *pro rata* percentage of the plant's full decommissioning costs.<sup>31</sup> Petitioners have offered us no reason to conclude that any of the Purchaser/Co-owners will default on this *pro rata* payment obligation. Indeed, as indicated below, all indications point to a contrary conclusion.

In the following discussion, the FERC further determined that YAEC's overall business and financial risks (including the risk of Purchaser/Co-owner default) have decreased as a result of shutting down the Yankee Rowe facility:

**Business Risk<sup>[32]</sup>**

We find that Yankee's business risk has certainly not increased. As [FERC] Trial Staff notes . . . , the Purchaser[/Co-owner]s have no more incentive to default now than they did before. The Purchaser[/Co-owner]s would, in fact, be better served by meeting their contractual obligations and passing the cost through to their customers, thereby maintaining their investment in Yankee, rather than defaulting and losing their investment. Furthermore, there is no evidence that any of the Purchaser[/Co-owner]s are in financial difficulty. However, if a Purchaser[/Co-owner] were to enter bankruptcy, as was the case with Public Service Company of New Hampshire (who, we note, continued payments to Yankee while under bankruptcy protection),<sup>[33]</sup> the trustee could better protect the estate of the Purchaser[/Co-owner] by fulfilling its contractual obligations and maintaining its investment in Yankee, rather than defaulting and losing the bankrupt Purchaser[/Co-owner]'s investment. Finally, given the incentive for Purchaser[/Co-owner]s to avoid default, and the fact that all Purchaser[/Co-owner]s of Yankee operate in New England, and thus generally face the same competitive pressures, we are unconvinced that competitive pressures would induce any particular Purchaser[/Co-owner] to default on its payment obligation.

Now that the [Federal Energy Regulatory] Commission has approved the settlement and issued this Opinion and Order, regulatory and competitive pressures become non-factors; the recovery of the Purchaser[/Co-owner]s' investment and of the costs that flow from maintaining the Rowe plant until decommissioning occurs, and also of the costs of decommissioning the Rowe plant, are now largely assured.<sup>[34]</sup> Moreover, the recovery

<sup>31</sup> Composite Conformed Copy of Power Contract, FERC Docket No. ER-95-835-000, Yankee Exhibit YA-102 (submitted March 31, 1995) at 3 § 2. See also *id.* at 5-6 § 6 (obligating each Purchaser/Co-owner to pay its power percentage of "operating expenses" — a term that includes all costs incurred in connection with decommissioning the plant).

<sup>32</sup> The FERC defines "business risk" as "the risk associated with doing business generally, such as changing economic conditions, changing industry conditions, and changing operating conditions." *Yankee Atomic Electric Co.*, 65 FERC ¶63,001, 1993 WL 390545 (F.E.R.C.) at \*22 (ALJ, Initial Decision, 1993).

<sup>33</sup> We note that Public Service Company of New Hampshire emerged from bankruptcy three years ago (see *Yankee Atomic Electric Co.*, 65 FERC ¶63,001, 1993 WL 390545 (F.E.R.C.) at \*24 (ALJ, Initial Decision, 1993)), and that Petitioners have given us no reason to question that particular utility's current ability to meet its decommissioning cost obligations under its Power Contract.

<sup>34</sup> The qualifying term ("largely") in the FERC's statement that YAEC's recovery of its decommissioning costs was "now largely assured" was evidently intended to reflect the fact that the FERC had denied without prejudice

(Continued)

permitted through the Commission's approval of the settlement and in this Opinion and Order cannot be barred by state regulators.

Thus, the risk associated with the Rowe plant, and in particular the regulatory risk of rate approval for the collection of adequate funds for decommissioning and the risk of actually decommissioning the Rowe plant, are at least no higher than, and are, in fact, lower than before the shutdown.

#### Financial Risk<sup>35</sup>

While Yankee was subject to financial risk as a result of the shutdown of the Rowe plant, that risk has similarly been eliminated with the approval of the settlement and the issuance of this Opinion and Order. In addition, Yankee witness Tracy testified that Moody's viewed the regulatory treatment of the settlement with the Purchaser/Co-owner[s] as a positive result. The parties also do not dispute that Yankee's day-to-day operating risk and the related financial risk have declined since the shutdown of the plant and approval of the settlement, respectively. Nor are we convinced that Yankee's decommissioning risk has replaced its day-to-day operating risk; in the past, Yankee faced both decommissioning risk and day-to-day operating risk, and, at a minimum, it no longer faces the latter.

Op. No. 390 at \*17-18 (footnotes omitted).

Notably the FERC, in issuing the ruling quoted above, expressly reversed an ALJ conclusion that YAEC's shutdown of Yankee Rowe increased YAEC's business and financial risks due to such factors as the risk of further increases in decommissioning costs, the risk of default by one or more Purchaser/Co-owners due either to bankruptcy or to the fact that Yankee Rowe is no longer providing power, doubts as to DOE's ability to accept spent fuel in 1998, and doubts as to the availability of an LLRW disposal site — all factors cited by Petitioners in our own proceeding. See *Yankee Atomic Electric Co.*, 65 FERC ¶63,001, 1993 WL 390545 (F.E.R.C.) at \*23-25 (ALJ, Initial Decision, 1993).

Moreover, the FERC, by recently approving YAEC's December 29, 1995 settlement, has authorized YAEC to collect from the Purchaser/Co-owners all estimated decommissioning costs (including site restoration expenses, see note 34, *supra*), up to \$306.4 million.<sup>36</sup> Under Supreme Court precedent, those Purchaser/Co-owners would appear to have a similar right to pass through those

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YAEC's request to recover its expected site restoration costs (totaling about \$12 million). See *Yankee Atomic Electric Co.*, Op. No. 390, 67 FERC ¶61,318, 1994 WL 270437 (F.E.R.C.) at n.48 (1994). The qualified nature of FERC's statement now appears outdated. YAEC included a site restoration cost estimate in its revised cost figure of \$368.8 million which YAEC submitted to FERC in Docket No. ER-95-835-000 (see *Yankee Atomic Electric Co.*, 71 FERC ¶61,200, 1995 WL 308632 (F.E.R.C.) at \*1-2 (1995)), and also in the December 29, 1995 settlement of that rate proceeding (approved by FERC letter order dated April 10, 1996).

<sup>35</sup> The FERC defines "financial risk" as "the risk incurred by using debt capital which entails taking on a fixed obligation to pay interest on that debt." *Yankee Atomic Electric Co.*, 65 FERC ¶63,001, 1993 WL 390545 (F.E.R.C.) at \*22 (ALJ, Initial Decision 1993).

<sup>36</sup> In YAEC's December 29, 1995 offer of settlement in an FERC rate proceeding, the Licensee revised its \$368.8 million decommissioning cost estimate (of March 31, 1995) downward to \$306.4 million (in 1995 dollars), based on both the reopening of the Barnwell LLRW disposal facility on July 1, 1995, and on the assumption that Barnwell

(Continued)

costs to their own customers. See *Mississippi Power and Light Co. v. Mississippi*, 487 U.S. 354, 370-74 (1988) (ruling that states may not bar regulated utilities from passing through to retail customers FERC-mandated wholesale rates and that the Supremacy Clause compels the states to permit such utilities to recover as a reasonable operating expense any costs incurred as a result of paying a FERC-determined wholesale rate for a FERC-mandated allocation of power). *Mississippi Power and Light Co.* suggests that YAEC's Purchaser/Co-owners are entitled to pass through to their own customers the cost of purchased power — including decommissioning costs. Such a situation would remove virtually all remaining risk that a Purchaser/Co-owner would default on its obligation to pay its *pro rata* share of decommissioning expenses.

## II. OTHER ARGUMENTS

Petitioners' second argument complains that YAEC has failed to provide information on any funding sources other than the Power Contracts — specifically, the tax loss carrybacks and the earnings realized from investment of the Purchaser/Co-owners' contributions to the trust fund. However, given that YAEC has provided sufficient proof that its Purchaser/Co-owners are obligated under the Power Contracts to pay all decommissioning costs, and given Petitioners' failure to demonstrate any likelihood that any Purchaser/Co-owner will default on that obligation, we need not rely on these other two sources of income in rejecting Petitioners' Contention C, and the Licensors' alleged omission of specific details as to these two sources of income is consequently of no moment.

We reject Petitioners' third argument (that the Purchaser/Co-owners will not meet their obligations) on the same grounds upon which we relied in rejecting Petitioners' first argument. Moreover, the third argument is mere speculation, and therefore insufficient to merit further consideration. See generally *Rancho Seco*, CLI-93-3, 37 NRC at 145-46 (rejecting contentions in a decommissioning proceeding as too speculative).

Finally, we reject Petitioners' fourth argument (regarding WPPSS) on the grounds that they have shown no logical relationship between the WPPSS situation and that at Yankee Rowe and have therefore failed to demonstrate the relevance of their argument to this case. *Id.*

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or some other LLRW disposal facility would be available to YAEC for the duration of its decommissioning activities. See Offer of Settlement, dated Dec. 29, 1995, in FERC Docket No. ER-95-835-000, at 4, 5, approved by FERC letter order dated April 10, 1996.



**4. *Contention D: The Decommissioning Plan Fails to Include Measures Necessary to Ensure That Workers and the Public Are Adequately Protected from Health Damage Caused by the Excessive Radiation Doses They Received During the Unlawful CRP***

Petitioners in Contention D complained that YAEC had begun the CRP "unlawful[ly]" and "in violation of 10 C.F.R. § 20.1101" (Petition to Intervene at 27) without considering decommissioning alternatives that would minimize radiation doses to workers and the public, such as a 30-year SAFSTOR period. Petitioners further complained that the Commission's approval of the CRP was unlawful because the NRC had refused to provide an opportunity for a hearing on the CRP or other aspect of the decommissioning plan. Petitioners claimed that, as a result of these unlawful activities, the workers and the public have received doses far above those reasonably achievable.

Specifically, Petitioners pointed to YAEC's estimate that the total occupational exposure for the CRP would be 350-400 person-rem. Petitioners placed this level in the following three contexts: (1) it far exceeds the 181 person-rem estimate that the Commission projected for the entire decommissioning of the Yankee Rowe facility following a 30-year SAFSTOR period; (2) it constitutes up to 80% of the 513 person-rem estimate that the Commission projected for the entire decommissioning of this facility under the DECON alternative;<sup>37</sup> (3) it corresponds to 0.3-1.2 additional latent cancer fatalities plus an equivalent number of health and genetic effects.

For relief, Petitioners asked that YAEC be ordered both to commission an independent study of cancer incidence and mortality in the Yankee Rowe facility's effluent pathway and to establish a fund for the treatment of cancers that are caused by radiation exposures during the CRP. Such relief, according to Petitioners, would constitute a prospective remedy appropriate to this proceeding (as opposed to the section 2.206 proceeding referenced by the Commission in CLI-96-1). Tr. at 163, 165. They analogized the Yankee Rowe facility's contamination of the environment and people to a spill that cannot be cleaned up completely and for which the Commission has, in section 50.75(g)(1), provided for monitoring and protection. Tr. at 163-64.

The Commission in CLI-96-1 addressed this contention as follows:

To the extent that the contention alleges that YAEC has violated NRC regulations, those allegations are more properly the subject of separate enforcement action. The focus of this proceeding is prospective only — the future decommissioning of the remainder of the facility under the proposed decommissioning plan.

<sup>37</sup> Referring to NUREG/CR-0130, "Technology, Safety and Costs of Decommissioning a Reference Pressurized Water Reactor Power Station," Addendum at 2-4 (Table 2.1-2), Battelle Pacific Northwest Laboratory (Aug. 1979) (on which the GEIS relied, at p. 4-21, ref. 2), appended as Attachment 11 to Petition to Intervene.



43 NRC at 9. The Board considered this guidance dispositive of Contention D and, accordingly, rejected it. LBP-96-2, 43 NRC at 85.

On appeal, Petitioners reiterate their arguments and contend again that they seek prospective rather than retrospective relief. Appeal at 32-33. We reject Petitioners' arguments for two reasons.

First, they cite no authority supporting their novel prayer for relief. Although the Commission has a general responsibility to ensure that decommissioning operations do not jeopardize public health and safety, no statute or regulation grants the Commission authority to require the Licensee to pay (in effect) compensatory damages to private individuals.

Second, the activities completed under the now-concluded CRP are beyond the scope of this proceeding, which deals solely with the propriety of YAEC's decommissioning plan and its future decommissioning activities. Insofar as Petitioners contend that YAEC's alleged regulatory violations call for NRC enforcement action, agency rules provide a procedural mechanism for requesting such relief. *See, e.g.*, 10 C.F.R. § 2.206.

##### **5. Contention E: The NRC Staff Violated NEPA by Failing to Prepare a Supplemental EIS for the Decommissioning of Yankee Rowe**

In Contention E, Petitioners argued that NEPA requires the Commission to prepare a Supplemental EIS ("SEIS") to address the significant environmental impacts that are specific to Yankee Rowe and were not addressed in the GEIS that the Commission prepared in 1988 in support of its Final Decommissioning Rule,<sup>38</sup> and to address assumptions that were relied on in the GEIS but are invalid for the Yankee Rowe facility. According to Petitioners, this requirement is applicable because the Commission's approval of the Yankee Rowe decommissioning plan constitutes a "major federal action significantly affecting the quality of the human environment." NEPA § 102(2)(C), 42 U.S.C. § 4332(2)(C).

The standard for issuing an SEIS is set forth in 10 C.F.R. § 51.92: There must be either substantial changes in the proposed action that are relevant to environmental concerns, or significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. Petitioners proffered five bases in support of this contention, the following four of which are still at issue in this appeal.<sup>39</sup>

<sup>38</sup> See NUREG-0586, "Final Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities" (August 1988); Final Rule, "General Requirements for Decommissioning Nuclear Facilities," 53 Fed. Reg. 24,018 (June 27, 1988).

<sup>39</sup> In the basis that Petitioners did not raise on appeal, they relied on a Sandia National Laboratories report to argue that transportation of LLRW poses the risk of a transportation accident involving a long-duration high-temperature fire that melts the plastic resin and vaporizes the radioactive liquid contained within the ion exchange resin matrix that is mixed with the LLRW.

*a. Decommissioning Financing*

Petitioners claim that the GEIS failed to consider the environmental impacts of potentially inadequate decommissioning financing for prematurely shutdown reactors such as Yankee Rowe. The Board in LBP-96-2 rejected this basis, noting that the GEIS *did* in fact include a discussion of the problem of inadequate funding (*citing* GEIS at pp. 2-14 to 2-20). The Board also concluded that, under the guidance offered by the Commission regarding Contention C, Petitioners have not provided a sufficient basis to question the adequacy of funding for Yankee Rowe's decommissioning and therefore "have not provided any material factual or legal dispute regarding the need for additional discussion on this topic in an SEIS for Yankee Rowe." LBP-96-2, 43 NRC at 83-84.

The Board ruled correctly. The GEIS did in fact consider the situation of a plant being decommissioned prior to the full funding of its decommissioning account. GEIS at p. 2-15, ¶ 3:

The weakness of the sinking fund approach is that in the event of premature closing of a facility the decommissioning fund would be insufficient. Therefore the sinking fund would have to be supplemented by insurance or surety bonds, or letters or lines of credit or other guarantee methods.

Petitioners have pointed to no factors that were not already considered in the GEIS and that are peculiar to the Yankee Rowe facility (other than Petitioners' concerns about the Power Contracts, discussed and dismissed above). Finally, we reject Petitioners' argument on the same grounds as we rejected their Contention C (*see* pp. 258-67, *supra*).

*b. Occupational Dose Estimate*

According to Petitioners, the NRC Staff erroneously asserted in the EA that YAEC's occupational dose estimate is within the range that the GEIS evaluated and found acceptable. Petitioners argued to the Licensing Board that this claim is flawed because Staff failed to "scale" the acceptable dose level downward to reflect the small size of the Yankee Rowe plant (185 MWe) as compared to the size of the model plant considered in the GEIS (1175 MWe). According to Petitioners, the projected occupational doses for Yankee Rowe exceed the decommissioning doses that were anticipated for Yankee Rowe in an NRC study on which the GEIS relied.

In support of this basis, Petitioners proffered two arguments: They pointed out the discrepancies in YAEC's various occupational dose estimates (755,<sup>40</sup> 744,<sup>41</sup> and 350-400<sup>42</sup> person-rem), and they claimed that the EA erroneously compared YAEC's estimate of 755 person-rem with the GEIS's estimated dose level of 1215 person-rem for the DECON decommissioning of a generic 1175-MWe pressurized water reactor. According to Petitioners, Staff should have instead compared YAEC's estimate with the 513 person-rem estimate that had been calculated specifically for the decommissioning of Yankee Rowe in a 1979 NUREG document on which the GEIS relied.<sup>43</sup> Petitioners concluded that an SEIS is required to evaluate these previously unexamined impacts.

The Board rejected the first of Petitioners' two arguments on the grounds that the 350-400 person-rem estimate from June 1993 has been superseded by a more-recent (1995) estimate of 160 person-rem (FSAR at pp. 507-4 and 507-15) and that Petitioners have presented no evidence to show that this latter estimate is incorrect. Consequently, the Board reasoned, Petitioners have failed to establish any disputed material issue warranting further litigation. LBP-96-2, 43 NRC at 87.

The Board, in rejecting Petitioners' second argument, determined that the GEIS's assessment of the impacts of occupational exposure was based on a comparison of the impacts of exposure during decommissioning with the impact of exposure during operation of the facility and that the GEIS concluded that the former impacts were acceptable. The Board concluded that Petitioners had neither challenged the substance of the GEIS's conclusion in this regard nor attempted to show that such a comparison for Yankee Rowe would yield a different result. LBP-96-2, 43 NRC at 88.<sup>44</sup>

On appeal, Petitioners interpret the Board's response to their first argument as a finding that the difference between the 1993 dose estimate of 350-400 person-rem for the CRP and the decommissioning plan's more recent CRP estimate

<sup>40</sup> YAEC's December 14, 1994 estimation of the dose for the entire decommissioning process over the 10-year period of June 1993 to 2003. See EA at 22; Petition to Intervene at 32; Petitioners' Appeal Brief at 11; Licensee's Answer to Petition to Intervene, dated Dec. 18, 1995, at 25 n.74.

<sup>41</sup> YAEC's 1995 estimated dose for the entire decommissioning process. See FSAR at 507-3 to 507-4, 507-15 (Table 507.1); Petition to Intervene at 32; Petitioners' Reply to Licensee's and Staff's Responses to the Petition to Intervene, dated Dec. 24, 1995, at 18 n.41; Petitioners' Appeal Brief at 11.

<sup>42</sup> YAEC's June 1993 preliminary estimate of the dosage for the CRP during the project's expected two-year duration (1993-1995). Letter from J.K. Thayer, YAEC to M. Fairlie, NRC, at 2 (June 17, 1993). (It is unclear from the record whether the 350-400 person-rem figure was intended to estimate dose during only Phase I of the CRP project or during both Phases I and II.)

<sup>43</sup> Referring to NUREG/CR-0130, "Technology, Safety and Costs of Decommissioning a Reference Pressurized Water Reactor Power Station," Addendum at 2-4 (Table 2.1-2), Battelle Pacific Northwest Laboratory (Aug. 1979) (on which the GEIS relied, at p. 4-21, ref. 2) — Attachment 11 to Petition to Intervene.

<sup>44</sup> Regarding a related argument, the Board acknowledged Petitioners' argument that the use of annual dose is a scientifically invalid method of assessing environmental impacts. However, the Board concluded that the occupational exposure resulting from decommissioning will be far less than the exposure during facility operation — regardless of whether viewed in terms of annual dose or total dose. LBP-96-2, 43 NRC at 88 n.23.

of 160 person-rem is "inconsequential." Petitioners assert that "such a large discrepancy cannot be explained away by merely claiming to correct it." Appeal at 36. Petitioners also argue on appeal that "dose records submitted by YAEC and the NRC Staff for the CRP and YAEC's current activities show that, in fact, the radiation doses caused [by] YAEC's decommissioning activities thus far are far in excess of the doses represented in the decommissioning plan." According to Petitioners, these showings raise a sufficient factual and legal basis to justify admission of Contention E.

We fail to see the significance of Petitioners' cursory assertion that Staff and YAEC have proffered inconsistent representations about decommissioning dose levels. Petitioners on appeal fail both to identify the inconsistent representations about which they are concerned and to describe those concerns. See *Curators of the University of Missouri*, CLI-95-1, 41 NRC 71, 132 n.81 (1995); *Public Service Co. of Oklahoma* (Black Fox Station, Units 1 and 2), ALAB-573, 10 NRC 775, 786-87 (1979). We already have found the remainder of Petitioners' argument — that "new" dose information raises a question whether excessive occupational dose will be incurred at Yankee Rowe — worthy of further scrutiny by the Board. See pp. 254-55, *supra*. If Petitioners can substantiate that argument on remand, they are free to pursue it on NEPA, as well as ALARA, grounds.

Petitioners also challenge the Board's rejection of their "scaling" argument. They characterize the Board's decision as "appear[ing] to concede" the appropriateness of scaling but then finding that doses are acceptable because they fall within the range of doses experienced during plant operation. Petitioners respond that the actual decommissioning dose amount is unknown and that the record is filled with inconsistent representations by YAEC and the Staff. According to Petitioners, these factors undermine the Board's dismissal of Contention E. Appeal at 37 n.11.

We reject these arguments for two reasons. First, Petitioners' argument that Staff improperly failed to "scale down" the occupational dose estimates to reflect the smaller size (185 MWe) of the Yankee Rowe plant fails to take into account the reason why the GEIS found acceptable a 1215 person-rem total estimated dose for decommissioning a 1175-MWe pressurized water reactor. This acceptability was not based on dose per megawatt of capacity, as Petitioners apparently suppose, but was premised instead on the fact that the 1215 person-rem dose estimate compared favorably on an annual basis (279 person-rem/year for the 4-year DECON period in the case of the GEIS's reference 1175-MWe plant) with the annual occupational radiation doses (between 550 and 1101 person-rem) seen over the period 1974-1980 from *operation, maintenance, and refueling* of PWRs. See GEIS at p. 15-1. See also LBP-96-2, 43 NRC at 87 n.21.

Second, Petitioners have not alleged any facts supporting their assumption that size has any effect on the decommissioning dose estimates, nor have they shown why the dose from decommissioning a smaller power plant must be less than the dose from decommissioning a large plant in order to be acceptable. We see no necessary correlation between the size of a plant and the dose from decommissioning that plant. The decommissioning of a larger plant might even result in *less* dose than the decommissioning of a smaller plant, depending on such factors as the difference in the two plants' designs, operating practices, fuel failures, and contamination levels. Also, Petitioners admit that there is no specific language in the regulations or the GEIS that would support their position regarding scaling the dose to fit the size of the plant. Tr. at 61.

*c. Cask Droppage Accident*

Petitioners claim that the GEIS fails to consider the potential for an accident involving the dropping of a cask into the spent fuel pit.

The Board responded that this matter is most directly relevant to a possible future application from YAEC to change Yankee Rowe's Technical Specification 3.2 (which effectively precludes the Licensee from moving larger multipurpose canisters over the pool), that any agency action on such an application would have to be accompanied by an appropriate safety and environmental analysis, and that such an analysis would then be subject to challenge at an adjudicatory hearing. The Board concluded that Petitioners had failed to show that current rather than future analysis of such a change in the technical specification has any relevant impact on the approval of YAEC's decommissioning plan, and that Petitioners have therefore failed to demonstrate any violation of the Commission's NEPA responsibilities. LBP-96-2, 43 NRC at 90.

Petitioners respond in their appeal that the Commission has an obligation under NEPA to mitigate significant environmental impacts of proposed licensing actions; that the health and environmental impacts of decommissioning Yankee Rowe can be mitigated by selecting the SAFSTOR alternative; and that the cask drop accident scenario is relevant to any analysis of whether SAFSTOR must be employed as such a mitigating measure because the scenario relates to YAEC's claim that the benefits of speedy decommissioning under DECON outweigh any benefits under SAFSTOR.

Petitioners go on to argue that YAEC's assumption that it will be able to complete its decommissioning rests on the feasibility and cost-effectiveness of its plan to place spent fuel in dry casks for long-term storage, thereby enabling YAEC to close the spent fuel pit and obtain access to the as-yet-undecommissioned remainder of the plant. Petitioners conclude from this line of reasoning that, to compare DECON and SAFSTOR adequately under NEPA, the Commission must evaluate the risks and feasibility of the Licensee's proposal



to use dry cask storage — including the risk of a cask drop accident. Appeal at 38.

We reject Petitioners' arguments for two reasons. First, Petitioners fail to demonstrate that risks of exposure from a cask droppage accident (or even the use of casks) are affected by the Licensee's selection of DECON over SAFSTOR. Such an accident could occur under either of these decommissioning options. Second, we agree with the Board that the issue of the risk of a cask droppage accident is not now ripe, and will not be ripe unless and until YAEC seeks a license amendment to permit it to remove fuel from the spent fuel pit. YAEC at this point disclaims any decision to use dry storage casks.<sup>45</sup> As previously noted, if YAEC ultimately adopts the dry cask storage option, it will have to follow the proper licensing procedure.

*d. Improper Consideration of Early Site Release*

Petitioners point out that NEPA requires the agency to consider alternatives that could mitigate the adverse impacts of a proposed action, and that the Commission's implementing regulations require a draft EIS that includes an analysis that

considers and balances the environmental and other effects of the proposed action and the alternatives available for reducing or avoiding adverse environmental and other effects, as well as the environmental, economic, technical and other benefits of the proposed action.

10 C.F.R. § 51.71(d).

According to Petitioners, the GEIS's balancing of the advantages of DECON and SAFSTOR for plants in general fails to reflect the advantages of DECON and SAFSTOR for Yankee Rowe in particular. Petitioners refer back to their earlier contentions A(1) and B(2)(a) that the use of the DECON alternative will not result in an early release of the facility for unrestricted use. Petitioners estimate that Yankee Rowe's spent fuel will remain on site for at least 30 more years. They conclude that the consequent absence of any early release under DECON swings the balance in favor of SAFSTOR. According to Petitioners, this swing in the balance necessitates the preparation of an SEIS.

The Board rejected this basis on the ground that Petitioners have failed to satisfy the requirement of 10 C.F.R. § 51.92(a)(2) to show "significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." The Board pointed out that the GEIS already contains an analysis of the environmental impacts of the SAFSTOR

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<sup>45</sup> See p. 257 & note 16, *supra*.

option in the event that a longer storage period for HLRW becomes necessary.<sup>46</sup> The Board also noted that, although the argument is couched in terms of NEPA compliance, it is essentially just another challenge to the Licensee's choice of DECON instead of SAFSTOR. The Board concluded that such a challenge does not produce a litigable NEPA issue, absent a showing grounded in dose estimates or other information outside the analytical framework of the GEIS. LBP-96-2, 43 NRC at 91.

Petitioners in their appeal reiterate their argument that the GEIS approved both DECON and SAFSTOR because each option balanced the level of exposure with the speed with which the site would be released, but that this balance is inapplicable to Yankee Rowe. According to Petitioners, this is due to DOE's apparent inability to open a HLRW repository in the near future and the consequent need for YAEC to retain the spent fuel on site for at least 30 more years. Petitioners assert that such retention will preclude the early release of the site and thereby alters drastically DECON's expected "balance" of greater dose with early site release. Accordingly, argue Petitioners, an SEIS is necessary to examine both this change in balance and the health and environmental advantages of SAFSTOR. Appeal at 38-39.

Petitioners essentially construct their argument around the following syllogism: (1) the GEIS found DECON acceptable *only* because the site would be available for unrestricted use sooner rather than later; (2) a licensee must remove the spent fuel from the site before releasing a site for unrestricted use; (3) as YAEC does not propose, or cannot accomplish, an early removal of spent fuel, DECON is inappropriate as to the Yankee Rowe site. We find problems with both the first and second prong of this syllogism.

Regarding the first prong, the GEIS's approval of DECON was not premised solely on the early availability of the site. The first prong ignores the following other benefits of DECON cited in the GEIS:

- availability of a work force highly knowledgeable about the facility and the elimination of the need for long-term security, maintenance and surveillance of the facility which would be required for the other decommissioning activities. [GEIS at p. 2-9; *see also id.* at p. 2-11.]

<sup>46</sup> The Board relied specifically on the following discussion in the GEIS at p. 4-20:

Consideration was given to the situation where, at the end of the reactor operation life, it is not possible to dispose of waste offsite for a limited period of time, but not exceeding 100 years. Such a constraint needs to be accounted for in the decommissioning alternatives. Based on an analysis by [Battelle Pacific Northwest Laboratories] of the technology, safety and cost considerations on selection of decommissioning alternatives, it is concluded that SAFSTOR is an acceptably viable alternative. While DECON and conversion of the spent fuel pool to an independent spent fuel storage pool is certainly a possibility for the case where all other radioactive wastes can be removed offsite, there does not appear to be any significant safety difference between this alternative and SAFSTOR and the choice should be a licensee decision.

LBP-96-2, 43 NRC at 91.

- avoidance of regulatory uncertainty that would result from long-term retention of the site. [*Id.* at p. 2-11.]
- lower cost than SAFSTOR. [*Id.* at p. 4-17.]

Moreover, as already noted, the GEIS also focused on the fact that neither DECON nor SAFSTOR was expected to result in more than a minor fraction of the dose from a typical operating plant. NEPA does not require preparation of an EIS for governmental actions having such a minimal impact.

The second point of the syllogism is also flawed in that it erroneously treats the entire site as indivisible, assuming that if one square foot had enough residual activity to preclude its release to the public, then none of the site would be releasable. According to YAEC, the buildings on the Yankee Rowe site take up only 10 of the site's 2000 acres, and the spent fuel area takes up only about one-tenth of an acre. Petitioners have offered no reason why 1990 or 1999.9 acres should be essentially "held hostage" by the 10 or 0.1 acres with residual activity.<sup>47</sup>

In addition to their syllogistic argument, Petitioners also disagree with the Board's statement that the GEIS actually assessed the potential impact of longer-term onsite storage of spent fuel. Pointing to the statement in the GEIS that "consideration was given" to situations "where, at the end of the reactor operation life, it is not possible to dispose of waste offsite for a limited period of time, but not exceeding 100 years," Petitioners assert that "it is not at all clear what that 'consideration' amounted to." They similarly point to the use of the word "appear" in the GEIS's following statement:

While DECON and conversion of the spent fuel pool to an independent spent fuel storage pool is certainly a possibility for the case where all other radioactive wastes can be removed offsite, there does not appear to be any significant safety difference between this alternative and SAFSTOR and the choice should be a licensee decision.

They say that this passage reflects the "superficial[ity]" of the GEIS's conclusion that the difference between SAFSTOR and DECON under such circumstances is insignificant. Appeal at 39-40, *quoting* GEIS at p. 4-20. For these reasons, Petitioners claim that the Commission must take a hard look at environmental impacts that it had previously considered unlikely.

We cannot accept Petitioners' second argument. Regardless of their efforts to find "tentative" words in the GEIS's discussion of prolonged onsite storage of spent fuel, Petitioners cannot (and do not) gainsay the critical fact that the GEIS *does* address that very issue. Consequently, as the Board correctly

<sup>47</sup> The Commission recognizes that the 10-acre or 0.1-acre figures do not reflect the additional surrounding area needed for an exclusionary zone and that these two numbers are therefore slightly smaller than the unreleasable area(s).

pointed out, Petitioners have failed to demonstrate the necessary "significant *new circumstances or information* relevant to environmental concerns and bearing on the proposed action or its impacts." LBP-96-2, 43 NRC at 90 (emphasis added).

As we explained earlier in this opinion (at pp. 251-52), the Commission need not revisit in case-by-case litigation matters resolved generically in prior rulemakings, including NEPA matters. See *Kelley v. Selin*, 42 F.3d at 1519-20. If parties believe that the agency's prior generic review reached the wrong conclusions, the proper remedy is a petition for rulemaking, not a litigation contention challenging the basis for a Commission rule.

#### IV. CONCLUSION

For the reasons set forth above, the Commission grants in part and denies in part Petitioners' appeal, rejects YAEC's arguments regarding standing, and remands for the Board's further consideration the questions whether Petitioners' new dose argument satisfies the "late-filing" standards in 10 C.F.R. § 2.714(a) and whether it provides a sufficient basis for an ALARA or NEPA challenge to YAEC's choice of a decommissioning alternative. See pp. 254-55, 271-72, *supra*. If a final decision on remand cannot be reached by July 31, 1996, the Board shall establish a fresh expedited schedule and refer it to the Commission for approval.

It is so ORDERED.

For the Commission

JOHN C. HOYLE  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 18th day of June 1996.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman  
Dr. Charles N. Kelber  
Dr. Richard F. Foster

In the Matter of

Docket Nos. 030-05373-EA  
030-32163-EA  
(ASLBP No. 96-714-02-EA)  
(EA 96-085)  
(Order Suspending Byproduct  
Material License Nos.  
29-09814-01 and 29-09814-02)

EASTERN TESTING AND  
INSPECTION, INC.

June 11, 1996

Ruling on a joint request by Licensee Eastern Testing and Inspection, Inc., and the NRC Staff to approve an agreement settling this license suspension enforcement proceeding, the Licensing Board approves the parties' accord and dismisses the case.

**RULES OF PRACTICE: SETTLEMENT OF CONTESTED  
PROCEEDINGS**

As is true with court proceedings requiring judicial approval of settlements, *see, e.g., Evans v. Jeff D.*, 475 U.S. 717, 727 (1986); *Jeff D. v. Andrus*, 899 F.2d 753, 758 (9th Cir. 1989); *In re Warner Communications Sec. Litig.*, 798 F.2d 35, 37 (2d Cir. 1986), a presiding officer does not have the authority to revise the parties' settlement agreement without their consent. A presiding officer thus must accept or reject the settlement with the provisions proposed by the parties.



**ENFORCEMENT ACTIONS: SETTLEMENT OF CONTESTED PROCEEDINGS (LICENSING BOARD JURISDICTION)**

**LICENSING BOARDS: JURISDICTION (SETTLEMENT OF CONTESTED PROCEEDINGS)**

**RULES OF PRACTICE: SETTLEMENT OF CONTESTED PROCEEDINGS (LICENSING BOARD JURISDICTION)**

When the parties agree to settle an enforcement proceeding, the Licensing Board loses jurisdiction over the settlement agreement once the Board's approval under 10 C.F.R. § 2.203 becomes final agency action. See *Carolina Power and Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-80-12, 11 NRC 514, 517 (1980); *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-726, 17 NRC 755, 757-58 (1983). Thereafter, supervisory authority over such an agreement rests with the Commission.

**MEMORANDUM AND ORDER**

**(Approving Settlement Agreement and Dismissing Proceeding)**

Pending before the Board is a joint request by Licensee Eastern Testing and Inspection, Inc. (ETI), and the NRC Staff to approve an agreement settling this case. Because we find the settlement agreement consistent with the public interest, we approve their accord and terminate this cause.

At issue in this proceeding is the validity of a March 29, 1996 NRC Staff order that suspended, effective immediately, two byproduct material licenses held by ETI. See 61 Fed. Reg. 15,836 (1996). The suspended licenses authorized ETI to possess and use iridium-192 and cobalt-60 in a compatible radiographic exposure device for performing industrial radiography, and cesium-137 and americium-241 in specified portable gauges. In its March 1996 order, the Staff asserted that an immediately effective suspension was necessary because of problems identified during agency inspections and an NRC Office of Investigations investigation. Cited by Staff in support of the order were purported violations of NRC requirements, some categorized as deliberate, concerning matters such as training, records accuracy, and alleged Licensee threats against a former employee because of his cooperation with agency inquiries.

In filings dated April 1 and 16, 1996, in accordance with 10 C.F.R. § 2.202(b), (c)(2)(i), ETI both requested a hearing to contest the Staff's March 1996 order and challenged the Staff's determination to make the license suspensions immediately effective. After receiving responses from the Staff, on April 30, 1996, the Board held an oral argument concerning ETI's immediate effectiveness decision request. Thereafter, the Board denied ETI's motion, concluding that

the requisite "adequate evidence" existed for some of Staff's charges and its immediate effectiveness determination. See LBP-96-9, 43 NRC 211 (1996).

Following the April 30 oral argument, ETI and the Staff began settlement negotiations. To permit negotiations to continue, on May 22 and again on May 28, 1996, the parties requested, and subsequently were granted, extensions to file a Board-ordered joint prehearing report. On June 3, 1996, the parties submitted the joint motion now pending with the Board. After reviewing the proposed settlement agreement, on June 5, 1996, the Board held a telephone conference with counsel to discuss several points the Board felt needed clarifying. As a result of that conference, on June 6, 1996, the parties submitted a revised settlement agreement.

Under the terms of the revised settlement agreement, prior to resuming NRC-licensed activities ETI must (1) have Staff approve ETI's choice of an experienced, outside, independent auditor who will then be retained as ETI's Radiation Safety Officer (RSO), and (2) have the auditor/RSO make various certifications to the Staff concerning employee qualifications and training as well as the auditor/RSO's knowledge of applicable regulatory requirements and agency concerns relating to ETI's operations. The agreement also provides that the auditor/RSO has the authority and responsibility to stop unsafe work, make reports to the NRC regarding any concerns about safety or regulatory compliance and "whistleblower" harassment, and conduct ETI's training and radiographer certification program. In addition, the auditor/RSO is to plan and implement an audit program that will review and suggest improvements in various ETI headquarters and field activities, including training and radiographic operations. Although the various requirements in the agreement could remain in effect as long as the two ETI licenses are extant, the agreement provides that one year after Board approval of the agreement the NRC Region I Regional Administrator may grant any ETI request to rescind any of the agreement's provisions. Such rescission, which would require a showing of good cause, would be in the sole discretion of the Regional Administrator.

Pursuant to section 81 and subsections (b) and (c) of section 161 of the Atomic Energy Act of 1954, 42 U.S.C. §§ 2111, 2201(b), (c), and 10 C.F.R. § 2.203, we have reviewed the parties' revised joint settlement accord to determine whether approval of the revised agreement and termination of this proceeding is in the public interest. Based on that review, and according due weight to the position of the Staff, we have concluded that both actions are consonant with

the public interest.<sup>1</sup> Accordingly, we grant the parties' joint motion to approve the settlement agreement, as revised, and dismiss this proceeding.

For the foregoing reasons, it is, this eleventh day of June 1996, ORDERED that:

1. The June 3, 1996 joint motion of the parties is *granted* and we *approve* their June 6, 1996 "Settlement Agreement," which is attached to and incorporated by reference in this Memorandum and Order.

<sup>1</sup> During the June 5, 1996 telephone conference with the parties, the Board raised a concern about the portion of paragraph 13 of the settlement agreement that, as we have noted above, permits the Regional Administrator to rescind any provision of the agreement if, in the exercise of his discretion, he finds good cause for such a rescission. The Board suggested the provision be revised to provide for notice to the Commission of such a Staff action, preferably before it was taken. The Staff, however, declined to accept such a change, asserting the paragraph's language without any Commission notice provision was consistent with existing agency enforcement policy.

As is true with court proceedings requiring judicial approval of settlements, see, e.g., *Evans v. Jeff D.*, 475 U.S. 717, 727 (1986); *Jeff D. v. Andrus*, 899 F.2d 753, 758 (9th Cir. 1989); *In re Warner Communications Sec. Litig.*, 798 F.2d 35, 37 (2d Cir. 1986), a presiding officer does not have the authority to revise the parties' agreement without their consent. We thus must accept or reject the settlement with paragraph 13 as proposed by the parties. We are still concerned about paragraph 13; nonetheless, we have concluded that withholding our approval of the ETI/Staff settlement because of the Commission notice issue would not serve the best interests of the parties or the hearing process. When, as here, all the parties agree to settle an enforcement proceeding, the Board loses jurisdiction over their settlement agreement once its approval under 10 C.F.R. § 2.203 becomes final agency action. See *Carolina Power and Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLJ-80-12, 11 NRC 514, 517 (1980); *Philadelphia Electric Co.* (Lircsick Generating Station, Units 1 and 2), ALAB-726, 17 NRC 755, 757-58 (1983). The matter, therefore, ultimately involves a Commission choice about how it wishes to supervise party revisions to such agreements. We thus outline our concern below and leave it to the Commission to give the matter whatever consideration it deems appropriate during its sua sponte review of this decision.

When a judicial proceeding is concluded based on an agreement by the parties that is approved by the court, the parties generally are not entitled to vary the terms of that agreement without the court's approval. See *SEC v. Levine*, 881 F.2d 1165, 1180 (2d Cir. 1989). Paragraph 13 of the settlement agreement here contemplates that one of the parties will be able to rescind any part of (or arguably all of) the agreement after one year, but makes no specific provision for review of, or even notice to, the ultimate approving adjudicatory body — the Commission. As we understand the explanation provided during the June 5 telephone conference, the Staff believes that its authority to excise any portion of this agreement (or indeed any settlement agreement in an enforcement case, including a civil penalty proceeding) is part of its delegated authority to initiate and conduct enforcement proceedings generally. Further, the Staff asserts that a specific provision regarding notice or Commission consultation concerning any rescission is not necessary under the terms of the agency's general enforcement policy statement. That policy statement, which declares "[t]he Commission will be provided written notification of all enforcement actions involving civil penalties or orders," requires Commission consultation regarding Staff enforcement actions only in specified instances, 60 Fed. Reg. 34,381, 34,384 (1995), reprinted in Office of Enforcement, U.S. Nuclear Regulatory Commission, "General Statement of Policy and Procedures for NRC Enforcement Actions," NUREG-1600, at 6 (July 1995). As it was explained to us during the telephone conference, the only exception in this policy that apparently would be relevant to this settlement agreement is for "[a]ny action the [Executive Director for Operations (EDO)] believes warrants Commission involvement," *id.*, a provision that essentially makes Commission consultation a matter within the EDO's discretion. In addition, the Staff noted during the telephone conference that a recent enforcement proceeding settlement agreement containing a provision largely identical to paragraph 13 was approved by a Licensing Board, which approval became final agency action after Commission sua sponte review. See *Western Industrial X-Ray Inspection Co.*, LBP-95-22, 42 NRC 205, 212-13 (1995) (paragraph 5(k)).

This issue of Commission notification/consultation about changes to an adjudicatory hearing settlement is a significant question that neither the enforcement policy statement nor the *Western Industrial X-Ray Inspection Co.*

(Continued)

2. This proceeding is *dismissed*.<sup>2</sup>

THE ATOMIC SAFETY AND  
LICENSING BOARD

G. Paul Bollwerk, III, Chairman  
ADMINISTRATIVE JUDGE

Charles N. Kelber  
ADMINISTRATIVE JUDGE

Richard F. Foster  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
June 11, 1996

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case directly address. Under 10 C.F.R. § 2.203 and the sua sponte review provisions of 10 C.F.R. § 2.786, both the presiding officer and the Commission assess whether a settlement agreement proffered to end an enforcement order or civil penalty adjudication serves "the public interest." A later substantive change to the agreement at the instance of one or more of the parties could significantly impact those assessments. As the adjudicatory body with continuing supervisory authority over the settlement, the Commission arguably has an interest in ensuring that any settlement agreement change by the parties does not abrogate its judgment about what serves the "public interest." Whether the terms of this agreement are sufficient to protect that interest is a question the Commission may now wish to consider.

<sup>2</sup> Copies of this Memorandum and Order, without the attachment, have been sent this date to counsel for ETI by facsimile transmission and to Staff counsel by E-Mail transmission through the agency's wide area network.

## ATTACHMENT 1

### UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

#### BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

Docket No. 030-05373  
(License No. 29-09814-01)  
Docket No. 030-32163  
(License No. 29-09814-02)  
(EA No. 96-085)  
(Byproduct Material License  
Nos. 29-09814-01 & 29-09814-02)

EASTERN TESTING AND  
INSPECTION

June 6, 1996

## SETTLEMENT AGREEMENT

### INTRODUCTION

On March 29, 1996, the staff of the Nuclear Regulatory Commission (Staff) issued an Order Suspending Licenses (Effective Immediately) (Order) to Eastern Testing & Inspection, Inc. (Licensee or ETI). 61 Fed. Reg. 15836 (April 9, 1996). The Licensee is the holder of Byproduct Nuclear Material Licenses Nos. 29-09814-01 and 29-09814-02. Order at 1; 61 Fed. Reg. at 15836. License No. 29-09814-01 authorizes the possession and use of iridium-192 and cobalt-60 sealed radiography sources for use in a compatible radiographic source exposure device. License No. 29-09814-02 authorizes the use of americium-241 and cesium-137 sealed sources in portable gauging devices. The Order alleged numerous violations, including some deliberate violations of NRC requirements, which were identified as the result of NRC inspections and an investigation conducted by the NRC's Office of Investigations (OI). The Order provided that: (A) all NRC-licensed material in the Licensee's possession must be placed in locked storage; (B) all activities under the licenses must be suspended; (C) no NRC-licensed material may be received while the Order is in effect; and (D) all



records related to licensed activities must be maintained in their original form and not be removed or altered in any way. Order at 8-9, 61 Fed. Reg. at 15838.

By letter dated April 1, 1996, the Licensee requested that the immediate effectiveness of the order be set aside. On April 10, 1996, an Atomic Safety and Licensing Board was established to preside over the proceeding. *Eastern Testing and Inspection, Inc.; Establishment of Atomic Safety and Licensing Board*, 61 Fed. Reg. 16654 (April 16, 1996). On May 10, 1996, following oral argument, the Board denied the Licensee's request. "Memorandum and Order (Denying Licensee Motion to Set Aside Immediate Effectiveness)," LBP-96-9, May 10, 1996.

On April 16, 1996, the Licensee requested a hearing on the Order. "Eastern Testing and Inspection, Inc.'s Demand for a Hearing on Order Suspending Licenses." On May 2, 1996, the Licensee submitted its answer to the Order (Answer). "Eastern Testing and Inspection, Inc.'s Answer to Order Suspending Licenses (Effective Immediately)." In its Answer, the Licensee admitted certain of the allegations in the Order and denied the remainder. Specifically, the Licensee denied any deliberate misconduct by its President and Radiation Safety Officer (RSO) as alleged in the Order.

The Staff and the Licensee agree that it is in their respective interests and in the public interest to settle this enforcement action without further litigation and agree to the following terms and conditions:

1. Prior to resumption of NRC-licensed activities:

- a) In addition to implementing the corrective actions identified in its Answer dated May 2, 1996 to the March 29, 1996 Order, ETI agrees to submit to the NRC for approval, the name of an experienced outside independent auditor who also can qualify as the Corporate Radiation Safety Officer. The NRC staff will review and approve the auditor based on the auditor's qualifications. Upon NRC approval of the auditor, ETI will retain that individual.

- b) The auditor will (1) review the qualifications of all employees who perform NRC-licensed activities for ETI, (2) conduct or supervise any additional training needed, and (3) test, in the area of radiation safety, each employee who performs NRC-licensed activities to assure that the employee is qualified, consistent with the training provisions of 10 C.F.R. Part 34 and the license, to act as a radiographer, radiographer's assistant, or gauge operator. The auditor will certify to the NRC completion of this step before each individual may resume performance of NRC-licensed activities.

- c) The independent auditor will certify to the NRC that he or she has read and understands the concerns of the NRC expressed in the Order of March 29, 1996, the Inspection Reports issued April 22, 1996, the terms and conditions of this Settlement Agreement, the applicable NRC regulations, and ETI's license requirements, and understands that he or she may be held personally accountable

for any violations of NRC regulations or ETI licenses pursuant to 10 C.F.R. § 30.10.

2. The auditor will make findings and recommendations based upon his or her own discretion and professional judgment in any area of ETI licensed operations, including, but not limited to: ETI management oversight, procedures, radiographer training, testing, and qualifications, recordkeeping, field operations and audits.

3. The auditor has the authority and obligation under this Settlement Agreement to:

a) stop work on any operation that is unsafe or which either violates ETI's licenses, applicable NRC regulations, or the provisions of this Settlement Agreement;

b) make required reports to the NRC and report to NRC any concerns relating to safety or compliance with NRC requirements, ETI's licenses, or this Settlement Agreement, if ETI is not taking prompt and appropriate corrective action as required; and

c) report to the NRC any interference by ETI management or employees with his or her duties and obligations pursuant to this Settlement Agreement or the proper conduct of NRC-licensed activities by any ETI employee.

4. The auditor shall implement the following audit program:

a) *Phase One:* The auditor will submit an audit plan for NRC approval within 30 days of approval of this agreement by the Atomic Safety and Licensing Board, describing the audit scope and methodology, including but not limited to performing a check on equipment and storage practices, including radiation-production devices and monitoring devices, qualifications of staff, training, field audits of radiographers' performance, and reviewing selected ETI records to verify compliance with ETI's radiation safety program. Within 30 days of approval of the audit plan, the auditor will commence the audit. The auditor thereafter will prepare a report on these activities, which he or she will provide to the NRC Staff and to ETI in a timely manner, but within 30 days of the completion of the audit. Within 30 days of receipt of the auditor's report, or at some other mutually agreeable time, ETI will notify the NRC Staff in writing concerning the status of any corrective actions as a result of the auditor's findings, including an explanation of and justification for any recommendations by the auditor that will not be addressed in ETI's corrective actions.

b) *Phase Two:* Within three months after completion of Phase One activities and at quarterly intervals thereafter, the auditor will perform unannounced field audits of radiographic operations and each radiographer or radiographer's assistant, at various ETI job sites consistent with the NRC-approved audit plan. Within 30 days of completion of these audits, the auditor will report his or her findings to ETI and the NRC Staff. Within thirty days following receipt of the auditor's report, or at some other mutually agreeable time, ETI will notify the

NRC Staff in writing concerning the status of any corrective action as a result of the auditor's findings.

5. The auditor will act as the "Corporate Radiation Safety Officer," on NRC license 29-09814-01, with the following duties and obligations:

- a) be responsible, at all times, for the training, qualification, and testing of all individuals performing NRC-licensed activities, including, but not limited to, radiographers and radiographer's assistants;

- b) will certify to the NRC Staff that he or she has personally attended any and all training sessions and that the required subject matter was adequately covered, that any tests given at the training session were appropriately monitored and graded, that the individuals attending the training were present during the entire time of training, and that the individuals who attended the training were appropriately trained for his or her duties in accordance with NRC regulations and license requirements;

- c) will verify and certify to the NRC, on a quarterly basis, that all utilization logs are accurate and complete; and

- d) not take direction on any compliance issue or radiation safety matter from any officer or employee of ETI.

6. In addition to the Corporate Radiation Safety Officer, prior to the commencement of NRC-licensed activities, ETI will propose an assistant Radiation Safety Officer, who must also be approved by the NRC Staff. The assistant Radiation Safety Officer shall:

- a) be responsible for the day-to-day performance of the duties of a radiation safety officer as described in ETI's License No. 29-09814-01 procedures;

- b) have the authority to stop work on any operations that are unsafe and or which will violate ETI's licenses, NRC regulations, or this Settlement Agreement;

- c) report to the NRC any interference by ETI management or employees with his or her duties and obligations pursuant to this Settlement Agreement or the proper conduct of NRC-licensed activities by any ETI employee;

- d) report directly to the Corporate Radiation Safety Officer; and

- e) not take direction on any compliance issue or radiation safety matter from any supervisor at ETI other than the Corporate Radiation Safety Officer.

7. ETI also agrees to inform all employees, including radiographers and radiographer's assistants, of the terms and conditions of this Settlement Agreement, the terms and conditions of ETI's licenses, and the applicable NRC Regulations. ETI specifically agrees to inform, in writing, its employees of the requirements of 10 C.F.R. § 34.44, "Supervision of radiographer's assistants" and to require employees to certify that they have read these requirements and provide to the NRC Staff each employee's certification.

8. ETI agrees to ensure the cooperation of its officers and employees with the auditor, the Corporate Radiation Safety Officer, and the assistant Radiation

Safety Officer, and will provide these individuals upon request with access to records kept in the ordinary course of ETI's business and in accordance with NRC requirements.

9. To ensure his or her independence from ETI, the auditor will not be an employee of ETI and will have no financial interest in ETI. Except as provided in this Settlement Agreement, nothing in this Settlement Agreement will be construed to provide the auditor with any legal authority to bind ETI with respect to any matter relating to ETI's NRC-licensed activities, and further, the auditor will not represent ETI's interest to the NRC or other authority.

10. ETI will also propose and obtain approval of a new Radiation Safety Officer for License No. 29-09814-02 prior to conducting activities under that license. The new Radiation Safety Officer may be the same individual named on License No. 29-09814-01 as the assistant Radiation Safety Officer.

11. Upon the resumption of NRC-licensed activities, ETI will, at the start of each work week, provide, in writing, the NRC Region I Staff and the auditor, with its work schedule for the week. The notification shall include the name of the customer, the schedule of work hours and location of the work. If there are any changes to this schedule, ETI will make its best effort to inform NRC Region I staff and the auditor at least 24 hours in advance, if possible. These submissions may be made by facsimile. Notification to the NRC shall be made to Frank Costello, Region I, 610-337-5275; FAX: 610-337-5269.

12. ETI agrees that its President, Himat J. Soni and the current Radiation Safety Officer named on License No. 29-09814-01, Joseph Badiali, will not be involved in the supervision of NRC-licensed activities or ETI's radiation safety program. However, Messrs. Soni and Badiali may perform the duties of radiographer and supervise radiographers' assistants as part of those duties. In addition, Messrs. Soni and Badiali may be involved in other business activities of ETI, including marketing, record keeping and technical training exclusive of radiation safety.

13. For good cause shown, the Staff may, in writing, extend the time to complete any action set forth in any provision of this Settlement Agreement. No earlier than one year from the date this Settlement Agreement is approved by the Atomic Safety and Licensing Board, ETI may request that the NRC Regional Administrator, Region I, rescind any of the provisions of this Settlement Agreement upon a demonstration of good cause. The decision as to good cause is in the sole discretion of the NRC Regional Administrator, Region I.

14. The NRC Staff agrees to withdraw the Order dated March 29, 1996. ETI agrees that a failure on its part to comply with the terms of this Settlement Agreement will constitute a material breach of this Agreement, and that any such breach may result in the revocation or suspension of the license, effective immediately, if the NRC Staff, in its sole discretion, determines such action

to be appropriate, and may result in further enforcement or other action as the NRC Staff may determine, in its sole discretion, to be appropriate.

15. ETI agrees to withdraw its demand for a hearing dated April 16, 1996. The Staff expects that good faith implementation of this Settlement Agreement should resolve the concerns stated in the March 29, 1996 Order. Nothing in this Settlement Agreement precludes the NRC Staff from taking additional regulatory action if warranted. The Staff and ETI agree and understand that this Settlement Agreement is only binding on the NRC and ETI and only relates to NRC's March 29, 1996 Order. This Settlement Agreement shall not be relied upon by any person or other entity as proof or evidence of any of the matters set forth in the Order.

16. This Settlement Agreement shall be binding upon the legal representatives, successors and assigns of each of the parties hereto.

17. The Staff and ETI shall jointly move the Atomic Safety and Licensing Board designated in the above-captioned proceeding for an order approving this Settlement Agreement and terminating this proceeding.

In Witness Whereof, the parties have caused this Settlement Agreement to be executed by their authorized representatives.

FOR EASTERN TESTING AND INSPECTION      FOR THE NRC STAFF

Himat J. Soni  
President  
Eastern Testing and Inspection, Inc.

Marian L. Zobler

Richard G. Bachmann  
Counsel for NRC Staff

Daniel F. Stenger  
Robert E. Helfrich  
Counsel for Eastern Testing  
and Inspection, Inc.

Dated at Rockville, Maryland,  
this 6th day of June 1996.



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

James P. Gleason, Presiding Officer  
Jerry R. Kline, Special Assistant

In the Matter of

Docket No. 40-8027-MLA-3  
(ASLBP No. 94-700-04-MLA-3)  
(Source Materials License  
No. SUB-1010)

SEQUOYAH FUELS CORPORATION

June 21, 1996

In this Decision, the Presiding Officer finds that Intervenors fail to prove deficiencies in a management reorganization and sustains a Staff issuance of a license amendment for that purpose.

**INITIAL DECISION**  
(License Amendment Application)

This opinion concerns challenges to a materials license amendment application of the Sequoyah Fuels Corporation (SFC), a Nuclear Regulatory Commission (NRC) Licensee. Pursuant to NRC's regulations, the applicant is involved in the development of a decommissioning program at its facility in Gore, Oklahoma.

For reasons set forth below, the Presiding Officer finds no justification for determining that Licensee's proposed amendment should be disapproved.

## BACKGROUND

On May 6, 1994, the Licensee submitted an application for amending its materials license to effect administrative organizational changes. Allegedly, the changes are designed to reassign management responsibility for SFC's reduced and limited decommissioning activities. Native Americans for a Clean Environment and the Cherokee Nation (Intervenors) petitioned the NRC for a hearing which was granted under the agency's Subpart L informal hearing procedures.<sup>1</sup> The NRC Staff elected not to participate in the case, and as required by 10 C.F.R. § 2.1231, submitted a hearing file, with updates, of relevant documents in the proceeding.<sup>2</sup> The Licensee revised its amendment application on November 23, 1994, and March 3, 1995.<sup>3</sup> In several pleadings, Intervenors submitted a number of areas of concern of the proposed organizational changes, and the Presiding Officer recognized six as germane to the subject matter of the proceeding.<sup>4</sup> The Intervenors contend that these concerns or issues demonstrate that the proposed amendment is deficient in the following areas:

1. Management and supervision of contractors.
2. Oversight of reporting requirements on safety and environmental work.
3. Qualifications of health and environmental protection positions.
4. Description of critical safety and environmental functions.
5. Compliance with regulatory timing requirements in decommissioning.
6. Quality assurance program.

In addition to the issues above, Intervenors presented legal arguments that SFC has violated provisions of the Atomic Energy Act (Act) and NRC's regulations. It contends that these violations resulted from SFC implementing the changes requested in its license amendment application prior to filing the amendment itself.

## LEGAL STANDARDS

There are general rules applicable to informal adjudications under the Commission's Subpart L regulations. These regulations govern the procedure initiated by a request for a hearing in a proceeding for the grant, transfer, renewal, or amendment of a materials license subject to Parts 30, 32 through 35, 39, 40, or 70. See 10 C.F.R. § 2.1201(a).

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<sup>1</sup> Intervenors' Hearing, Request, July 19, 1994; Board Memorandum and Order, October 14, 1994 (unpublished).

<sup>2</sup> Letters, Hom to Gleason, September 6, 1994, November 10, 1994, and February 23, 1996.

<sup>3</sup> The changes in the November 23 submission were purportedly to incorporate revisions based on Staff comments (Letter, Ellis to Bernero) and on March 3 to consolidate additional SFC functions and responsibilities.

<sup>4</sup> Board Memoranda and Orders, October 14, 1994, and June 9, 1995 (unpublished).

Any person whose interest may be affected by a proceeding under Subpart L may file a request for hearing. 10 C.F.R. § 2.1205(a). However, a request for a hearing filed by a person other than the licensee must describe in detail "[t]he requester's areas of concern about the licensing activity that is the subject matter of the proceeding." 10 C.F.R. § 2.1205(d)(3). In ruling on a request for a hearing, the Presiding Officer "shall determine that the specified areas of concern are germane to the subject matter of the proceeding." 10 C.F.R. § 2.1205(g). The petition to intervene must be ruled upon, taking into account matters set forth in section 2.1205(g). 10 C.F.R. § 2.1205(j)(3). An order granting a request for a hearing or petition for leave to intervene may condition or limit participation in the interest of avoiding repetitive factual presentations and argument. 10 C.F.R. § 2.1205(m). The Presiding Officer has the duty to conduct a fair and impartial hearing according to law and has all powers necessary to regulate the course of the hearing and the conduct of the participants. 10 C.F.R. § 2.1209(a).

In the Order of October 14, 1994, which granted Intervenor's hearing request, and the Order of June 9, 1995, the Presiding Officer limited the scope of the hearing and specifically set forth the areas of concern which the parties subsequently supported or opposed in written presentations.<sup>5</sup>

On February 23 of this year, the Staff accepted the license amendment, and the organizational changes proposed by SFC were authorized. See Staff Letter updating file, February 23, 1996.

The relevant arguments in support of the parties' positions, and the decisions by the Presiding Officer with respect to them, are set forth below.<sup>6</sup>

## DISCUSSION<sup>7</sup>

### Management and Supervision of Contractors

Intervenor's contend that SFC's preliminary plan for completion of decommissioning (PPCD), as submitted to the NRC, reflects that private contractors would be utilized for major decommissioning projects. However, no information was presented in either the PPCD or the current amendment application on the nature of the work to be performed or the management systems required to provide information on contractor performance. A reduction in SFC personnel

<sup>5</sup> See Native Americans for a Clean Environment and Cherokee Nation's Brief (Intervenor's Brief) and Earl Testimony in Opposition to Sequoyah Fuels Corporation's License Amendment Application (Earl Testimony), and Sequoyah Fuels Corporation's Brief in Response to Intervenor's Brief (SFC Brief) and Ellis Affidavit.

<sup>6</sup> Intervenor's and SFC submitted motions for leave to file Reply Briefs and expert testimony. Although the testimony is frequently repetitive, in the interest of time, these motions are granted and, where cited, are referred to as Intervenor's or Earl Reply and SFC or Ellis Reply.

<sup>7</sup> The written briefs and responses contain numerous references to NRC inspection reports and reviews which, except as they relate to the operations of the current SFC management, are considered irrelevant to the issues of this proceeding.

and the magnitude of the work to be undertaken suggest, in Intervenor's view, that SFC will rely heavily on contractors in decommissioning. *See* Intervenor's Brief at 17; Earl Testimony at 29-32.

The Licensee responds that SFC is not relying extensively on contractors, with their use being limited to activities customarily performed at the facility, such as consulting, land surveying, well drilling, and fertilizer distribution. *See* SFC Brief at 18; Ellis Affidavit at 8, 14-15.

Intervenor's argue, in reply, that SFC provides no evidence that its management structure is adequate to supervise existing levels of contractors, let alone any increase, and that its PPCD provides illustrations of "weak" project planning capabilities, such as not providing a breakdown of contractor tasks, number of contractors required, and supervision information. They also contend that prior inspection reports show a lack of strong project planning efforts. *See* Earl Reply at 16-17.

### ***Decision***

SFC's application makes no reference to the utilization, supervision, or responsibilities of private contractors. *See* License Application, Hearing File. No judgment can be made on the basis of the facts in evidence that the amendment raises a deficiency at this point in SFC's decommissioning mode. The proposed amendment is intended to reassign basic responsibilities among a fewer number of employees for performing a diminishing number of activities pending the submission of the Licensee's final decommissioning completion plan. The allegations of Intervenor's concerning the responsibility of management in monitoring private contractor work at the site may be validated during future decommissioning operations at the facility. However, no conclusion may be reached now concerning such a happenstance. The Licensee has testified, without challenge, that the role of contractors at the present time is limited to routine activities. Not demonstrating a regulatory necessity for referencing the utilization of private contractors in SFC's ongoing work, the issue must be resolved in the Licensee's favor.

### **Oversight of Reporting Requirements on Safety and Environmental Work**

Intervenor's allege that, in the proposed amendment, SFC's Director of Regulatory Affairs assumes responsibility for the quality assurance (QA) function over the Health, Safety, and Environmental departments. This, it contends, presents a conflict of interest with the Director having audit duties over operations in departments he regularly supervises. *See* Earl Testimony at 50-51.

SFC answers that the Director of Regulatory Affairs has been responsible for the auditing function prior to the amendment under consideration. It contends that section 2.8 of the proposed changes protects against any conflict by having General Atomics (GA) perform audits of operations under the Director's jurisdiction. And to provide further protection against conflicts, the Director is authorized to provide additional audits by independent sources if needed. *See Ellis Affidavit at 22-23.* Intervenor's argue, in rebuttal, that a conflict is presented by the Director having authority to decide whether an audit will, in fact, take place and to determine the areas to be audited. *See Earl Reply at 27-28.*

### ***Decision***

The Licensee has instituted an audit procedure that insulates the Director, Regulatory Affairs, against conflicts by providing a periodic audit by GA with additional audits to be performed by outside sources as requested. It is evident that when such audits occur, they will not be performed by individuals supervised by the Director. That is the dividing line that immunizes against the type of conflict envisioned by the Intervenor's concern. No grounds exist here to justify disapproval of the license amendment.

### **Qualifications of Health and Environmental Protection Positions**

Intervenor's allege that a "high turnover" in SFC personnel and increased "reliance" on contractors calls for a premium to be placed on training requirements but that the position responsible for managing and certifying training, the Technical Training Coordinator, is being eliminated by the proposed amendment. Further, the sole duty of the Manager, Health and Safety, to whom training duties are being transferred, appears to be one of merely documenting that adequate training has been conducted. Additionally, Intervenor's claim, the Manager's predecessor had to have 3 years of experience in training and development but none is required of the Manager. *See Earl Testimony at 51-52.*

The Licensee avers that training requirements at its facility have been reduced with fewer staff on board and also simplified with fewer tasks, with training basically limited to radiation protection and industrial safety. On the question of experience, the Manager, Health and Safety, has helped develop the current training program — rated a "programmatic strength" by the NRC in 1994 — and conducted several training courses at the facility. Also, Licensee asserts, the Manager has a Masters degree in health physics with 8 years of industrial experience in the field. Finally, it notes, the training program is the Manager's responsibility, and his documentation of course completion is adequate certification that it has been conducted. *See Ellis Affidavit at 23-24.*



Intervenors contend that having fewer employees does not require less of a training effort and, although no obligation exists that a certificate of training completion be issued, SFC's license does require that the training be certified. See Earl Reply at 14-15, 28-29.

### ***Decision***

With respect to an alleged inappropriate reduction in the qualifications of these positions, the facts verify that the position of Training Coordinator has been abolished in the proposed license amendment and the responsibilities of that position transferred to the Manager, Health and Safety. It is uncontested that the incumbent of that position has an exceptional training background and has previously conducted training courses. We do not subscribe to the Intervenors' proposition that, even with substantially fewer employees, the same level of training resources are required, nor do we, in light of the limited activities to be performed, evaluate the training requirements to be imposed here as burdensome or complicated. Certainly, they are far less than the period when SFC was in an operating mode. Accordingly, it cannot be said on the basis of the evidence, that there is a deficiency in training requirements called for by the license amendment or that the Intervenors have successfully carried the argument on an inappropriate reduction in qualifications here. The Presiding Officer finds that the Licensee has carried its burden of proof on this issue.

### **Description of Critical Safety and Environmental Functions**

Intervenors allege that a number of safety and environmental functions have incomplete and unclear descriptions in the proposed amendment. These involve staff positions responsible for audits, a number of unlisted manager positions under the Director, Decontamination and Decommissioning (Director, D&D), unauthorized positions on the Plant Safety Review Committee (PRC), and designee to act as Chairman of that committee, and a Project Supervisor, a safety-related position, whose description, qualifications, and line of support are unspecified. The testimony cites Regulatory Guide 3.55, § 2.2, as requiring license applicants to describe minimum requirements for safety-related positions. See Intervenors' Brief at 15, 17-18; Earl Testimony at 52-56.

The Licensee claims that, in view of the limited nature of authorized decommissioning activities under the license, only the Director, D&D, is required to handle that position's responsibilities, and no plan is contemplated to employ additional managers. SFC states that the PRC is composed of senior facility managers with safety roles, but the President, who has overall responsibility for the plant's safe operation, is being provided the authority to

make additional assignments if assistance is required by the Committee. The license assigns authority to the President to fill safety-related positions. The word "designee" was added by the amendment to provide someone to fill the role of Chairman in the President's absence. And the Project Supervisor is a position carrying no safety responsibilities. *See Ellis Affidavit at 24-26.* Finally, SFC states that Regulatory Guide 3.55 is guidance only, and is written for operating facilities seeking license renewal.

Intervenors argue that the workload of the Director, D&D, is too heavy for a single person and the Licensee has failed to provide enough information regarding the responsibilities of that office and how its duties would be distributed among subordinates. Also, SFC provides no justification for the President's proposed authority to appoint additional members to the PRC even though they hold no safety-related position. Additionally, the current license does not permit the President to appoint some nonmember of the PRC to serve in his place as Chairman. And finally, it is stated that, since the SFC testimony lists for the first time the Chief Executive Officer as part of SFC's management organization, the responsibilities and relationship of that office to other positions should be described in the application. *See Earl Reply at 30-31; also, Ellis Affidavit at 5.*<sup>8</sup>

In reply, SFC states that the purpose for referring to the Chief Executive Officer was to identify the number of employees on SFC's payroll and not to indicate that the position has safety-related responsibilities, which it does not. By providing for a "designee" to be appointed to the PRC, the amendment was merely attempting to clarify the wording on the license, which is silent on who may serve as Chairman in the President's absence. The Licensee argues that the President, who is responsible for the overall safety of the plant, should have the authority to select additional members for the PRC as well as designate someone to act as Chairman in his absence. *See Ellis Affidavit at 6.*

### **Decision**

Intervenors' allegations challenging the description of critical safety and environmental functions embrace a number of assumptions, the validity of which has been vitiated by SFC's responses. No subordinate employees are intended to help carry out the responsibilities of the Director, D&D; the Chief Executive Officer position is not safety-related; the necessity of having someone preside as Chairman of the PRC in the President's absence requires some indication of that intention in the license; and finally, it cannot be successfully averred that the President of the corporation who carries ultimate responsibility for the safety

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<sup>8</sup>In several pages of Intervenors' Reply (at 15-18) and the Ellis Reply (at 7-9), arguments are made concerning Mr. Ellis' prior occupation and record at the Hanford Porex plant. The Presiding Officer does not believe that this matter is relevant to the issues delineated in this case and accordingly disregards the matter herein.

of the facility should be unable to make additional appointments whenever the PRC — which serves an important function — may need specialized assistance. The Licensee prevails on this issue.

### **Compliance with Regulatory Timing Requirements in Decommissioning**

Intervenors state that Commission rules require the submittal of the Licensee's final decommissioning plan by September 15, 1995, and, unless a schedule change is requested and approved, the completion of decommissioning within 2 years of approval of the decommissioning plan. The contention is that SFC neither requested nor had approved a decommissioning schedule extension. As a consequence, Licensee's proposed management and organizational structure will be inadequate to meet decommissioning deadlines and the schedule for completion of decommissioning will be delayed.

According to Intervenors, the Timeliness-in-Decommissioning Rule (10 C.F.R. § 40.42) injects considerations of time and efficiency into the agency's evaluation process. Except for NRC approval of SFC submitting its site characterization plan (SCP) late to conform to an Environmental Protection Agency (EPA) schedule date, the argument is that there has been no approval of any other time change in the decommissioning schedule. Intervenors argue that SFC is already 2 years behind the Timeliness-in-Decommissioning Rule date.

Related to this contention, Intervenors assert that an efficient and effective organization requires full-time directors and managers in key positions. However, SFC's application does not provide essential information for the assessment of time burdens imposed on key safety positions. Instead, it appears that SFC is assigning one of its most critical positions, Director, D&D, to part-time status.<sup>9</sup> Due to the large workload and responsibilities of that position, where four positions with substantial duties have been combined into one, it is inappropriate, in Intervenors' view, to treat that position as part-time. Its employment status, whether full- or part-time, should be set forth explicitly in the license application.

Intervenors also contend that substantial responsibilities of several other functions have been consolidated in the new position of Manager, Health and Safety. This, without apparent consideration of whether the workload can be handled in a timely manner. This position, among other duties, they assert, carries training program responsibilities, the effective performance of which is unclear due to the lack of demonstrated training experience. Consequently, Intervenors conclude, the Licensee's amendment fails to demonstrate that its

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<sup>9</sup> Letter, Axelrad to Curran, March 6, 1995.

proposed organization and management structure has the manpower resources to conduct its decommissioning timing responsibilities, and must be rejected. *See* Intervenor's Brief at 6-13; Earl Testimony at 12-29.

The Licensee argues that its decommissioning schedule is irrelevant in this proceeding but that SFC is operating with an NRC-approved schedule under the rule. It cites correspondence from the NRC as substantiating the approved schedule. *See* Ellis Affidavit, Attach. 8. The schedule, it claims, calls for the submission of the Plan for Completion of Decommissioning (PCD) 6 months after NRC approval of a site characterization report, or approximately late 1996. Stating that its proposed amendment deals with organization and not staffing levels, SFC contends that the only relevant questions are whether the proposed organizational structure satisfies NRC's regulatory requirements and whether managers performing safety-related functions are appropriately specified.

With respect to the near-term activities at the SFC facility, the Licensee alleges that management responsibility has been delegated to two officials and characterizes the activities for which they are responsible as "easily manageable" and "routine." It asserts further that contract support would be solicited if SFC's workload increases or additional expertise is required. Licensee concedes that the functions previously assigned to several individuals have been assigned to single persons but claims that the responsibility of SFC's President (Ellis) who also serves as Director, D&D, and that of the rest of the organization, will be reevaluated as part of the final PCD when the scope of its decommissioning effort and activities is fully determined. The Licensee argues that it would be irresponsible and inefficient for assignments that can be carried out on a part-time basis to be allocated for full-time assignments. In connection with Intervenor's comments on the Manager, Health and Safety, SFC states that the workload and training responsibilities of that office have been lessened as a result of the decrease in activities and personnel at the site. *See* SFC Reply at 8-14; Ellis Affidavit at 6-14.

Intervenor's concede that, in practical terms, NRC has permitted a delay in SFC's decommissioning scheduling by not timely approving a draft SCP. However, they assert that the delay in submitting a PCD must be judged against SFC's new proposed submittal date of late 1996. Further, they contend that SFC has not committed itself to complete decommissioning within 24 months of NRC's approval of the PCD, which violates the regulations in 10 C.F.R. §40.42(f)(4)(iv). Intervenor's assert that SFC plans a completion date of 2004, four years after the proposed approval date of the PCD.

With regard to the part-time positions issue, Intervenor's argue again that unless key positions are explicitly stated as full- or part-time, it is impossible to evaluate whether the proposed organization is capable of handling the workload associated with the regulatory requirements of 10 C.F.R. §40.41. *See* Intervenor's Reply at 9-11.



Licensee's Reply restates that, despite Intervenor's claim to the contrary, NRC has approved a change in its decommissioning schedule. The brief argues that no regulatory requirement exists on specifying full- versus part-time employment, but the performance of functions of safety-related positions by qualified individuals is required, and that satisfying such a requirement can only be confirmed by NRC inspections. See Licensee Reply Brief at 3-4; Ellis Reply Affidavit at 1-4, 5.

### **Decision**

The arguments alleging noncompliance with regulatory decommissioning timing requirements are confusing and seemingly disparate. Summarized, they can be stated as follows:

1. SFC has not had an NRC officially approved schedule extension change to complete decommissioning although the agency, in fact, endorsed a change by not timely approving an SFC draft SCP.
2. SFC violates 10 C.F.R. § 40.42(f)(4)(iv)<sup>10</sup> in its proposed deadline of 2004 for decommissioning completion as it has not obtained a schedule extension approval.
3. In order to comply with regulatory timing requirements for decommissioning and the protection of health and to minimize danger to life or property, it is essential for SFC to designate which of its positions are part-time. Its failure to do so makes it impossible to evaluate whether SFC's proposed organization can handle its work responsibilities to meet timing requirements.

Although the parties have a conflict on the current approved schedule for decommissioning, it is not clear how that schedule is relevant to the evaluation of a proposed amendment dealing with organizational changes. The issue of concern raised by the Intervenor and relevant to the subject matter of this proceeding is whether the Licensee's proposed organization violates regulatory requirements. The regulations cited by Intervenor (10 C.F.R. §§ 40.41 and 40.42(g)(4) and (h)) deal with the terms and conditions of materials licenses; the expiration and termination of those licenses; and the decommissioning of sites, buildings, and outdoor areas. Although provisions of section 40.42 are concerned with the submission and completion of decommissioning plans, it is silent with respect to questions concerning the capability of personnel to implement and complete decommissioning, the employment of full-time or part-time personnel, or requirements to maintain an organizational structure and staffing levels to meet specific time periods for completion of decommissioning. In connection with

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<sup>10</sup>The Presiding Officer believes that the correct citation here is section 40.42(g)(4) and (h).



decommissioning schedule deadlines, the regulations provide for changing timing schedules for the submittal and completion of decommissioning. A recent Staff status report reflects an agency determination that the submittal of the PCD will not occur prior to late 1997 rather than 1996.<sup>11</sup> Based on this information and the evidence submitted, no significant challenge has been raised to regulatory timing requirements concerning decommissioning, and this issue is accordingly ruled on in the Licensee's favor.

### **Quality Assurance Program**

Intervenors assert that an adequate and effective quality assurance (QA) program is jeopardized by the proposed license amendment at the Licensee's facility. It claims that the changes in SFC's operation will not ensure the safe handling of existing radioactive and toxic materials or avoid contaminating the environment. Through deleting a requirement for an internal audit function and assigning the primary QA function to SFC's parent organization, GA, Intervenors contend that the proposed application undermines the QA system's checks and balances and the comprehensiveness and independence of the program. Additionally, Intervenors assert that written procedures are not available that limit SFC's ability to conduct additional audits on an "as needed basis." The brief cites these changes as violating a "principle" from NRC's Timeliness-in-Decommissioning Rule (59 Fed. Reg. at 36,032) that QA programs governing operations equally apply to decommissioning. Intervenors contend that the technical precision required for preparing SFC's site characterization report and the ongoing work at the facility, although reduced in scope, calls for an adequate and effective QA program to ensure that employees are following health and safety requirements.

Basically, Intervenors assert that the independence of SFC's auditing processes is undermined by placing responsibility for the QA function with the Director, Regulatory Affairs, who has operating responsibilities, and GA, which has operational and conflicting responsibilities of its own. The elimination of internal audits dispenses, Intervenors contend, with a system of checks and balances for a review of GA's auditing work. Having GA perform its auditing function on a quarterly basis demonstrates a substantial downgrading of SFC's QA program. Finally, Intervenors argue that GA is engaged in another litigation involving the NRC and is attempting to distance itself from SFC in that proceeding. This creates a conflict with GA simultaneously having responsibility for

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<sup>11</sup> See Staff Response to Presiding Officer, May 7, 1996. In correspondence to the Presiding Officer on May 27, 1995(6), a representative of NACE, one of the two Intervenors in the proceeding, challenges the Staff's schedule information. No notice of appearance having been provided by that individual, the substance of that correspondence has not been considered herein.

auditing under the proposed SFC amendment. *See* Intervenor's Brief at 13-15; Earl Testimony at 32-50.

The Licensee asserts that, for QA purposes, no large quantities of radioactive or hazardous materials exist at the site, as Intervenor's contend, and even the emptying of the site's pools has been deferred until the final PCD is approved. Although SFC claims that there are no regulatory requirements or guidance on QA for a site in a decommissioning mode, nevertheless, the provision for GA and additional independent audits, if needed, meets the regulatory criteria of Regulatory Guide 3.55. The Guide merely provides guidance and calls for the performance of audits and inspections pursuant to a written plan by people not responsible for production activities. SFC contends that GA's audits satisfy this requirement, that SFC is implementing an effective QA program tailored to the company's ongoing activities, and that no inspector's reports have cited its QA program for any deficiencies.

In regard to the independence issue, the Licensee asserts that there is no regulatory requirement that internal and external audits must be conducted during decommissioning and the current level of activity at the site does not warrant an internal audit function. The audit function performed by GA under the license has been retained in the amendment and, again, GA has been directed to perform audits of areas and departments responsible and reporting to the Director of Regulatory Affairs. If additional audits are needed, the Director of Regulatory Affairs will arrange to have them performed by an independent auditor. Referring to a recent inspection report on August 9, 1995, the Licensee claims that the NRC Staff characterized the oversight of the SFC as evidenced by audits as adequate. SFC regards the argument questioning GA's independence within its own organization an irrelevant concern.

On the challenges asserted to comprehensiveness and downgrading of the QA program by quarterly audits, SFC contends that no necessity exists for GA to be available on a daily basis. SFC's other resources, it claims, routinely handle daily inspections. It states that an NRC 1994 inspection report cited the audit plan and audits at the site as appearing to be very comprehensive. Admitting that there had been some previous confusion regarding lines of reporting due to changes in personnel, the present functions and responsibilities, SFC contends, remain basically unchanged and all activities and responsibilities are assigned to SFC personnel who meet license qualifications. It states that the fact that GA is continuing the audit function that it holds in the current license evidences the fact that GA's position in another proceeding is unrelated to its audit responsibilities for the SFC.

The Licensee contends that the workload associated with audits and the QA function is not heavy for the limited activities currently taking place. It asserts further that the noncompletion of written procedures referred to by Intervenor's involved SFC in an operating mode, not its current decommissioning one. SFC

decided not to complete those procedures and has not been cited by the NRC for a failure or lack of appropriate procedures in its QA. SFC cites section 2.8 of the license application as requiring GA to audit the Director, Regulatory Affairs, and as also authorizing the Director to direct the performance of additional audits of functions under his responsibility. *See* SFC Brief at 14-16; Ellis Affidavit at 15-23.

Despite the lack of a regulatory requirement on audits, Intervenor contend that the Board ["Presiding Officer"] can impose conditions when health and safety protection concerns require it. Alleging that there still may be activities involving radioactive materials, Intervenor contend that the spotty operating history of SFC requires frequent QA oversight.

They allege that the EPA has imposed stringent QA requirements on SFC, and Intervenor find it difficult to understand, therefore, how the Licensee would not need internal audits. The Intervenor claim that GA's auditing role is not clearly outlined by the License amendment and insist that the Director of Regulatory Affairs has a conflict in being able to decide on additional audits over areas in which he has program responsibility. *See* Intervenor's Reply at 11-14; Earl Reply at 18-27.

In the Licensee's view, a quarterly audit program conducted by GA and backed by selected independent audits is sufficient for the current level of limited activities at SFC. The QA program is not being degraded and it satisfies EPA and NRC requirements. SFC argues that other proceedings that GA is involved in are irrelevant to this proceeding and no one has previously challenged GA handling the QA function under SFC's current license.

According to the Licensee, the Intervenor are seemingly confused and are mistaken in referring to SFC as discontinuing its internal QA program. Internal inspections, SFC states, are still being performed on quality control functions and only internal QA audits have been eliminated. NRC's inspection program has not identified any of the problems cited by Intervenor. Finally, the Licensee asserts that the authority of the Chairman, who has overall responsibility for the plant's safety, is not limited by the license from designating someone to serve in his place or to appoint additional members to the PRC. *See* Licensee Reply Brief at 5-6; Ellis Reply Affidavit at 4.

### **Decision**

Intervenor challenge the amendment application as undermining the checks and balances of the Licensee's QA program as well as its quality and independence. It argues that making GA's audit function the responsibility of the Director of Regulatory Affairs, who has operating supervisory authority, and eliminating internal audits presents a conflict of interest, dispenses with a check-

and-balance system, and removes any method of validating GA's auditing performance.

It cannot be demonstrated that a licensee in a decommissioning posture where its activities are greatly decreased requires the same level of resources as in an operating mode. That is the case here where unchallenged testimony shows an overall personnel reduction from 350 at the peak of SFC's operations to less than 30 currently.<sup>12</sup> As resources and activities decline, similarly will the QA effort to which it applies. Since GA has been performing its audit responsibilities while in a decommissioning stance and no one has produced evidence of current QA deficiencies being cited by NRC inspectors, it is impossible to conclude that SFC's QA audit procedure has any basic flaws at this point in time.

In view of its decreased activities, a successful challenge cannot be made that NRC has a requirement for an internal audit function at present. We need not debate the issue of a regulatory requirement for QA during decommissioning since the QA function, although lessened, is being performed here. No substantial challenge has been made to SFC's arrangement to have GA continue the QA function it has performed previously or the additional independent audits whenever needed to review GA's work or other activity. The fact that the authority to request such additional audits rests with a person who has authority over the areas to be audited does not, in and of itself, represent a conflict of interest. Nor is the independence of SFC's QA program threatened by the utilization of GA as an outside auditor. That company has been exercising the same responsibility for years without any regulatory challenge to its independent performance.

In light of the present level of activity, Licensee's QA effort appears at this stage as adequate. And lack of independence or conflict of interest cannot be successfully claimed where GA's QA work is deliberately interposed between the Director, Regulatory Affairs, and the departments supervised. Further, it cannot be maintained that the question of GA's independence within its own organization is relevant to this proceeding. If the Intervenor's argument that GA is trying to distance itself in another proceeding from SFC is correct, one can only conclude that a willingness to continue an audit function with the same company is an odd way to demonstrate that fact. It is difficult to understand how SFC's QA effort, at this limited stage of its decommissioning activity, can be reviewed as deficient. At a time when the PCP is forwarded for approval to the agency and the effort to dispose of contaminated materials is clarified, the QA program can be screened with more pertinency than it can under the present state of affairs. It should be noted that the Staff now requires SFC to review its staffing levels and qualifications whenever there is a change of activities at

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<sup>12</sup> Ellis Affidavit at 11.



the facility, and there is a requirement that such reviews will be made available. See Amendment of SFC License, Weber to Ellis (Feb. 21, 1996).

### *Legal Argument*

The Intervenor claim that section 103 of the Atomic Energy Act (Act) and 10 C.F.R. § 40.3 of the Commission's regulations control the issuances of licenses to conduct activities with radioactive materials. The Staff ordinarily issues requested licenses, but in this case, it is asserted "because a hearing was requested by the Intervenor, the authority to issue a license rests with the Licensing Board." Intervenor's Brief at 2-3. Intervenor cite 10 C.F.R. § 2.104(d)(3) as support for this proposition. *Id.* at 3.

Intervenor argue that NRC Staff inspectors, acting on behalf of the agency, acquiesced in the unilateral organizational changes made by SFC prior to obtaining licensing authority to do so. This violated section 189a of the Act and abrogated Intervenor's hearing rights. From this argument, Intervenor conclude, the Presiding Officer should decline to exercise his authority to consider a license amendment application as a "*fait accompli*." Instead, SFC's license application should be denied; the Presiding Officer should order SFC to restore the staffing and management organization as they existed prior to April 1993; and the Presiding Officer should refuse any further license amendments "implemented prior to receiving approval from the NRC Staff or the Board [*sic*], as appropriate." *Id.* at 5.

In its Reply Brief, SFC counters that Intervenor have relied upon the wrong provisions of both the AEA and NRC regulations. SFC claims that the provisions cited for support refer exclusively to the licensing of nuclear reactors and fuel reprocessing facilities. According to SFC, section 103 of the Act is not relevant to a source materials licensee "which is subject to NRC jurisdiction under Section 62 of the AEA (42 U.S.C. § 2092) and licensed under 10 C.F.R. Part 40." SFC Brief at 3. SFC argues that 10 C.F.R. § 2.104(d), upon which Intervenor rely, is applicable to production and utilization facilities under Part 50 and only to antitrust questions, neither of which is a concern in this proceeding. The Intervenor, SFC contends, ignore the provisions of 10 C.F.R. § 2.1205(l) where "the staff retains its authority to act upon the pending application notwithstanding the granting of Intervenor's hearing request." *Id.* at 4.

As to the substance of Intervenor's argument that many of the administrative changes requested by the Licensee's amendment request are already a *fait accompli*, SFC answers that all the individuals assigned to decommissioning responsibilities are fully qualified for those positions under the current SFC license, and therefore, SFC is meeting its regulatory responsibilities. SFC states that Intervenor have failed to identify any regulatory requirements concerning the assigning of more than one position to a single individual. *Id.* at 5. SFC



further argues that Intervenor's requests — that the Presiding Officer decline to consider the amendment application, that the application be denied, and that the staffing levels be returned to the April 1993 level — are, except for denying the application, beyond the scope of the Presiding Officer's authority. According to SFC, that authority is limited to the resolution of the admitted areas of concern in determining whether the pending application should be granted, denied, or conditioned. *Id.* at 6.

SFC also argues that Intervenor has not been denied their hearing rights under the AEA. It states that under the provisions of 10 C.F.R. Part 2, Subpart L, a hearing on a materials license can be held before or after the issuance of the license, depending upon the circumstances of the hearing request. SFC cites, for an example, if the *Federal Register* notice of a licensing action has not been published, a hearing on the issuance of a license or license amendment can be requested until the earlier of 30 days after the requester receives actual notice of the NRC action granting an application or 180 days after such action. *Id.* at 7, citing 10 C.F.R. § 2.1205(c)(2).

In their Reply Brief, Intervenor agrees that they inappropriately relied on section 103 of the AEA in their earlier written presentation. See Intervenor's Reply. However, they point to language in section 62, cited by SFC, that carries "even more explicit prohibition than § 103 against the conduct of unlicensed activities." *Id.* at 1. Again Intervenor argues that changes in the management structure at the SFC facility "in the absence of prior staff approval, required SFC to wait for the Board's ruling that the amendment was lawful and reasonable before it could implement the proposed license amendment." *Id.* at 3. Intervenor questions the validity of 10 C.F.R. § 2.1205(a)(1) under section 189(a) of the Act. Intervenor states that section 189(a)(2)(A) of the AEA (which clearly enunciates "construction and operating licenses") "applies to all licenses issued under Chapter 23 of the U.S. Code" and further presumes "all hearings on license amendments which are offered under § 189(a) of the AEA will be held prior to the issuance of the license amendment unless they are subject to a no significant hazards determination." *Id.* at 3-4. The Board has an interest in seeing that the integrity of its adjudicatory process is respected, Intervenor says, and in the absence of formal licensing approval from the NRC staff, SFC is required to wait for the Board's resolution of the pending hearing request before implementing those changes. *Id.* at 5. The Licensee's Reply alleges the inapplicability of the "no significant hazards" determination of section 189(a) to materials licensees.

### *Decision*

There are substantial flaws in Intervenor's legal arguments. Notwithstanding the Intervenor's beliefs, a Presiding Officer does not have the authority to issue a license or license amendment. That authority is solely the province of the Staff. The Presiding Officer's duty is to determine whether or not challenges to the license amendment application and the granting of the license by the Staff are against either statutory or regulatory law. In its Reply Brief, the Licensee has set forth the relevant provisions of the law and regulations governing materials licensing. Summarized and as they pertain to the matters raised by the Intervenor, they are:

1. The Presiding Officer is limited in this case to a determination that the license application be granted, denied, or conditioned. Declining to consider the present license application on the basis that it already has been implemented is a matter beyond the scope of his authority.
2. The regulations in Subpart L make clear that a hearing can be held before or after the issuance of a materials license. *See* 10 C.F.R. § 2.1205(c)(2).
3. None of the provisions of the Atomic Energy Act and NRC's regulations cited by Intervenor have been violated through the commencement of this license amendment proceeding.

It should be noted that the legal challenges to this proceeding have not been raised prior to the written presentation of Intervenor's case. In its request for hearing, the right to a hearing was based on the substance of the amendment and contesting "the adequacy of SFC's management organization to provide adequate protection of petitioners' health and safety. . . ." Although the basis of Intervenor's legal arguments have been considered, a determination could be made that such contentions are outside the scope of this proceeding. Procedural irregularities in the manner in which managerial and administrative changes have taken place prior to the granting of a license amendment, as alleged by Intervenor, are reachable by recourse to the provisions of 10 C.F.R. § 2.206. That procedure authorizes the questioning of Licensee activities through a petition to the NRC's Executive Director for Operations and the issuance of an enforcement order to have protested irregularities stopped.

In light of the foregoing, and based on the complete record of this proceeding, the Presiding Officer concludes that Intervenor has not demonstrated or proven any deficiencies in the Licensee's proposed amendment at this time.

### **ORDER**

On the basis of the presentations and evidence submitted, and in consideration of the opinions and conclusions set forth herein, it is ORDERED that

1. The issuance of an Amendment dated February 21, 1996, to Sequoyia Fuels Corporation Materials License SUB-1010 is sustained.

2. In accordance with 10 C.F.R. § 2.1251, this Initial Decision will constitute the final action of the Commission within thirty (30) days after the date of issuance, unless any party petitions for Commission review in accordance with 10 C.F.R. § 2.786, or the Commission takes review *sua sponte*. Any other party to the proceeding may file within ten (10) days after service of a petition for review, an answer supporting or opposing Commission review.

James P. Gleason, Presiding  
Officer  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
June 21, 1996.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

## OFFICE OF ENFORCEMENT

James Lieberman, Director

In the Matter of

Docket Nos. 50-528

50-529

50-530

ARIZONA PUBLIC SERVICE  
COMPANY(Palo Verde Nuclear Generating  
Station, Units 1, 2, and 3)

June 3, 1996

With the exception of granting the request that the Nuclear Regulatory Commission (NRC) take escalated enforcement action against the Licensee, Arizona Public Service (APS) Company, the Director of the Office of Enforcement denies the requests set forth in the petitions dated May 12, 1993 (as supplemented on May 28, 1993, October 26, 1993, and January 15, 1994), May 27, 1994 (as supplemented on July 8, 1994), and November 14, 1994, filed by Thomas J. Saporito, Jr., Florida Energy Consultants, and Linda Mitchell (Petitioners). The Petitioners requested that the NRC (1) initiate a proceeding pursuant to 10 C.F.R. § 2.202 to modify, suspend, or revoke the Palo Verde operating licenses; (2) initiate actions to immediately shut down Palo Verde; (3) issue escalated enforcement action against the Licensee and/or Licensee management personnel; (4) take immediate actions to survey Palo Verde employees to ascertain any chilling effect and discover any management actions effective in limiting the chilling effect; (5) issue a notice of violation to APS for continuing to employ The Atlantic Group (TAG) as a labor contractor at Palo Verde; (6) investigate alleged material false statements made by William F. Conway and require that he be relieved of his duties; (7) investigate comments about Mr. Saporito appearing in an APS letter dated August 10, 1993; (8) investigate the termination of Joseph Straub; (9) initiate a "chilling-effect letter" to APS regarding Mr. Straub's termination; (10) issue an order requiring APS to bring the

Palo Verde units to 0% power until APS can demonstrate that corrective actions have been taken to obviate any inference of a hostile work environment at Palo Verde; (11) issue a demand for information requesting specified information from APS concerning the work environment at Palo Verde and the effect that the employment of certain named individuals has on the work environment and why the NRC should have confidence that the named individuals will comply with NRC regulations; (12) take escalated enforcement action against TAG and any of its employees found to have engaged in wrongdoing; (13) require APS to provide Mr. Saporito a make-whole remedy for terminating him and failing to rehire him; and (14) require actions by APS to abate and obviate the chilling effect caused by the failure to provide employee protection for Mr. Saporito. The Director has reviewed the Petitioners' requests and concerns and concluded that the need for further action has not been substantiated. The reasons for the partial denial are fully set forth in the Director's Decision.

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

### **I. INTRODUCTION**

A petition was filed by Thomas J. Saporito, Jr. (Petitioner) in accordance with 10 C.F.R. § 2.206 on May 12, 1993. The petition requested that the NRC: (1) institute a show-cause proceeding pursuant to 10 C.F.R. § 2.202 to modify, suspend, or revoke Arizona Public Service (APS) Company's operating licenses for Palo Verde Nuclear Generating Station (Palo Verde); (2) initiate actions to shut down Palo Verde; (3) take escalated enforcement action against APS, including the issuance of civil penalties against APS and/or Licensee management personnel at Palo Verde; and (4) survey Palo Verde employees to gauge the chilling effect that may exist and whether the Licensee's actions were effective in limiting the chilling effect. On May 28, 1993, Petitioner forwarded a *New Times* article (May 26-June 1, 1993) to the NRC as a supplement to this petition.<sup>1</sup> On October 26, 1993, Petitioner supplemented the May 12, 1993 Petition to include a copy of an October 23, 1993 discrimination complaint filed by the Petitioner with the Department of Labor against APS and The Atlantic Group (TAG). In the October 26, 1993 supplement, Petitioner reiterated his earlier request for action and additionally requested escalated enforcement action against TAG and against any of its employees who are found to have engaged in wrongdoing.

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<sup>1</sup> This article contains accounts of whistleblower retaliation by the Licensee against plant workers at Palo Verde.



Another petition was filed by Petitioner on January 15, 1994. This petition, which has been treated as a supplement to the May 12, 1993 Petition: (1) reiterated the requests for escalated enforcement action against APS that were made in the May 12, 1993 Petition; (2) requested that APS be required to provide a make-whole remedy for Petitioner for terminating Petitioner and failing to rehire him as a result of Petitioner's engaging in protected activities; and (3) requested that APS be required to abate and obviate the chilling effect at APS arising from the failure to provide the Petitioner with employee protections afforded under 10 C.F.R. § 50.7.

As the bases for the May 12, 1993 request, Petitioner asserted that: (1) a Department of Labor (DOL) Administrative Law Judge (ALJ) ruled that APS discriminated against Petitioner (ERA Case No. 92-ERA-030);<sup>2</sup> (2) the DOL case is evidence that "the Licensee appears to have violated numerous NRC requirements regarding operation of the Palo Verde nuclear station; and (3) Licensee managers have made questionable if not false statements to the NRC regarding the emergency lighting at Palo Verde. Petitioner's October 26, 1993 supplement to the original petition bases the request for action on Petitioner's October 23, 1993 complaint filed with DOL and the ruling in favor of Ms. Sarah C. Thomas against APS. Petitioner's January 15, 1994 supplement to the original petition bases the request for action on the admission by one of the witnesses at the Petitioner's DOL hearing that the witness lied under oath, as evidence of APS' intent to discriminate against Petitioner and that the discriminatory treatment of Petitioner has caused a chilling effect on other employees at Palo Verde.

Another petition was filed by Petitioner and Florida Energy Consultants (Petitioners) on May 27, 1994. This petition (1) reiterated the request for a show-cause proceeding, and further requested that the NRC: (2) issue a notice of violation against the Licensee for continuing to employ TAG as a labor contractor at Palo Verde; (3) investigate alleged material false statements made by William F. Conway, Executive Vice President at Palo Verde, during his testimony at Petitioner's DOL hearing (ERA Case No. 92-ERA-030) and that, in the interim, the NRC require that Mr. Conway be relieved of any authority over operations at Palo Verde; (4) investigate the Licensee's statements regarding Petitioner Saporito in an August 10, 1993 letter from Mr. Conway to NRC Administrator, Mr. Bobby H. Faulkenberry, in which the Licensee said that Mr. Saporito gave materially false, inaccurate, and incomplete information on his application for unescorted access to Palo Verde so that, as a result of that event, Petitioner Saporito lacks trustworthiness and reliability for access to Palo Verde; (5) investigate the circumstances surrounding the February 1994 termination of

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<sup>2</sup> *Saporito v. Arizona Public Service Co.*, 92-ERA-030 (Recommended Decision and Order of May 10, 1993).

Licensee employee Joseph Straub, a former radiation protection technician at Palo Verde, to determine if his employment was illegally terminated by the Licensee for having engaged in "protected activity" during the course of his employment; (6) require that the Licensee respond to a "chilling-effect" letter regarding the circumstances surrounding Mr. Straub's termination from Palo Verde and whether any measures were taken to ensure that his termination did not cause a chilling effect at Palo Verde; and (7) initiate appropriate actions to require the Licensee to immediately conduct eddy-current testing on all steam generators at Palo Verde, because the steam generator tubes were recently subjected to cracking.

As the bases for these requests, Petitioners asserted that: (1) a show-cause proceeding is necessary because the public health and safety concerns that are alleged are significant and to permit public participation to provide NRC with new and relevant information; (2) past practices of TAG demonstrate that employees of TAG were retaliated against for having raised safety concerns while employed at Palo Verde; (3) citations to testimony from transcripts and numerous newspaper articles (appended as exhibits to the petition), demonstrate that Mr. Conway's testimony is not credible; (4) statements in the August 10, 1993 letter are inaccurate and materially false and characterize Mr. Saporito as an individual lacking trustworthiness and reliability for access to Palo Verde, so that such negative characterizations have blacklisted him from continued employment in the nuclear industry, which is all in retaliation for his raising safety concerns about operations at Palo Verde, and thus, Petitioners ask that these statements be rescinded; (5) an investigation into the termination of Mr. Straub is warranted in view of the fact that the Licensee has engaged in similar illegal conduct in the past where the NRC has required the Licensee to pay fines; (6) Mr. Straub is entitled to reinstatement with pay and benefits pending the NRC's investigation into his termination to offset any chilling effect his termination had on the Palo Verde workforce; and (7) in addition to cooling tower problems, the stress corrosion and cracking in the steam generators is a recurring problem of which the Licensee is aware and which the Licensee has failed to properly correct, so that the NRC should be concerned about proper maintenance of safety systems and equipment there.

Immediate action with respect to item 7 of the May 27, 1994 Petition, regarding eddy-current testing of the steam generators, was denied by William T. Russell, Director, Office of Nuclear Reactor Regulation, in a letter to the Petitioners dated July 26, 1994. The nonimmediate portion of the request is being addressed in a separate Director's Decision by Mr. Russell, and the issue will not be discussed further here.

On July 8, 1994, Petitioners filed a supplement to the May 27, 1994 Petition raising additional issues concerning technical matters unrelated to the issues addressed in this Decision. The requests filed in this July 8, 1994 supplement

are being addressed in the above-noted Director's Decision by Mr. Russell and will not be addressed here.

Another petition was filed by Thomas J. Saporito, Jr., Florida Energy Consultants, and Linda Mitchell (Petitioners) on November 14, 1994. The petition requested that NRC: (1) issue a confirmatory order requiring APS to reduce power at all Palo Verde units to 0% until APS can demonstrate corrective actions for the alleged hostile work environment at Palo Verde; (2) issue a demand for information to APS asking (a) why NRC should have confidence that APS can operate Palo Verde in an environment free of harassment, intimidation, and discrimination; (b) about the current duties and responsibilities of certain listed employees, including whether any of those employees is currently involved in NRC-licensed activities; (c) why the Commission should have confidence that these employees will comply with NRC requirements; and (d) why the NRC should not take action to prohibit the involvement of these employees in NRC-licensed activities.

As the bases for these requests, Petitioners assert that: (1) DOL found that Sarah Thomas was discriminated against by APS; (2) DOL found that Linda Mitchell was discriminated against by APS; (3) DOL found that Thomas J. Saporito, Jr., was discriminated against by APS; (4) these matters could have been settled before adjudication by DOL; (5) other recent DOL complaints by Straub and Irick are indicators that discrimination is the normal course of business at Palo Verde; (6) Petitioner Linda Mitchell lives within 2 air miles of Palo Verde and, therefore, has standing to intervene in a hearing before an NRC Atomic Safety and Licensing Board (Board); (7) Petitioners Saporito and Florida Energy Consultants have the requisite standing to intervene in a hearing before a Licensing Board through Ms. Mitchell; (8) Petitioners are subject to physical harm and loss of personal property in the event of a nuclear accident at Palo Verde as a direct or indirect result of the hostile work environment fostered at Palo Verde; and (9) a hostile work environment exists and is pervasive at Palo Verde and is condoned and fostered by Licensee management.

## II. DISCUSSION

Due to the numerous requests and interrelated nature of the issues raised and the bases provided by Petitioners, the items raised in each of the petitions and their supplements described above have been considered together and are described in one composite list below. The discussion that follows the list is keyed to the numbers used to identify each request. The petitions and supplements noted above request that the NRC:

1. Initiate a show-cause proceeding pursuant to section 2.202 to modify, suspend, or revoke APS' licenses to operate Palo Verde (May 12, 1993 Petition, request 1; May 27, 1994 Petition, request 1).
2. Initiate actions to cause the immediate shutdown of the Palo Verde reactors (May 12, 1993 Petition, request 2).
3. Issue escalated enforcement action against Licensee and/or Licensee management personnel at Palo Verde directly or indirectly responsible for the safe and proper operation of Palo Verde (May 12, 1993 Petition, request 3) and issue escalated enforcement action against APS for discrimination against Petitioner Saporito, including providing a make-whole remedy for the Petitioner (January 15, 1994 Supplement to May 12, 1993 Petition, requests 1 and 2).
4. Take immediate actions to cause an exhaustive survey of employees at Palo Verde to ascertain the scope and breadth of any chilling effect and to discover what management actions were effective in limiting the chilling effect (May 12, 1993 Petition, request 4), and require actions by APS to abate and obviate the chilling effect caused by the failure to provide employee protections for Petitioner Saporito (January 15, 1994 Supplement to May 12, 1993 Petition, request 3).
5. Issue a Notice of Violation to APS for continuing to employ TAG as a labor contractor at Palo Verde (May 27, 1994 Petition, request 2) and issue escalated enforcement action against TAG for discrimination against Petitioner Saporito (October 26, 1993 Supplement to May 12, 1993 Petition).
6. Investigate alleged material false statements made by William F. Conway during his testimony at the hearing for DOL Case No. 92-ERA-030 and, in the interim, require that he be relieved of his duties (May 27, 1994 Petition, request 3).
7. Investigate the comments made in a footnote of APS' August 10, 1993 Letter to the NRC (May 27, 1994 Petition, request 4).
8. Investigate the circumstances surrounding the termination of Joseph Straub by APS to determine if the termination was illegal (May 27, 1994 Petition, request 5).
9. Initiate a "chilling-effect letter" to APS requesting APS to respond regarding Mr. Straub's termination and to describe what measures were taken by APS to ensure that Mr. Straub's termination did not cause a chilling effect at Palo Verde (May 27, 1994 Petition, request 6).
10. Issue a confirmatory order requiring APS to bring all Palo Verde units to 0% power until such time as the Licensee can demonstrate corrective actions to obviate any inference of a hostile work environment at Palo Verde (November 14, 1994 Petition, request 1).

11. Issue a demand for information requesting that APS:
  - a. explain why NRC can have confidence that the environment at Palo Verde is free of harassment, intimidation, and discrimination, both in general and with respect to certain individuals.
  - b. describe the current employment duties and responsibilities of certain named Licensee employees, including whether any of those employees is now involved in NRC-licensed or -regulated activities.
  - c. explain why NRC can have confidence that the named employees will comply with NRC requirements
  - d. provide information as to why the Commission should not prohibit the named employees from involvement in NRC-licensed activities.

(November 14, 1994 Petition, request 2).

**Requests for Action for Discrimination Against  
Petitioner Saporito — Items 3 and 5**

With respect to the portion of item 3 that requests enforcement action against APS, Petitioner has based the request for civil penalties against APS and/or its managers on violations of section 50.7 for denying Petitioner Saporito employment at Palo Verde Unit 1 in 1992 based on his earlier involvement in protected activities at Palo Verde. In fact, in a letter to NRC, dated August 10, 1993, APS stated that following a hearing before a DOL ALJ concerning whether APS had violated section 210 (now section 211) of the Energy Reorganization Act of 1974 (ERA) in denying the Petitioner employment at Palo Verde (DOL Case No. 92-ERA-030), an APS supervisor admitted that he discriminated against the Petitioner in denying him employment at Palo Verde and falsely testified in the ALJ proceeding. The NRC Office of Investigations conducted an investigation into the matter and concluded that the APS supervisor discriminated against the Petitioner (OI 5-93-023R). OI referred its findings to the Department of Justice (DOJ) for criminal prosecution. DOJ pursued and obtained a criminal conviction of the APS supervisor for discrimination in this case. On March 7, 1996, the NRC issued a civil penalty in the amount of \$100,000 to APS (EA 93-159) and a Notice of Violation to the APS supervisor (IA 96-015) involved in the violation of section 50.7 for failure to hire Petitioner due to his earlier involvement in protected activities. Therefore, Petitioner's request in item 3 for enforcement action has been granted.

With respect to the portion of item 3 that requests a make-whole remedy for Petitioner, section 210 (now 211) of the ERA gives the Department of Labor the authority to effect remedies for the complainant. The NRC has no such authority. Therefore, this portion of the request in item 3 is denied.



Item 5 requests escalated enforcement action against TAG for TAG's alleged discrimination against Petitioner Saporito and further requests that a Notice of Violation be issued against APS for continuing to employ TAG as a contractor at Palo Verde. Petitioners based this request for enforcement action against TAG on its alleged discrimination against Petitioner Saporito and based the request for enforcement action against APS on the fact that past practices by TAG demonstrate that employees of TAG were retaliated against for having raised safety concerns while employed by TAG at Palo Verde.

Of the five complaints filed with the DOL against TAG for alleged violations of employee protection requirements at Palo Verde, four were filed by Petitioner Saporito and were ultimately settled without the DOL finding any discrimination.<sup>3</sup> On January 14, 1994, the NRC's Office of Investigations (OI) initiated an investigation of multiple allegations of Petitioner Saporito that TAG had discriminated against Petitioner by refusing to hire him for additional employment and "blacklisting" him and that a TAG employee lied in testimony in a DOL hearing. Following its investigation, OI issued a report on November 8, 1995 (OI Case No. 2-94-003) in which it found that these allegations were not substantiated. Accordingly, Petitioners' allegations of discrimination, "blacklisting," and false testimony by TAG with regard to Petitioner Saporito do not appear to have merit and do not provide a basis for the NRC action against APS and TAG that Petitioners request.

The complaint filed by another TAG employee involved a claim that TAG violated its internal policy when a TAG supervisor divulged derogatory information about the complainant to a prospective employer. The DOL ALJ concluded that discrimination occurred in that case (DOL Case No. 94-ERA-009) and the NRC issued a Notice of Violation to TAG on January 8, 1996, for a Severity Level III violation (EA 95-192).

While disputing the violation, TAG's February 6, 1996 response advised the NRC that it was going to comply with the Secretary of Labor's order requiring TAG to pay compensatory damages and attorney's fees. The response also described the corrective steps taken by TAG, including: (1) the requirement for a signed release from an employee before any information about his/her personnel file can be given out; (2) a new limitation on types of personnel information that can be given out; (3) training of company employees on the requirements of section 211 of the Energy Reorganization Act; (4) training of supervisors to emphasize the right and obligation of employees to maintain an environment in which employees are encouraged to raise safety concerns;

<sup>3</sup> The DOL Area Director specifically found no discrimination in two of the complaints (DOL Case Nos. 93-ERA-045 and 93-ERA-026) but the DOL had not yet ruled on the other two complaints (consolidated in DOL Case No. 94-ERA-029) before the settlement of all complaints with respect to the Petitioner and TAG resulted in the dismissal of the complaints. Case No. 94-ERA-029 included the October 23, 1993 complaint that the Petitioner submitted with his October 26, 1993 supplement to the May 12, 1993 Petition.

(5) specific training for the supervisor involved in the case; (6) additional correspondence from the President of TAG to its employees reminding them of the company's commitment to a proper work environment; and (7) the hiring of an individual as TAG's Manager of Quality Assurance who had won a section 211 whistleblower complaint against another employer. The Staff has concluded that Petitioners have failed to provide information that would show that TAG retaliated against its employees and that, with regard to the one violation of employee protection requirements that was substantiated against TAG, considerable improvement and corrective actions have been implemented by TAG. Moreover, it is not a violation to utilize a contractor that has been involved in past violations. In short, there is no basis to justify further action against TAG at this time and no basis to take action against APS for employing TAG.<sup>4</sup> Petitioners' request for additional enforcement action beyond that described above is, therefore, denied.

#### **Requests for Action for Discrimination Against Joseph Straub — Item 8**

With respect to item 8, which concerns the Petitioners' request for an investigation of the circumstances concerning the termination of Joseph R. Straub by APS, I note that of the two complaints filed by Mr. Straub with the DOL concerning his termination by APS, the DOL ALJ dismissed Case No. 95-ERA-010<sup>5</sup> on February 23, 1995 without action, finding that its issues were inextricably intertwined with those of Case No. 94-ERA-037 and, in 94-ERA-037, the ALJ concluded on October 6, 1995, that Mr. Straub had not established a prima facie case of discrimination.<sup>6</sup> In fact, the DOL ALJ found that Mr. Straub was not credible in his assertions of discrimination or the presence of a hostile work environment at Palo Verde. The ALJ recommended that the complaint be dismissed and, in an order issued on April 15, 1996, the Secretary of Labor concurred, dismissing Mr. Straub's complaint. Considering the Secretary of Labor's finding regarding Mr. Straub's complaints, and the fact that there has not been any other evidence of discrimination presented by the Petitioner that would establish that Mr. Straub was the subject of discrimination, an investigation into Mr. Straub's claims of discrimination is not warranted and, therefore, the request is denied.

<sup>4</sup> In fact, at the time of the initial identification of a potential violation in TAG's divulging derogatory information about the Petitioner, APS itself issued its own "chilling-effects letter" to TAG, demanding that TAG take action to correct the problem and preclude such problems in the future. This was appropriate action by APS to make it clear to its contractor that potentially discriminatory acts are unacceptable.

<sup>5</sup> See *Straub v. Arizona Public Service Co.*, 95-ERA-010 (Recommended Decision and Order of Dismissal, Feb. 23, 1995).

<sup>6</sup> See *Straub v. Arizona Public Service Co.*, 94-ERA-037 (Recommended Decision and Order, Oct. 6, 1995).

**Requests for Action to Address Resulting Chilling  
Effect — Items 4, 9, and 11**

Items 4 (a request that NRC survey Palo Verde employees and require actions by APS to abate the alleged chilling effect) and 11 (a request that NRC issue a Demand for Information to APS) relate to the Petitioner's assertions about the work environment at Palo Verde, the chilling effect that might exist at Palo Verde, and whether the NRC should have confidence that certain named Licensee employees will comply with the NRC regulations. In a letter dated April 21, 1994, APS described the corrective actions it has taken with respect to the violation discussed in the response to item 3 above to avoid future violations. These actions included: (1) retention of a consultant service to perform an independent assessment of employee attitudes and evaluate the factors that impede or encourage employees to raise concerns; (2) retention of another consultant to evaluate the effectiveness of APS' programs for handling employee concerns; (3) corporate and management changes that place a high priority on building a culture in which managers are measured, in part, on human interaction skills and effective employee-management relations; (4) development of the Management Issues Tracking Resolution program, a formal mechanism for raising and tracking management-related concerns which provides timely feedback to employees, timely resolution of the concern, and an appeal process; and (5) reduction and elimination of the backlog of existing "significant" concerns.

In a letter dated January 11, 1996, APS described additional actions, including: (1) initiation of the Integrated Palo Verde Management/Issues Tracking and Resolution Process, which allows employees to raise personal or technical concerns either formally or informally; (2) issuance of a memorandum to emphasize that resolution of issues is a top priority; (3) changing the reporting structure so that the Employees Concerns Program reports to the Vice President, Nuclear Support; (4) issuance of a letter to all employees to emphasize the importance of open communications; (5) issuance of a memorandum to all contractors informing them of the Integrated Palo Verde Management/Issues Tracking and Resolution Process; (6) a letter to TAG requesting that TAG inform APS of the actions it has taken to foster an open and positive work environment, followed up by a similar letter to 170 companies that work for APS; and (7) a commitment to the NRC to conduct yearly audits of the Integrated Palo Verde Management/Issues Tracking and Resolution Process. In addition, in a June 30, 1995 response to a letter from APS regarding EA 95-192, TAG described the actions it had taken to correct the possible chilling effect associated with this violation. These actions included: (1) revision of its policy regarding the release of information to prospective employers, (2) reiteration to all employees that reference inquiries be directed to TAG's Human Resources Department,

(3) retraining of the supervisor involved in this violation, and (4) issuance of a memorandum to all TAG employees to emphasize that they are encouraged to raise concerns with TAG, the Licensee, or the NRC.

With regard to previous enforcement actions taken by NRC against APS for discrimination violations (cited by the Petitioners as bases for issuance of a Demand for Information to APS), in the case involving the Petitioner (EA 93-159), the NRC did not require any further response regarding the violation, stating that "information regarding the reason for the violation, and the actions taken and planned to correct the violation and prevent recurrence is already adequately addressed on the docket." The other cases referred to by Petitioners involving Ms. Linda Mitchell and Ms. Sarah Thomas (EA 92-139) arose a number of years ago and have long-since been resolved. In light of the positive progress made by APS in the intervening years, as noted above, and after careful consideration of the corrective actions taken by APS for each of the above violations, the NRC does not believe that additional actions are necessary at this time. The Petitioners have not presented information that would indicate that the corrective actions are inadequate or that there is a hostile work environment at Palo Verde *at this time*, and therefore, have not provided a basis for issuing the Demand for Information requested here. Consequently, the request is denied.

Item 9 concerns a request that a chilling-effect letter be issued to require APS to respond regarding Mr. Straub's termination and to describe the actions taken by APS to ensure that Mr. Straub's termination did not cause a chilling effect at Palo Verde. In Case No. 94-ERA-037, the DOL ALJ found no discrimination and found that Mr. Straub "failed to present evidence to suggest, let alone prove, that he was required to work in . . . a hostile or abusive work environment."<sup>7</sup> As previously noted, the Secretary of Labor agreed with the ALJ's finding and dismissed Mr. Straub's complaint in an order issued on April 15, 1996. Since the NRC normally issues chilling-effect letters only when there appears to have been discrimination, or when the circumstances suggest that other employees at the site perceive that there might have been discrimination, and since the DOL has concluded that no discrimination was shown with regard to Mr. Straub, there is no justification for a chilling-effects letter with regard to Mr. Straub's termination. Accordingly, Petitioners' request for a chilling-effects letter is denied.

#### **Actions Against William F. Conway — Item 6**

As to the portion of item 6 that concerns a request that the NRC require that Mr. Conway be relieved of his duties at Palo Verde, Mr. Russell's July 26,

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<sup>7</sup> *Id.*



1994 letter informed Petitioner that Mr. Conway had retired and, therefore, this request is moot. With respect to the request that the NRC investigate whether or not Mr. Conway provided false information during his testimony at trial in DOL Case 92-ERA-030, Petitioners enclosed newspaper articles to demonstrate that Mr. Conway's statement that he was not aware of a gathering of news reporters at the gate of Florida Power and Light Company's Turkey Point plant, was not credible. The credibility of witnesses in a DOL administrative hearing is a matter to be determined by the ALJ during the course of the hearing. The DOL ALJ, in case 92-ERA-030, did not find that Mr. Conway was not a credible witness. Moreover, based on a review of information submitted by the Petitioners in support of this allegation, it is the Staff's view that the allegations regarding Mr. Conway's credibility are unsubstantiated. Therefore, the request for a separate investigation is denied.

#### **Actions Relating to False Statements — Item 7**

With respect to item 7, which concerns a request that NRC investigate alleged false statements made in an August 10, 1993 letter from APS to NRC regarding Mr. Saporito's application for unescorted access to Palo Verde, the Petitioner quoted the Licensee's letter without giving the entire context. The Petitioners quote the letter as saying "Mr. Saporito had provided materially false, inaccurate, and incomplete information as part of his application for unescorted access to Palo Verde," which suggests an accusation on the part of the Licensee. In fact, the letter actually states: "Notwithstanding the results of [an investigation by APS], or the facts which have thus far been established regarding Mr. [Frank] Warriner's state of knowledge, APS had previously concluded that Mr. Saporito had provided materially false, inaccurate, and incomplete information." The phrase bearing the added emphasis makes clear that APS was simply stating the position it had taken before it became aware of Mr. Warriner's admission that he had discriminated against Mr. Saporito and had lied to the DOL ALJ about the matter. Furthermore, the Staff does not believe that APS "blacklisted" Mr. Saporito, as asserted, by stating the results of its investigation into the accuracy of the information provided by Mr. Saporito in his application for unescorted access to Palo Verde. In sum, the Staff does not believe that the Petitioners have provided a basis for initiating an investigation into this matter. Therefore, the request is denied.



**Actions to Shut Down Palo Verde or Bring It to 0% Power — Items 1, 2, and 10**

Items 1 and 2 concern requests for actions to shut down the Palo Verde reactors and item 10 concerns a request for a confirmatory order requiring APS to bring all Palo Verde units to 0% power until such time as the Licensee can demonstrate corrective actions obviating any inference of a hostile work environment at Palo Verde. Based on the information discussed above, Petitioners have not provided information that would establish that a hostile work environment exists at Palo Verde. Therefore, Petitioners have not provided a basis to support the requested action. These requests are hereby denied.

**III. CONCLUSION**

As explained above, the request for enforcement action against APS (*see* item 3, above) has been granted. For the reasons given in the discussion of items relating to continued employment of TAG by APS, discrimination against Mr. Straub, the alleged chilling effect at Palo Verde, actions against Mr. Conway, false statements, and the shutdown of Palo Verde, the remaining requests, other than those to be addressed by Mr. Russell in a separate Director's Decision, have been denied.

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

James Lieberman, Director  
Office of Enforcement

Dated at Rockville, Maryland,  
this 3d day of June 1996.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

## OFFICE OF NUCLEAR REACTOR REGULATION

William T. Russell, Director

In the Matter of

Docket Nos. 50-277  
50-278PECO ENERGY COMPANY  
(Peach Bottom Atomic Power  
Station, Units 2 and 3)

June 10, 1996

The Director of the Office of Nuclear Reactor Regulation denies a petition dated October 6, 1994, filed by the Maryland Safe Energy Coalition (Petitioner). The petition requests the Nuclear Regulatory Commission (NRC) to immediately shut down both reactors at Peach Bottom, stating that (1) the risk of fire near electrical control cables due to combustible insulation could cause a catastrophic meltdown; (2) cracks were found in the structural support (core shroud) of the reactor fuel in Peach Bottom Unit 3, indicating possible cracks in other parts of the reactor vessel; (3) the NRC discovered that both reactors had no emergency cooling water for an hour on August 3, 1994; and (4) other chronic problems exist at Peach Bottom according to an August 16, 1994 NRC report. In addition, the Petitioner raises a concern about the lack of an analysis of the synergistic effects of cracks in multiple reactor vessel components. After a review of the Petitioner's concerns, the Director concluded that the Petitioner's concerns do not raise substantial health or safety issues warranting the requested actions. The reasons for the denial are fully set forth in the Director's Decision.

**REGULATIONS: INSERVICE INSPECTION PROGRAMS**

Nuclear power reactor licensees are required by 10 C.F.R. § 50.55a to implement inservice inspection programs that meet requirements set forth in the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code). The scope of the inservice inspection programs for reactor

pressure vessels and their internal components is prescribed by ASME Code § XI, Division 1, subsections IWA and IWB. Licensees are required by the ASME Code § XI, art. IWA-6000, to submit the results of the inspections to the NRC within 90 days of completion.

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

### **I. INTRODUCTION**

On October 6, 1994, the Maryland Safe Energy Coalition (Petitioner) issued a press release describing its concerns with the operation of PECO Energy Company's Peach Bottom Atomic Power Station (PBAPS). In the press release, the Petitioner requested that the U.S. Nuclear Regulatory Commission (NRC) take action to address those concerns. The Petitioner requested the NRC, among other things, to immediately shut down both reactors at Peach Bottom and keep them shut down until certain conditions are corrected. Specifically, the Petitioner stated that (1) the risk of fire near electrical control cables due to combustible insulation could cause a catastrophic meltdown; (2) cracks were discovered in the structural support (core shroud) of the reactor fuel in Peach Bottom Unit 3, indicating possible cracks in other parts of the reactor vessel; (3) the NRC discovered that both reactors had no emergency cooling water for an hour on August 3, 1994; and (4) other chronic problems exist at Peach Bottom according to an August 16, 1994 NRC report.

The Petitioner seeks relief from the risk of fire (Request 1) due to cable insulation on the basis of a September 30, 1994 article in the *Baltimore Sun* that described the indictment of Thermal Sciences, Inc., on charges of falsifying laboratory records related to Thermo-Lag. Thermo-Lag is a material used to insulate electrical cables and other equipment from fire damage. The petition states that a fire in combustible insulation near electrical control cables could cause a catastrophic meltdown.

The petition also seeks the correction of cracks that were discovered in the structural support (core shroud) of the reactor fuel in Peach Bottom Unit 3, indicating possible cracks in other parts of the reactor vessel (Request 2). In support of this request, the Petitioner also references an earlier demand by the Nuclear Information and Resource Service (NIRS)<sup>1</sup> that all safety-class

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<sup>1</sup> On September 19, 1994, NIRS sought relief, pursuant to 10 C.F.R. § 2.206, regarding safety-class reactor internal components at Oyster Creek Nuclear Generating Station (OCNGS) on the following premises: (a) the core shroud

(Continued)

component parts in both reactor vessels, including the cooling system, the heat transfer system, and the reactor core, be inspected and that an analysis be conducted of the synergistic effects of cracks in multiple parts. The Maryland Safe Energy Coalition did not, however, provide any information to support the application of the NIRS petition to PBAPS.

The Petitioner also raises equipment problems at PBAPS, stating that: (a) the NRC discovered both reactors at PBAPS had no emergency cooling water for approximately 1 hour on August 3, 1994 (Request 3); and (b) an NRC inspection report dated August 16, 1994, which the Petitioner asserts described numerous chronic problems at PBAPS<sup>2</sup> (Request 4).

In a letter dated December 2, 1994, I acknowledged receipt of the October 6, 1994 Petition and denied the Petitioner's requests for immediate relief. In the acknowledgment letter, I informed the Petitioner that the remaining requests were being evaluated under section 2.206 of the Commission's regulations and that action would be taken in a reasonable time.

The issues raised by the Petitioner concerning the use of Thermo-Lag fire barriers raised by Request 1 of the October 6, 1994 Petition have been previously considered. A Director's Decision (DD-96-3) addressing this specific request as well as the requests of other petitioners with concerns regarding the use of Thermo-Lag by reactor licensees, was issued on April 3, 1996.<sup>3</sup> The NRC Staff's review of the issues related to cracking of reactor internal components and concerns regarding equipment problems raised by Requests 2, 3, and 4 of the October 6, 1994 Petition is now complete. Accordingly, I am issuing a Final

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in General Electric boiling-water reactors (BWRs) is vulnerable to age-related deterioration; (b) 12 domestic and foreign BWR owners have found extensive cracking on welds of the core shroud; (c) only 10 of 36 U.S. BWR owners have inspected their core shrouds and 9 of the 10 core shrouds had cracks at the time of the NIRS petition; (d) 19 of 25 selected BWR internal components are susceptible to stress corrosion cracking and 6 of 19 are susceptible to irradiation-assisted stress corrosion cracking; (e) as the eldest operating General Electric Mark I BWR and the third oldest operating reactor in the United States, OCNCS has been subjected for the longest period to operational conditions that cause embrittlement and cracking; (f) according to the BWR Owners Group (BWROG), cracking of the core shroud is a warning signal that additional safety-class reactor internals are increasingly susceptible to age-related deterioration; (g) cracking of any single part or multiple components jeopardizes safe operation of that nuclear station; (h) Oyster Creek did not inspect for core shroud cracking prior to the current refueling outage, and other safety-class reactor internals have not been adequately inspected for cracking; and (i) a safety analysis has not been performed on the potential synergistic effects of multiple-component cracking. The relief sought in the petition based upon these concerns was denied in a Partial Director's Decision issued on August 4, 1995 (*See General Public Utilities Nuclear Corp. (Oyster Creek Nuclear Generating Station)*, DD-95-18, 42 NRC 67 (1995)).

<sup>2</sup> The Petitioner stated that the problems described in the August 16, 1994 NRC report included: cooling tower leaks, coolant injection system vibration, injection valve failures, feedwater vibrations and leakage, fuel pool hot spots, incore probe failures, auxiliary boiler unreliability, valve failures, air solenoid failure, and hydraulic leaks and malfunctions.

<sup>3</sup> *All Reactor Licensees with Installed Thermo-Lag Fire Barrier Material*, DD-96-3, 43 NRC 183 (1996). In addition to the Maryland Safe Energy Coalition, Petitioners with concerns about the use of Thermo-Lag included the Citizens for Fair Utility Regulation and the Nuclear Information and Resource Service, the GE Stockholder's Alliance and Dr. D.K. Cinquemani, the Toledo Coalition for Safe Energy, R. Benjan, B. DeBolt, and the Oyster Creek Nuclear Watch. In the Decision under 10 C.F.R. § 2.206, the Director of the Office of Nuclear Reactor Regulation determined that the petitioners' requests concerning the use of Thermo-Lag should be denied.

Director's Decision with regard to Requests 2, 3, and 4. A discussion of the Final Director's Decision follows.

## **II. DISCUSSION**

### **A. Correction of Cracks in the Core Shroud and Assertion of Possible Cracks in Other Parts of the Reactor Vessel (Request 2)**

Nuclear power reactor licensees, including PECO, are required by 10 C.F.R. § 50.55a to implement inservice inspection programs that meet the requirements set forth in the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code). The scope of the inservice inspection programs for reactor pressure vessels and their internal components is prescribed by ASME Code § XI, Division 1, subsections IWA and IWB. Licensees are also required by ASME Code § XI, art. IWA-6000, to submit the results of these inspections to the NRC within 90 days of completion. The NRC Staff performs periodic audits of licensee-implemented inservice inspection programs to determine compliance with applicable codes and regulations. These audits are documented in NRC inspection reports, which are publicly available at the NRC Public Document Room, the Gelman Building, 2120 L Street, NW, Washington, DC. Inspection reports related to PBAPS are also available at the local public document room for PBAPS located at the State Library of Pennsylvania (Regional Depository), Government Publications Section, Education Building, Walnut Street and Commonwealth Avenue, Box 1601, Harrisburg, PA 17105.

The Licensee's inservice inspection program contains provisions for the periodic inspection of the PBAPS reactor vessel internal components, including such components as the top guides, core shroud welds, shroud support plate access hole covers, incore instrument tubes, steam dryer drain channels, core spray piping, and jet pump assemblies. By letter dated April 8, 1986, the NRC found the Inservice Inspection Program for the Second Ten-Year Interval at PBAPS Units 2 and 3 to be satisfactory (September 1986–November 1997 and December 1985–August 1997, for Units 2 and 3, respectively).

In addition to the ASME Code design and inservice inspection program requirements, the NRC provides information to the nuclear power industry on various emerging phenomena that may potentially affect the safe operation of nuclear power plants. For example, intergranular stress corrosion cracking (IGSCC) of BWR internal components has been identified as a technical issue of concern by both the NRC Staff and the nuclear industry. The core shroud is among the internal reactor components susceptible to IGSCC. Identification of cracking at the circumferential beltline region welds in several plants during 1993 led to the publication of NRC Information Notice (IN) 93-79, "Core Shroud Cracking at Beltline Region Welds in Boiling-Water Reactors," issued



on September 30, 1993. Several licensees inspected their core shrouds during planned outages in the spring of 1994 and found cracking at the circumferential welds. To disseminate this information to nuclear power plant licensees, the NRC issued IN 94-42, "Cracking in the Lower Region of the Core Shroud in Boiling-Water Reactors," on June 7, 1994, and Supplement 1 to IN 94-42, on July 19, 1994, concerning cracking found in the core shrouds at Dresden Unit 3 and Quad Cities Unit 1. On July 25, 1994, the NRC issued GL 94-03, "Intergranular Stress Corrosion Cracking of Core Shrouds in Boiling Water Reactors," requesting that BWR licensees inspect their core shrouds by the next refueling outage and justify continued operation until inspections could be completed. The NRC has been closely monitoring these inspection activities. Additional examples of NRC action regarding reactor vessel internal component reliability issues are the issuance of Bulletin 80-13, "Cracking in Core Spray Spargers," on May 12, 1980, after the detection of cracks in core spray system sparger piping at several operating BWRs and the issuance of IN 95-17, "Reactor Vessel Top Guide and Core Plate Cracking," issued on March 10, 1995, that concerned reactor vessel top guide and core plate cracking.

#### *Core Shroud Cracks*

The Licensee submitted letters dated March 14, 1994, November 7, 1994, and November 3, 1995, regarding the results of its inspections of the PBAPS Unit 2 and 3 core shrouds. The inspections revealed a moderate amount of crack indications in the Unit 2 and Unit 3 core shrouds, totaling 5% of the weld length examined in Unit 2 and 12% of the weld length examined in Unit 3. Along with the inspection results, the Licensee presented an analysis of the impact of the crack indications on the structural strength of the core shrouds for Unit 2 and Unit 3. For both the Unit 2 and Unit 3 core shroud, the Staff reviewed the Licensee's analysis of structural loading of the as-found shroud weld which showed that the loadings were less than ASME Code-allowable values. In a letter dated February 6, 1995, the NRC Staff issued a safety evaluation of the 1994 Unit 2 core shroud inspection concluding that sufficient structural margin remained in the Unit 2 shroud to justify operation of PBAPS 2 for another operating cycle (current operating cycle 11 that ends in September 1996) without modification to the shroud. In a letter dated January 29, 1996, the NRC Staff issued a safety evaluation of the 1995 Unit 3 core shroud inspection concluding that sufficient structural margin remained in the Unit 3 shroud to justify operation of PBAPS 3 for another operating cycle (current operating cycle 11 that ends in September 1997) without modification to the shroud.

### *Reactor Vessel Internals Cracking*

In addition to the inspection of core shrouds, PECO performs inspections of the PBAPS Unit 2 and 3 reactor vessel internals and other internal safety-related components in accordance with the PBAPS inservice inspection program, as set forth in section 50.55a and ASME Code § XI. By letter dated January 17, 1995, PECO submitted, in accordance with 10 C.F.R. § 50.55a(g)(3), a report on its inservice inspection activities conducted during the September 1994 Unit-2 refueling outage. In the report, PECO listed the inspections performed and discussed the disposition of indications in certain components. In addition to the core shroud flaws described above, the Licensee discovered some minor defects, such as a crack in a jet pump assembly restrainer adjustment screw tack weld, and performed an engineering evaluation to determine if a repair was needed. In the case of the jet pump restrainer adjustment screw tack weld crack, a second existing weld was found intact and no repair was necessary. The NRC Staff conducted an inspection of the Licensee's inservice inspection activities during the PBAPS Unit 2 refueling outage. The results of that inspection are documented in Inspection Report 50-277/94-28 and 50-278/94-28 (IR 94-28). The Staff concluded that PBAPS inservice inspection programs and nondestructive examination programs were well planned, controlled, and executed for both PBAPS 2 and PBAPS 3. Therefore, the requirements of section 50.55a and the ASME Code have been met in this area, and the results confirm that satisfactory material conditions exist for the safe operation of both units.

The NRC Staff has reviewed the content and results of other Licensee inspection activities, as discussed below.

NRC Bulletin 80-13, issued on May 12, 1980, requested that BWR licensees visually inspect core spray piping inside the reactor vessel at each subsequent refueling outage. During inspections conducted as requested by the Staff in Bulletin 80-13, PECO detected cracks in core spray piping inside the reactor vessel in Unit 2 and Unit 3 in 1982 and 1985, respectively. In both instances, the Licensee installed clamps on the affected piping to mitigate the consequences of the cracks. In letters dated June 10, 1982, and November 21, 1985, the NRC Staff reviewed the Licensee's analysis of the crack consequences and repair plans<sup>4</sup> and found them acceptable for PBAPS Units 2 and 3, respectively.

In November 1993, during subsequent inspections, PECO identified cracking in the downcomer portion of the Unit 3 core spray piping. By letters dated November 5 and November 10, 1993, the Licensee provided an analysis that demonstrated that this downcomer piping had sufficient structural integrity

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<sup>4</sup> Correspondence regarding these cracks, including letters from PECO to the NRC, dated April 29, 1982, May 11, 1982, June 4, 1982, and November 8, 1985, are available in the local public document room.

to justify operation without repair for the subsequent operating cycle. In a letter dated November 16, 1993, the NRC found PECO's proposal to operate for one operating cycle without repairing the core spray downcomer cracks acceptable. During the September 1995 refueling outage for PBAPS Unit 3, PECO performed additional inspections of the core spray piping within the reactor vessel. As documented in its letter dated October 9, 1995, PECO stated that this inspection revealed additional cracking. In its letter of October 9, 1995, as supplemented by a letter dated October 12, 1995, PECO proposed to repair the core spray piping by installing mechanical clamps over the affected cracked welds. The NRC Staff reviewed the design of the proposed clamps and found that the clamps provided the required structural integrity for the piping. The NRC Staff also approved restart of the Peach Bottom Unit 3 based on PECO's installation of the clamps.<sup>5</sup>

Although cracking of the top guide has not been detected at PBAPS, the Licensee has implemented a program to inspect the top guide and has included the top guide inspection into the PBAPS inservice inspection program.

#### *Analysis Regarding Synergistic Effects of Cracking of Multiple Components*

The Petitioner raises a concern about the lack of an analysis of the synergistic effects of cracks in multiple reactor vessel components.

Most reactor internals are fabricated from high-toughness materials such as stainless steel and were designed with significant margins on allowable stresses. Cracking must be severe to adversely impact plant safety. It is unlikely that Licensee inspections would not find such severe degradation. In fact, the PECO inspections, using qualified inspectors and procedures, have been effective in identifying and sizing of the cracks in the Peach Bottom Unit 2 and Unit 3 core shrouds. In addition, after evaluating the results from internals inspections performed to date at PBAPS, the NRC Staff has concluded that ASME Code structural margins have been maintained to meet ASME design requirements. Thus, these components will perform their function in the safe operation of the plants.

Implementation of an effective inservice inspection program serves to detect cracking. Upon detection of cracking, proper actions by the Licensee to maintain component integrity will prevent cracks large enough to affect operability from existing in multiple components at the same time. Nevertheless, the NRC has asked the BWR Vessel Internals Project (BWRVIP), an industry group, to develop an assessment to address this unlikely situation. A report from the

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<sup>5</sup> The NRC Staff's review of the clamp design is addressed in Inspection Report 50-277/95-18, 50-278/95-18 and in a letter dated October 13, 1995.

BWRVIP on this issue, "Reactor Pressure Vessel and Internals Examination Guidelines (BWRVIP-03, EPRI Report TR-105696," dated November 10, 1995, is currently under NRC Staff review. In addition, the NRC has undertaken a longer-term evaluation of the effects of cracking in multiple internal components. This evaluation will involve appropriate probabilistic treatment of the key variables (such as material susceptibility, loading, and environment).

Moreover, the Licensee is not required by section 50.55a or the ASME Code to perform an analysis that addresses the synergistic effects of cracking in multiple safety-class components. Since the NRC Staff has found during reviews of the initial plant design and reviews of the Licensee's response to subsequently identified cracks, as described above, that each affected component has been shown to meet the ASME design margins, the NRC Staff is satisfied that these components will perform their intended function in the safe operation of the facilities. Because of this and the inspection requirements that pertain to reactor internals and the results of the inspections performed to date, the NRC Staff does not consider the lack of an analysis of the synergistic effects of cracks in multiple reactor components for PBAPS to be a substantial safety concern.

In summary, on the basis of the NRC inspections and the evaluations of the Licensee inspections required by section 50.55a and the ASME Code, the NRC Staff has concluded that the Licensee has taken appropriate actions to ensure the structural integrity of the PBAPS reactor vessel internal components. The NRC Staff, however, continues to overview PECO's inspections, evaluations, and repairs as necessary to meet these requirements. At this time, the NRC Staff has not found any reason to question the safe operation of PBAPS. Therefore, the NRC Staff has concluded that the Petitioner has not presented a substantial health or safety issue to warrant taking the actions requested in the petition.

#### **B. Correction of Equipment Problems Identified in Recent NRC Inspection Reports (Requests 3 and 4)**

##### ***Emergency Core Cooling***

The petition referred to a situation on August 3, 1994, wherein the PBAPS emergency service water (ESW) system was placed in a degraded condition. The Petitioner asserted that both reactors at PBAPS had no emergency cooling water for about 1 hour. The NRC resident inspectors at the Peach Bottom site conducted an inspection of this event and documented their findings in Inspection Report 50-277/94-24 and 50-278/94-24, dated September 29, 1994 (IR 94-24). In the report the NRC inspectors concluded that the discharge valve from the ESW system back to the Susquehanna River was shut and left unattended for approximately 50 minutes after maintenance and testing on the valve. In the report, the NRC Staff concluded that, if an accident requiring the use of safety



equipment (including emergency diesel generators and emergency core cooling equipment) had occurred during that 50-minute period, the operation of that safety equipment could have been jeopardized.

By letter dated November 21, 1994, the NRC issued a Notice of Violation and Proposed Imposition of Civil Penalty (EA-94-197) to PECO Energy Company regarding the circumstances surrounding the August 3, 1994 event. The NRC Staff cited the Licensee for failure to implement maintenance and testing procedures that were adequate to ensure that the ESW system could perform its intended function while maintenance activities were being performed. The Staff noted that since the August 3, 1994 event, the Licensee had restored the ESW to its intended configuration and had initiated steps to ensure that future maintenance activities would not lead to a degraded ESW system. Notwithstanding the specific corrective actions implemented by the Licensee, the Staff imposed a civil penalty in the amount of \$87,500. On December 21, 1994, PECO Energy paid the civil penalty.

Because appropriate NRC action has been taken and the Licensee has restored the ESW system to its intended configuration and has implemented corrective actions to prevent recurrence of the deficiencies that occurred on August 3, 1994, no specific concern about the ability of the ESW system to perform its intended function currently exists.

#### *Chronic Equipment Problems*

The petition also referenced a list of chronic equipment problems at PBAPS.<sup>6</sup> The petition referenced an NRC report dated August 16, 1994 (NRC Inspection Report 50-277/94-17, 50-278/94-17 (IR 94-17)), as the source of the chronic problems.

In this inspection report the NRC assessed the performance of the Licensee's engineering and technical support organization at Peach Bottom. The NRC inspector reviewed various facets of PECO's engineering department's performance in order to identify potential organizational weaknesses and deficiencies. The NRC uses the inspection findings to maintain a close understanding of the Licensee's performance in areas that can affect safe plant operation. As such, the NRC reviews the Licensee's program for identifying, addressing, and resolving recurring or "chronic" equipment problems. At the time that IR 94-17 was issued, the basis document for the Licensee's program was the "Chronic Equipment/System Problems" list. This was a list of recurring problems for which the Licensee had either identified the need for engineering department

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<sup>6</sup> See note 2, *supra*.



review and action or had determined a method for resolving the problem but had not yet implemented the solution.

The "Chronic Equipment/System Problems" list included equipment problems with potential safety impact as well as obvious non-safety-related problems. In assessing the management of recurring problems, the NRC evaluates the Licensee's ability to address and resolve problems in a timely manner and the Licensee's ability to evaluate the safety significance of each problem. The existence of a list of issues does not in itself indicate poor engineering department performance. As noted in IR 94-17, the Licensee had developed solutions for a number of the problems on the list and had developed plans to implement these solutions. Further, the NRC Staff assessed the PBAPS Chronic Equipment/System Problem list as a positive management feature and a commitment on the part of the Licensee to improve overall plant performance.

The NRC Staff, including the resident inspectors and the Region I inspection staff, periodically reevaluate the performance of the Licensee's engineering department. In addition, NRC inspectors continue to review the Licensee's action on many of the individual problems on the PBAPS Chronic Equipment/System Problem list. Accordingly, the NRC performed a followup inspection to IR 94-17. In the followup inspection, documented in Inspection Report 50-277/94-21, 50-278/94-21 (IR 94-21), dated November 4, 1994, the NRC Staff examined the safety significance of those items that were on the Chronic Equipment/System Problem List as of September 13, 1994. The Staff concluded that none of the items on the list was a significant current safety concern. The inspectors concluded that the Licensee had initiated appropriate action to evaluate and correct those items detailed in IR 94-21. The Staff concluded that the Licensee used the Chronic Equipment/System Problem list to appropriately focus long-term engineering and management attention to known reliability problems.

In summary, the Staff considers proper management of recurring equipment problems important to the continued safe operation of a nuclear power plant. Accordingly, the NRC Staff views positively the Licensee's activities such as the formulation of the Chronic Equipment/Systems Problem list, which was cited in the petition. On the basis of the review efforts by the NRC Staff, I conclude that no substantial health or safety issues have been raised by the Petitioner.

### III. CONCLUSION

The institution of proceedings in response to a request pursuant to section 2.206 is appropriate only when substantial health or safety issues have been raised. See *Consolidated Edison Co. of New York* (Indian Point, Units 1, 2, and 3), CLI-75-8, 2 NRC 173, 176 (1975), and *Washington Public Power Supply System* (WPPSS Nuclear Project No. 2), DD-84-7, 19 NRC 899, 923

(1984). This standard has been applied to the concerns raised by the Petitioner to determine whether the action requested by the Petitioner is warranted. With regard to the specific requests made by the Petitioner discussed herein, the NRC Staff finds no basis for taking any additional actions. Rather, as explained above, the NRC Staff considers that no substantial health or safety issues have been raised by the Petitioner. Accordingly, the Petitioner's requests for additional action pursuant to section 2.206, specifically requests 2, 3, and 4, are denied. Accordingly, no action pursuant to section 2.206 is being taken in this matter.

A copy of this Final Director's Decision will be filed with the Secretary of the Commission for review in accordance with 10 C.F.R. 2.206(c). This Decision will become the final action of the Commission 25 days after issuance unless the Commission, on its own motion, institutes review of the Decision within that time.

FOR THE NUCLEAR  
REGULATORY COMMISSION

William T. Russell, Director  
Office of Nuclear Reactor  
Regulation

Dated at Rockville, Maryland,  
this 10th day of June 1996.

Attachment: DD-96-3

[The attachment, DD-96-3, has been omitted from this publication but can be found at 43 NRC 183 (1996) or in the NRC Public Document Room, 2120 L Street, NW, Washington, DC.]

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

William T. Russell, Director

In the Matter of

Docket Nos. 50-247  
50-286  
(License Nos. DPR-26  
DPR-64)

CONSOLIDATED EDISON COMPANY  
OF NEW YORK  
(Indian Point, Units 2 and 3)

June 10, 1996

The Director of the Office of Nuclear Reactor Regulation denies a petition filed on May 18, 1995, requesting that the operating license for Indian Point Units 2 and 3 be suspended until the Licensees have completed the actions requested by Generic Letter 95-03, "Circumferential Cracking of Steam Generator Tubes." The Petitioner also requested that the NRC hold a public meeting to explain its response to this request.

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

**I. INTRODUCTION**

On May 18, 1995, Ms. Connie Hogarth (Petitioner) filed a petition with the U.S. Nuclear Regulatory Commission (NRC) pursuant to 10 C.F.R. § 2.206. The Petitioner requested that the operating licenses for Indian Point Units 2 and 3 be suspended until the Licensees have completed the actions requested by Generic Letter (GL) 95-03, "Circumferential Cracking of Steam Generator Tubes." The Petitioner also requested that the NRC hold a public meeting to explain its response to the suspension request.

The Petitioner stated that the impetus for GL 95-03 was the discovery at the Maine Yankee plant of steam generator tube cracks that had previously gone undetected due to inadequate inspection procedures. The Petitioner also stated that while GL 95-03 calls for comprehensive examination of steam generator tubes, it appears to allow licensees to postpone their evaluations until the next scheduled inspection.

On June 16, 1995, I informed the Petitioner that the petition had been referred to my office for preparation of a Director's Decision. I informed the Petitioner that her request for immediate suspension of the operating licenses of Indian Point Units 2 and 3 was denied because the continued operation of these units posed no undue risk to public health and safety. I further informed the Petitioner that her request for a public meeting to explain the denial of her request for license suspension was denied, primarily because the NRC assessment of risk associated with steam generator tube rupture events has already been articulated in public documents.

## II. DISCUSSION

The Petitioner requested that the operating licenses for Indian Point Units 2 and 3 be suspended until the Licensees have completed the actions required by GL 95-03. The Petitioner's request appears to be based on her belief that without the immediate completion of the requested actions of GL 95-03, the steam generators in Indian Point Units 2 and 3 could be susceptible to one or more steam generator tube ruptures brought about by existing circumferential cracks.

Generic Letter 95-03 was issued on April 28, 1995, after Maine Yankee shut down due to primary-to-secondary leakage through theretofore undetected circumferential steam generator tube cracks. The generic letter was intended to alert licensees to the importance of performing steam generator inspections with equipment capable of detecting degeneration to which the steam generator tubes are susceptible. GL 95-03 requested three actions of licensees of pressurized water reactors. It requested (1) that they evaluate their operating experience to determine whether or not they could have a circumferential cracking problem, (2) that based on this evaluation they develop a safety assessment justifying continued operation until the next scheduled steam generator tube inspection, and (3) that they develop a plan for inspecting for circumferential cracking during the next steam generator tube inspection.

Stress corrosion cracking of the Indian Point Unit 2 steam generator tubes was first detected during the 1993 refueling outage. During the 1995 refueling outage, Unit 2 conducted a steam generator inspection as required by their technical specifications; this inspection included a complete examination of all

areas deemed most susceptible to circumferential cracking. This inspection, which used enhanced techniques and eddy-current probes sensitive to indications of circumferential cracking, identified 114 tubes with potential circumferential crack indications; however, these may actually have been closely spaced axial indications. Since the Licensee could not conclusively determine that these 114 tubes did not contain indications of circumferential cracks, the worst case was assumed, that is, that the indications were in fact circumferential. The indications were logged as circumferential and all of these tubes were removed from service before the unit was restarted. All of the logged circumferential indications were deep within the tubesheet. The fact that the indications were all within the tubesheet is significant since, if a circumferential failure were to occur at this location, the structural strength lent to the tubes by the tubesheet would reduce the amount of primary-to-secondary leakage. The Licensee for Indian Point Unit 2 will continue to use inspection techniques capable of detecting circumferentially oriented tube degradation.

Because pitting corrosion had caused deterioration of the Indian Point Unit 3 steam generators, they were replaced in 1989 with steam generators designed and fabricated to reduce the possibility of corrosion-related problems; specifically, the new generators have tubes made of thermally treated Alloy 690. Four other nuclear plants in the United States have thermally treated Alloy 690 tubes and to date neither Indian Point Unit 3 nor any of the other four units has experienced tube cracks.

Circumferential cracking of steam generator tubes is accompanied by other forms of tube degradation that are readily detected by bobbin coil inspections. Since the bobbin coil inspections at Indian Point Unit 3 have detected no service-induced tube degradation, the Staff has concluded that Indian Point Unit 3 does not have a circumferential tube cracking problem. Indian Point Unit 3 has not yet experienced steam generator tube degradation; nevertheless, the Licensee has committed to performing an augmented inspection for indications of circumferential cracking during the next scheduled steam generator inspection. Unit 3 is currently operating and this inspection is required by May 1997.

The requirements placed on licensees to ensure steam generator tube integrity go beyond the requested actions of GL 95-03. Steam generator tube degradation is dealt with through a combination of inservice inspection, tube plugging and repair criteria, primary-to-secondary leak rate monitoring, and water chemistry analysis. In addition to the steam generator inspections required by their technical specifications, both Indian Point Units 2 and 3 are required to monitor primary-to-secondary leakage to ensure that, in the event that steam generator tubes begin to leak, operators will be able to bring the plant to a depressurized condition before a tube ruptures. In addition, both units are required to implement secondary water chemistry management programs that are designed to minimize steam generator tube corrosion.



The layers of protection that licensees are required to implement make multiple steam generator tube ruptures unlikely events. The NRC issued the results of its study of the risk and potential consequences of a range of steam generator tube rupture events in NUREG-0844, "NRC Integrated Program for the Resolution of Unresolved Safety Issues A-3, A-4, and A-5 Regarding Steam Generator Tube Integrity" dated September 1988. The Staff estimated the risk contribution due to the potential for multiple steam generator tube ruptures. A combination of circumstances is required to produce such failures, specifically: (1) a main steam line break or other loss of secondary system integrity, (2) the existence of a large number of tubes susceptible to rupture in a particular steam generator, (3) the failure of operators to take action to avoid high differential pressure, and (4) the actual simultaneous rupture of a large number of tubes. In the NUREG-0844 assessment, the Staff concluded that the probability of simultaneous multiple tube failure was small (approximately  $10^{-5}$ ), and the risk resulting from releases during steam generator tube ruptures with loss of secondary system integrity was also small.

### III. CONCLUSION

Based on the facts that (1) adequate steam generator tube inspections have been performed at both Indian Point Units 2 and 3, (2) Unit 2 steam generator tubes that showed signs of circumferential cracking have been removed from service, (3) Unit 3 steam generator tubes show no sign of service-induced corrosion, (4) Items (1), (2), and (3), above, collectively constitute an acceptable response to the requested actions of GL 95-03 for both units, (5) operational limits are placed on primary-to-secondary leakage, (6) the risk of multiple steam generator tube rupture events is small, and (7) the NRC assessment of risk associated with steam generator tube rupture events has already been articulated in public documents (NUREG-0844 and GL 95-03), I have concluded that neither the suspension of the licenses of Indian Point Units 2 and 3 nor the holding of a public meeting to explain this Decision is warranted.

The Petitioner's request for action pursuant to 10 C.F.R. § 2.206 is denied. As provided in 10 C.F.R. § 2.206(c), a copy of the Decision will be filed with the Secretary of the Commission for the Commission's review. This Decision will constitute the final action of the Commission 25 days after issuance unless

the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE NUCLEAR  
REGULATORY COMMISSION

William T. Russell, Director  
Office of Nuclear Reactor  
Regulation

Dated at Rockville, Maryland,  
this 10th day of June 1996.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

## OFFICE OF NUCLEAR REACTOR REGULATION

Frank J. Miraglia, Acting Director

## In the Matter of

YANKEE ATOMIC ELECTRIC  
COMPANY  
(Yankee Nuclear Power Station)Docket No. 50-029  
(License No. DPR-3)SACRAMENTO MUNICIPAL UTILITY  
DISTRICT  
(Rancho Seco Nuclear Generating  
Station)Docket No. 50-312  
(License No. DPR-54)PORTLAND GENERAL ELECTRIC  
COMPANY  
(Trojan Nuclear Plant)Docket No. 50-344  
(License No. NPF-1)SOUTHERN CALIFORNIA EDISON  
COMPANY  
(San Onofre Nuclear Generating  
Station, Unit 1)Docket No. 50-206  
(License No. DPR-13)

June 14, 1996

The Director of the Office of Nuclear Reactor Regulation denies a petition dated April 1, 1996, submitted to the Nuclear Regulatory Commission by Citizens Awareness Network, Nuclear Information and Resource Service, and nine other organizations. The petition requests that the NRC: (1) suspend the current plan by Yankee Atomic Electric Company to remove, transport, and bury the Yankee Nuclear Power Station (or Yankee Rowe) reactor pressure vessel (RPV); (2) require licensees of Yankee Rowe, Rancho Seco Nuclear Generating Station, Trojan Nuclear Plant, and San Onofre Nuclear Generating Station, Unit 1, who are now developing plans to remove, transport, and bury their respective

RPVs, to suspend such operations; and (3) require the owners of the four nuclear power plants to present substantial metal and weld specimens from their respective RPVs to the NRC for analysis in order to study and materially archive the radiation embrittlement phenomenon.

The Director denies the petition because the Petitioners did not provide sufficient bases to warrant the suspension of decommissioning plans or activities at the four nuclear power plants, and because sufficient information is available to the Staff to address such radiation embrittlement phenomenon in a manner that protects public health and safety without the issuance of an order.

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

### **I. INTRODUCTION**

Citizens Awareness Network, Nuclear Information and Resource Service, and nine other organizations<sup>1</sup> (Petitioners) submitted a petition dated April 1, 1996, pursuant to section 2.206 of Title 10 of the *Code of Federal Regulations* (10 C.F.R.), requesting that the U.S. Nuclear Regulatory Commission (NRC) take action with regard to the Yankee Nuclear Power Station (or Yankee Rowe, licensed to the Yankee Atomic Electric Company), Rancho Seco Nuclear Generating Station (licensed to the Sacramento Municipal Utility District), Trojan Nuclear Plant (licensed to the Portland General Electric Company), and San Onofre Nuclear Generating Station, Unit 1 (licensed to the Southern California Edison Company). These four power reactors have permanently ceased operation and are in various stages of decommissioning.

Petitioners request that the NRC take emergency action to require a collaborative effort by the Licensees of the four power reactors to document and research radiation embrittlement of RPVs (RPVs) as an age-related deterioration phenomenon because an archive is essential in understanding the issues surrounding embrittlement of reactor vessels. Specifically, the Petitioners request that the NRC (1) suspend the current plan by Yankee Atomic Electric Corporation (YAEC) for the removal, transport, and burial of the Yankee Rowe RPV; (2) require Licensees of the four permanently closed reactors, who are now developing plans to remove, transport, and bury their respective RPVs, to suspend such operations; and (3) require the owners of the four nuclear power plants to present substantial metal and weld specimens from their respective

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<sup>1</sup> Don't Waste Oregon Council, Greenpeace, Environmental Coalition on Nuclear Power, Friends of the Coast Opposing Nuclear Pollution, New England Coalition Against Nuclear Pollution, Ohio Citizens for Responsible Energy, Physicians for Social Responsibility, the Redwood Alliance, and the Westchester People's Action Coalition.

RPVs to the NRC for analysis in order to study and materially archive the radiation embrittlement phenomenon.

As bases for their requests, Petitioners state that (1) the four permanently closed reactors constitute a valuable asset for evaluating RPV embrittlement, (2) "boat" or scoop samples from the RPV could be retrieved with minimal occupational radiation exposure, (3) data from boat samples could be used to verify the veracity of simulated embrittlement in research reactors, and (4) boat samples could be subjected to annealing or reheating processes to analyze the results for restoring ductility of the material and for determining the durability of an annealing process.

For the reasons explained below, Petitioners' request is denied.

## II.

Irradiation of the RPV materials adjacent to the reactor core (the beltline materials) by neutrons escaping from the reactor core leads to embrittlement of those materials. This embrittlement phenomenon causes the RPV to be more susceptible to fracture when subjected to operational or accident transients that cause overcooling (thermal shock) concurrent with or followed by significant pressure in the reactor vessel. Concern over this phenomenon has resulted in the NRC developing regulations to closely monitor embrittlement of reactor vessels. Additionally, to better understand and qualify the embrittlement process, the NRC Office of Research has an RPV safety research program that addresses the embrittlement phenomenon on a broad basis.

## III.

The NRC Staff has concluded that sufficient information already is and will be available to the Staff in order to address the radiation embrittlement phenomenon in a manner that protects public health and safety, without ordering any of the four Licensees to suspend decommissioning plans or decommissioning activities to supply metal and weld RPV samples for study. In addition to studying monitoring data which all licensees are required to supply, the Staff has tested and will continue to test material from several sources as part of its confirmatory research program. Samples obtained from decommissioned RPVs already do and will continue to supplement other embrittlement data.

Licensees are required by 10 C.F.R. § 50.61 and Part 50, Appendix H, "Reactor Vessel Material Surveillance Program Requirements," to monitor RPV embrittlement. Appendix H specifies requirements for material surveillance programs to monitor changes in the fracture toughness of ferritic materials in the



RPV beltline region from exposure of these materials to neutron radiation. This regulation requires each licensee to monitor neutron irradiation embrittlement by placing weld and/or base materials (either plate or forging) that are representative of its beltline materials in capsules that are placed inside the RPV. Most plants have plant-specific surveillance programs under which the capsules are irradiated in the licensee's RPV. Some licensees are participating in integrated surveillance programs under which the capsules are irradiated in a vessel that has an irradiation and thermal environment equivalent to that of the Licensee's RPV. The capsules are periodically withdrawn from the RPV and the materials tested to monitor the effect of neutron radiation on the fracture toughness of the vessel beltline materials. These programs have been reviewed by the Staff and are sufficient for monitoring the effect of neutron radiation at all operating light-water reactors.

In addition to licensee programs, the NRC is sponsoring a number of other programs. NRC confirmatory research programs in which materials are irradiated in test reactors, and the effect of neutron radiation on the fracture toughness of beltline materials is analyzed, are the Heavy Section Steel Irradiation Program, the Radiation Embrittlement and Prediction Program, the Improved Radiation Embrittlement Correlation Program, and the Embrittlement Database and Dosimetry Evaluation Program. In the Improved Radiation Embrittlement Correlation and the Embrittlement Database and Dosimetry Evaluation Programs, the Staff accumulates and evaluates data from power reactor licensee and test reactor programs and determines the effect of neutron radiation on the fracture toughness of beltline welds, forgings, and plates. In connection with these issues, the Staff has documented in Regulatory Guide 1.99, Revision 2, "Radiation Embrittlement of Reactor Vessel Materials," a methodology for determining the effect of neutron radiation on reactor vessel welds, forgings, and plates. The methodology in Regulatory Guide 1.99 includes a margin term to account for the uncertainties in the material properties and the radiation environment. As the NRC Staff accumulates more surveillance data from licensees, it periodically evaluates the data to determine whether the Regulatory Guide 1.99 methodology needs revision. The licensee surveillance database consists of data from several hundred licensee capsules.

The Heavy Section Steel Irradiation Program provides experimental evaluation of the effects of chemistry and radiation environment on the irradiation embrittlement of RPV steels, including the effects of thermal aging, recovery of fracture toughness by thermal annealing, and reembrittlement trends on annealed reactor vessel materials. This program, in conjunction with the Radiation Embrittlement and Prediction Program, is developing improved methods for predicting irradiation embrittlement. Both programs are evaluating, experimentally and analytically, the mechanisms that control irradiation embrittlement to justify extrapolation of the empirical model to predict plant-specific irradiation em-

embrittlement. These programs are validating the analytical and empirical models through the testing of service-degraded reactor vessel materials.

The NRC Staff's recommended methodology for determining the effect of thermal annealing on RPV embrittlement is documented in Regulatory Guide 1.162, "Format and Content of Report for Thermal Annealing of Reactor Pressure Vessels." NUREG/CR-6327, "Models for Embrittlement Recovery Due to Annealing of Reactor Pressure Vessel Steels," contains the data and evaluation that form the bases for the percent recovery of radiation embrittlement from thermal annealing that is documented in Regulatory Guide 1.162. The thermal annealing rule, 10 C.F.R. § 50.66, requires that each licensee performing a thermal anneal must monitor the post-anneal reembrittlement trend using a surveillance program that conforms with the intent of Appendix H. The effect of thermal annealing on RPV embrittlement is adequately addressed by requiring licensees to monitor the post-anneal reembrittlement trend through a surveillance program and by use of the Regulatory Guide 1.162 methodology.

Based on analyses performed by licensees and the NRC, the Staff has concluded that the overall integrity analyses, including the various margins, are conservative and that they provide reasonable assurance that the vessels can withstand normal operation and accident conditions. Furthermore, each licensee must bear the burden of demonstrating the adequacy of its pressure vessel to withstand the effects of a transient causing overcooling concurrent with or followed by significant pressure when the methodology of Regulatory Guide 1.99, Revision 2, does not predict an acceptable result. Should a licensee not be able to demonstrate, or be unwilling to expend the resources to demonstrate, the adequacy of its pressure vessel (which may include actual samples of base material), the plant must be shut down as was the case for Yankee Rowe.

Test material from the Yankee Rowe pressure vessel would not be of value in estimating the level of embrittlement, thermal annealing recovery, and reembrittlement after annealing at currently operating U.S. facilities. The Yankee Rowe reactor operated at a lower temperature than typical of operating plants, making any data on embrittlement from Yankee Rowe difficult to correlate with other light-water reactor designs in the U.S.

Samples from the Rancho Seco vessel would not provide useful information since equivalent weld material and vessel wall samples are available from the Babcock and Wilcox Owners Group and from the canceled Midland Nuclear Plant. These samples are currently being evaluated in a program that irradiates the samples in test reactors. These components and samples, taken from power reactors and irradiated in test reactors, will provide data that could be correlated to other sample research programs that utilize research reactors.

The Licensee for the San Onofre Unit 1 reactor has submitted a decommissioning plan to the NRC that proposes SAFSTOR, or long-term storage of the facility, until the licenses for San Onofre Units 2 and 3 expire, sometime after

2013. Therefore, the Unit 1 vessel will remain on site and in a condition that would allow samples of test material to be obtained for a substantial period of time, should it be determined that such samples would be useful for study.

The Trojan Nuclear Plant is currently undergoing active dismantlement. Portland General Electric, the Licensee, is planning to remove the reactor vessel and dispose of it at the Hanford, Washington low-level burial site no earlier than 1998. The Staff currently is pursuing the possibility of obtaining samples from the reactor vessel once the reactor vessel reaches the burial site.

For the above reasons, the Staff concludes that sufficient information is already and will be available to appropriately and timely address the radiation embrittlement phenomenon.

#### IV. CONCLUSION

The Petitioners have not provided sufficient bases to warrant the suspension of decommissioning plans or activities at the four nuclear power plants in order to take specimens of reactor vessels for the purpose of studying the nuclear power RPV radiation embrittlement phenomenon. Moreover, as explained above, sufficient information is available to the Staff to address such radiation embrittlement phenomenon in a manner that protects public health and safety without the issuance of an order. Accordingly, for the reasons discussed above, the petition, including the request to take emergency action, is denied.

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

FOR THE NUCLEAR  
REGULATORY COMMISSION

Frank J. Miraglia, Acting  
Director  
Office of Nuclear Reactor  
Regulation

Dated at Rockville, Maryland,  
this 14th day of June 1996.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

## OFFICE OF NUCLEAR REACTOR REGULATION

William T. Russell, Director

In the Matter of

Docket Nos. 50-528

50-529

50-530

ARIZONA PUBLIC SERVICE

COMPANY

(Palo Verde Nuclear Generating  
Station, Units 1, 2, and 3)

June 25, 1996

The Director of the Office of Nuclear Reactor Regulation partially denies a petition dated May 27, 1994, as supplemented on July 8, 1994 filed by Thomas J. Saporito, Jr., for himself and on behalf of Florida Energy Consultants, Inc. (Petitioners). Specifically, Petitioners' requests 1, 2, 3, 5, and 6, submitted in the July 8, 1994 Supplement, were addressed and denied on the basis that the concerns raised have been satisfactorily addressed and do not raise substantial health and safety concerns warranting the requested action. The Petitioners requested that the Nuclear Regulatory Commission (1) institute a proceeding pursuant to 10 C.F.R. § 2.206 for the modification, suspension, or revocation of the Palo Verde operating licenses for Units 1, 2, and 3; (2) modify the Palo Verde operating licenses to require operation at 86% power or less; (3) require the Licensee to submit a no significant hazards safety analysis to justify operation above 86% power; (5) require the Licensee to analyze a design-basis steam generator tube rupture event to show that the offsite radiological consequences do not exceed the limits of 10 C.F.R. Part 100; and (6) require the Licensee to demonstrate that its emergency operating procedures for steam generator tube rupture events are adequate and that the plant operators are sufficiently trained in the procedures. The remaining issues were addressed in the Director's letter dated July 26, 1994, acknowledging receipt of the petition and in a Director's

Decision (DD-96-4, 43 NRC 309), issued on June 3, 1996. The reasons for the partial denial are fully set forth in the Director's Decision.

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

### **I. INTRODUCTION**

On May 27, 1994, Florida Energy Consultants, Inc. (FEC), by and through Thomas J. Saporito, Jr. (Petitioners), submitted a petition pursuant to 10 C.F.R. § 2.206 to the U.S. Nuclear Regulatory Commission (NRC). The petition requested that the NRC (1) institute a show-cause proceeding pursuant to 10 C.F.R. § 2.202 to modify, suspend, or revoke the operating licenses of Arizona Public Service Company (Licensee or APS) for Palo Verde Nuclear Generating Station (PVNGS or Palo Verde); (2) issue a notice of violation against the Licensee for continuing to employ The Atlantic Group (TAG) as a labor contractor at Palo Verde; (3) investigate alleged material false statements made by William F. Conway, Executive Vice President at Palo Verde, during his testimony at a Department of Labor hearing (ERA Case No. 92-ERA-030) and, in the interim, require that he be relieved of any authority over operations at Palo Verde; (4) investigate the Licensee's statements in a letter dated August 10, 1993, from Mr. Conway to the former NRC regional administrator, Mr. Bobby H. Faulkenberry, that Mr. Saporito gave materially false, inaccurate, and incomplete information on his application for unescorted access to Palo Verde and that, as a result, Mr. Saporito lacks trustworthiness and reliability for access to Palo Verde; (5) investigate the circumstances surrounding the February 1994 termination of Licensee employee Joseph Straub, a former radiation protection technician at Palo Verde, to determine if his employment was illegally terminated by the Licensee because he engaged in "protected activity" during the course of his employment; (6) require the Licensee to respond to a "chilling-effect" letter regarding the circumstances surrounding Mr. Straub's termination from Palo Verde and specify whether any measures were taken to ensure that his termination did not have a chilling effect at Palo Verde; and (7) initiate appropriate actions to require the Licensee to immediately conduct eddy-current testing (ECT) on all steam generators (SGs) at Palo Verde because the SG tubes were recently found to be subject to cracking.

As the bases for these requests, the Petitioners allege that (1) a show-cause proceeding is necessary (a) because the public health and safety concerns alleged are significant and (b) to permit public participation to provide NRC with new and relevant information; (2) past practices of TAG demonstrate that employees of TAG were retaliated against for having raised safety concerns



while employed at Palo Verde; (3) citations to testimony from transcripts and newspaper articles (appended as exhibits to the petition) demonstrate that Mr. Conway's testimony is not credible; (4) statements in the letter of August 10, 1993, are inaccurate and materially false and characterize Mr. Saporito as an individual lacking trustworthiness and reliability for access to Palo Verde, and that such negative characterizations have caused the nuclear industry to blacklist him from continued employment, all in retaliation for his raising safety concerns about operations at Palo Verde; thus, the Petitioners ask that these statements be rescinded; (5) an investigation into the termination of Mr. Straub is warranted in view of the fact that the Licensee has engaged in similar illegal conduct in the past for which the NRC has required the Licensee to pay fines; (6) Mr. Straub is entitled to reinstatement with pay and benefits pending the NRC's investigation into his termination to offset the chilling effect his termination had on the Palo Verde workforce; and (7) in addition to cooling tower problems, the stress-corrosion and cracking in the SGs is a recurring problem of which the Licensee is aware and has failed to properly correct, so that the NRC should be concerned about proper maintenance of safety systems and equipment at Palo Verde.

On July 8, 1994, the Petitioners filed a supplemental petition (Petition Supplement) raising six additional issues. The Petitioners requested that the NRC (1) institute a show-cause proceeding pursuant to section 2.202 for the modification, suspension, or revocation of the Palo Verde operating licenses for Units 1, 2, and 3; (2) modify the Palo Verde operating licenses to require operation at 86% power or less; (3) require the Licensee to submit a No Significant Hazards safety analysis<sup>1</sup> to justify operation of those units above 86% power; (4) take immediate action (e.g., by confirmatory order) to require the Licensee to reduce operation to 86% power or less; (5) require the Licensee to analyze a design-basis steam generator tube rupture (SGTR) event to show that the offsite radiological consequences do not exceed a small fraction of the limits of 10 C.F.R. Part 100; and (6) require the Licensee to demonstrate that its emergency operating procedures (EOPs) for SGTR events are adequate and the plant operators are sufficiently trained in EOPs.

As bases for these requests, the Petitioners allege that (1) the Licensee experienced an SGTR in the free-span area on Unit 2 on March 14, 1993; (2) during a January 1994 inspection on Unit 2, 85 axial indications were identified, the longest indication being 7.5 inches; (3) as of May 1994, 28 axial indications were found at Unit 2, and 9 axial indications were found at Unit 1 (more extensive testing will confirm the existence of circumferential crack indications

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<sup>1</sup> Section 50.91 of the Commission's regulations provides that at the time a licensee requests an amendment it must provide the NRC its analysis of the issue of no significant hazards consideration, using the standards of section 50.92.

in the expansion and transition areas); (4) in May 1994, SG sludge from Units 1 and 2 indicated a lead content of 4000 to 6000 ppm, which is unusually high, accelerates the crevice corrosion process, and is believed to be caused by a feedwater source deficiency; (5) in eight instances, the Licensee failed to properly implement operational procedures during the SGTR event on March 14, 1993; (6) the Licensee's failure to comply with approved procedures in the above-mentioned event is indicative of a problem plant that warrants further NRC action; (7) in four instances, the NRC is aware of additional Licensee weaknesses regarding the SGTR event; (8) the Licensee cannot ensure that the radiation dose limits are satisfied for applicable postulated accidents; (9) the Licensee is not maintaining an adequate level of public protection in that the offsite dose limits will be exceeded during an SGTR; (10) the Licensee cannot demonstrate that a Palo Verde unit can safely be shut down and depressurized to stop SG tube leakage before a loss of reactor water storage tank inventory; (11) SG tubes are an integral part of the reactor coolant boundary and tube failures could lead to containment bypass and the escape of radioactive fission products directly into the environment and, therefore, must be carefully considered by NRC and the Licensee; (12) the Licensee cannot demonstrate compliance with 10 C.F.R. Part 50, Appendix A, which establishes the fundamental requirements for SG tube integrity; (13) the Licensee has failed to comply with NRC recommendations under NUREG-0800 to show that in the case of an SGTR event, "the offsite conditions and single failure do not exceed a small fraction of the limits of 10 CFR Part 100"; and (14) the Licensee has posed an unacceptable risk to public health and safety by raising power on all three Palo Verde units above 86%, considering the severe degradation of the SG tubes.

In a letter dated July 26, 1994, I acknowledged receipt of the Petition of May 27, 1994, and the Petition Supplement of July 8, 1994, and denied the Petitioners' two requests for immediate action. The Petitioners requested the initiation of actions to require the Licensee to immediately conduct ECT on all SGs at Palo Verde (Request 7 of the May 27, 1994 Petition) and immediate action to cause the Licensee to reduce operation to 86% power or less (Request 4 of the July 8, 1994 Petition Supplement). Although these two requests for immediate action were denied, the concerns raised by the Petitioners regarding their requests for ECT and reduced-power operation are addressed in this Decision.

The Staff informed the Petitioners that the remaining requests were being evaluated under 10 C.F.R. § 2.206 of the Commission's regulations and that a response would be forthcoming. This Decision addresses the Petitioners' concerns about ECT (Request 7 of the May 27, 1994 Petition), SG tube integrity, and emergency operating procedures for SGTR events and the remaining requests (Requests 1, 2, 3, 5, and 6) of the July 8, 1994 Supplement. The Staff has completed its review of the remaining issues in your supplemental petition. A Director's Decision (DD-96-4, 43 NRC 309) regarding Requests 1 through 6

in the Petition of May 27, 1994, was issued under separate cover letter on June 3, 1996. A discussion of the Director's Decision follows.

## II. BACKGROUND

The Petitioners' concerns addressed in this Decision appear to be based largely on the March 1993 SGTR event and the NRC Staff findings concerning that event set forth in the NRC Augmented Inspection Team (AIT)<sup>2</sup> report. Palo Verde Unit 2 experienced an SGTR event in SG No. 2 on March 14, 1993. At the time, the unit was at about 98% power. The plant operators manually tripped the reactor, declared an Unusual Event,<sup>3</sup> which was subsequently upgraded to an Alert,<sup>4</sup> and entered the PVNGS Functional Recovery Procedure<sup>5</sup> to mitigate the event. The plant was cooled down and depressurized, and the event was terminated when Mode 5<sup>6</sup> was achieved on March 15, 1993.

During the period March 17-25, 1993, an NRC AIT conducted an inspection at PVNGS Unit 2. Overall, the AIT concluded that the response to the SGTR succeeded in bringing the unit safely to a cold-shutdown condition and limiting the release of radioactivity so that there was no threat to public health and safety. However, the AIT identified weaknesses in the Licensee's implementation of emergency plan actions, including event classification, activation of the emergency response facilities, and prompt assignment of tasks to on-site personnel. Weaknesses were also found in the procedures, equipment, and training associated with responding to an SGTR event. The AIT inspection was documented in NRC Inspection Report No. 50-529/93-14, issued on April 16, 1993.

Enforcement action resulted from the AIT inspection in several areas (e.g., emergency preparedness, chemistry and radiation monitoring, and emergency operating procedures). All violations were issued as Severity Level IV.<sup>7</sup>

<sup>2</sup> An AIT is an NRC inspection team composed of experts from the responsible NRC Regional Office augmented by personnel from NRC Headquarters and other regions with special technical qualifications. The purpose of an AIT is to determine the causes, conditions, and circumstances relevant to an event and to communicate its findings, safety concerns, and recommendations to NRC management.

<sup>3</sup> The lowest level of emergency classification as delineated in 10 C.F.R. Part 50, Appendix E.

<sup>4</sup> The second lowest level of emergency classification as delineated in 10 C.F.R. Part 50, Appendix E.

<sup>5</sup> PVNGS Procedures providing operators' actions for responding to design-basis events.

<sup>6</sup> The operation mode defined as cold shutdown in plant technical specifications.

<sup>7</sup> See EA 93-179 (issued July 1, 1993) and EA 93-039 (issued April 27, 1993). At the time, violations were categorized in terms of five levels of severity. Severity Level I and II violations were of very significant regulatory concern. Severity Level III violations were cause for significant regulatory concern. Severity Level IV violations were less serious but were of more than minor concern. Severity Level V were of minor safety or environmental concern. General Statement of Policy and Procedure for NRC Enforcement Actions, 10 C.F.R. Part 2, Appendix C, § IV. Effective June 30, 1995, the NRC's Enforcement Policy, as published in the *Federal Register* (60 Fed. Reg. 34,381), is set forth in NUREG-1600.

The NRC issued a confirmatory action letter<sup>8</sup> (CAL) to the Licensee on June 4, 1993, for Unit 2. The NRC issued a safety evaluation by letter dated August 19, 1993, concluding that Unit 2 could safely resume operation for 6 months, the interval between SG tube inspections. This safety evaluation closed the CAL.

The NRC issued a second CAL<sup>9</sup> on October 4, 1993, for Unit 3 (amended on November 8 and 23, 1993), confirming the commitments made by the Licensee in its September 29, 1993 letter. By letter dated December 3, 1993, the Licensee reported that it had completed the actions discussed in the CAL. Satisfied that the Licensee had completed the conditions of the CAL, the Staff closed the CAL by letter dated April 1, 1994.

The Licensee voluntarily reduced power to approximately 86% power in the fall of 1993 to minimize SG degradation. The Licensee evaluated and implemented several improvements to the operation of its SGs, one of which was a reduction in the reactor coolant system hot-leg temperature. The units were all returned to 100% power by the fall of 1994.

Following a midcycle outage on Unit 2 and midcycle and refueling outages on Unit 3, the NRC issued a safety evaluation on June 22, 1994, which concluded that both Units 2 and 3 could safely operate for 6 months between SG tube inspections. Since that time, there have been additional midcycle outages on Units 2 and 3 and a refueling outage on all three units. Eddy-current inspection results and outage planning for the units currently support the following operating intervals between inspections: Unit 1, 16 months; Unit 2, 12 months; and Unit 3, 11 months.

### III. DISCUSSION

#### A. Eddy-Current Testing on All Steam Generators at Palo Verde

Item 7 of the Petitioners' letter of May 27, 1994, requested the NRC to require the Licensee to conduct immediate ECT on all SGs at Palo Verde to ascertain the integrity and life expectancy of the SG tubes. Although, as indicated above, this request for immediate action has been denied, the Petitioners' concerns regarding ECT are addressed below.

<sup>8</sup>This CAL set forth commitments made by the Licensee to the NRC Staff on June 2, 1993, regarding the SGTR event on Unit 2. In the CAL, the Staff confirmed the Licensee's commitment (1) to notify the NRC prior to completion of ECT on the Unit 2 SGs; (2) to include the proposed operating interval to the next SG tube inspection in its safety analysis; and (3) not to restart Unit 2 until the NRC concurs with the restart of the facility.

<sup>9</sup>In this CAL, the Staff confirmed the Licensee's commitment to (1) shut down Unit 3 for ECT inspection of both SGs; (2) continue the review of Unit 3 ECT data to identify indications that were not identified in refueling outage 3R3 by bobbin coil ECT and to provide a written summary of the review; (3) continue to implement the Unit 1 SG inspection plan (SGIP); (4) implement changes to emergency operating procedures (EOPs), operator training, and leakage monitoring; and (5) continue to operate Unit 3 to take advantage of some of the preventive measures that can be taken to reduce outside-diameter stress corrosion cracking (ODSCC) rates.



The Petitioners assert as a basis (Petition Basis 7) for their request concerning ECT that the Licensee's SGs have recently developed cracks in the free-span portion of their internal structure, that tube stress corrosion and cracking is a recurring problem in SGs, and that there is a risk the emergency cooling system will be unable to prevent the melting of the fuel because of tube ruptures.<sup>10</sup>

The Licensee has completed at least two eddy-current inspections on each of the Palo Verde units since the SGTR event in March 1993. The Staff issued safety evaluations (SEs) that addressed Unit 2 and 3 operating intervals by letters dated August 19, 1993, and June 22, 1994.<sup>11</sup> These SEs were based on the results of the Licensee's eddy-current inspections of Unit 1 in October 1993, of Unit 2 in May 1993 and January 1994, and of Unit 3 in December 1993 and May 1994. In summary, the Staff concluded that Units 2 and 3 could be safely operated for up to 6 months between SG eddy-current inspections. The Licensee conducted five of these "minicycles"<sup>12</sup> (three on Unit 2 and two on Unit 3), thereby obtaining extensive SG eddy-current data, which it used to validate models used for analysis. In May 1995, the Licensee submitted a report supporting a cycle length of up to 11 months on Unit 3. Unit 1 completed a 16-month operating cycle in June 1995. After meeting with the Licensee, the Staff approved a Unit 3 cycle length of 11 months in a meeting summary dated August 22, 1995. During a September 20, 1995 meeting with the Staff, the Licensee presented its submittal and arguments to support a 12-month cycle for Unit 2. The Staff incorporated data from the most recent Unit 3 SG inspection in its evaluation of the Licensee's conclusion regarding a 12-month operating cycle on Unit 2. The Staff approved the 12-month operating cycle by letter dated March 5, 1996.

In summary, the Licensee performed the necessary eddy-current inspections, and the Staff extensively reviewed and approved Palo Verde SG eddy-current inspection results and continues to review additional information regarding the integrity of the SG tubes. On the basis of its review of ECT, the Staff has concluded that the Petitioners' concerns regarding the need for ECT have been satisfactorily addressed by the Licensee and that no further action by the NRC Staff is warranted.

<sup>10</sup>The Petitioner also mentioned cooling tower problems in his basis, stating that "the NRC should be concerned about proper maintenance of safety systems and equipment there." The cooling towers at Palo Verde are not safety-related systems. If the cooling towers of a unit were incapacitated, the unit might operate less efficiently, but that would be an economic penalty, rather than a safety problem. The Petitioners did not provide any specific examples of problems with the cooling towers, though the Staff is aware of the general maintenance problems the Licensee has had with the cooling towers. This issue was the subject of a previous Director's Decision, DD-92-1, 35 NRC 133, 137 (1992), which found no substantial nuclear safety concern with the condition of the cooling towers.

<sup>11</sup>Unit 1 was not directly addressed in the SEs because no free-span axial indications were identified on Unit 1 at the time.

<sup>12</sup>The Palo Verde operating cycle is normally 16-18 months.



## B. Operation Above 86% Power

Requests 1, 2, 3, and 4 of the Petition Supplement, in essence, request actions requiring the Palo Verde licenses to be modified to require operation at 86% power or less.<sup>13</sup>

As bases for these requests, the Petitioners assert that on March 14, 1993, Palo Verde Unit 2 had an SGTR in the free-span section between the tube supports and that in January 1994, an inspection of Palo Verde's Unit 2 SGs found 85 axial indications (longest indication, 7.5 inches) (Petition Supplement, Basis 2); and that as of May 1994, 28 axial indications were found at Unit 2, and 9 axial indications found at Unit 1. The Petitioners believe that more extensive testing will confirm the existence of circumferential crack indications in the expansion-transition area (Petition Supplement, Basis 3). The Petitioners also assert that in May 1994, Units 1 and 2 SG sludge indicated a lead content of 4000-6000 ppm, which would accelerate the crevice corrosion cracking process (Petition Supplement, Basis 4). The Petitioners also stated that the operation of Palo Verde units at above 86% power is unacceptable due to severe degradation of the SG tubes (Petition Supplement, Basis 14).

### *Axial and Circumferential Steam Generator Tube Indications*

With regard to the Petitioners' concern about identifiable axial indications (Petition Supplement, Basis 2), it is correct that 85 axial indications in the free-span area (longest indication, 7.5 inches) were discovered on SG tubes at Palo Verde Unit 2 during the January 1994 inspection. However, this number was apparently based on preliminary information from the Licensee's eddy-current inspection during the January 1994 eddy-current inspection. The Licensee's report of March 8, 1994, stated that actually 330 free-span axial indications were discovered during the Unit 2 first midcycle outage: 22 in SG 1 of Unit 2 (SG 21) and 308 in SG 2 of Unit 2 (SG 22). Although a number of axial indications were detected by the Licensee, it is not the number of indications that is of a safety concern but rather the severity of the indications (i.e., severity in terms of whether the tube indication had adequate structural and leakage integrity). As noted in the petition supplement, the longest indication was 7.5 inches long. The safety significance of this indication, as with any eddy-current

<sup>13</sup>The specific request for immediate action to make the Licensee reduce operation to 86% power or less (Request 4) was denied by letter of July 26, 1994. With regard to the request (Request 3) to require the Licensee to submit a no significant hazards safety analysis to justify operation of the units above 86% power, the Licensee is not required by the NRC regulations to submit a no significant hazards analysis, since a TS change was not required to resume operation above 86% power. The Staff did, however, review a no significant hazards analysis related to operation of the units at 100% power with a reduced hot-leg temperature. These TS changes were submitted by the Licensee on February 18, 1994, for Units 1 and 3; and on July 1, 1994, for Unit 2. The NRC Staff review of these TS changes and support for operation at a power level of 100% is discussed at pp. 354-55, *infra*.

indication, depends not only on the length of the indication but also on the depth of the indication. To assess the safety significance and/or severity of an indication, licensees size the indications in terms of length, depth, and/or voltage.<sup>14</sup> However, eddy-current testing methods have not been qualified for determining the depth of stress corrosion cracks. Where qualified eddy-current methods do not exist, licensees may pursue alternative methods such as in-situ pressure testing<sup>15</sup> to further confirm or assess the condition of the tube (i.e., to confirm that the tube indication could withstand the required pressure loadings; thereby demonstrating that the tube had adequate structural integrity). The Licensee did select nine tubes for in-situ pressure testing during the outage. The 7.5-inch-long indication did not meet the Licensee's screening criteria for selecting the more severe indications. The screening criteria, discussed in the NRC Staff's SE of June 22, 1994, considered the length, depth, and/or voltage of the indication. All nine tubes satisfactorily passed the in-situ pressure test, thereby providing reasonable assurance that the tube indications had adequate structural integrity. Furthermore, all tubes with axial free-span indications were plugged before Unit 2 was returned to operation.

The Petitioners also assert that, as of May 1994, 28 axial indications were found on Unit 2, and 9 axial indications found at Unit 1, and that more extensive testing would confirm the existence of circumferential crack indications in the expansion-transition areas (Petition Supplement, Basis 3). These numbers are incorrect. Neither Unit 1 nor Unit 2 was in an outage conducting eddy-current examinations in May 1994. Unit 1 had no axial indications identified as of this date. The Unit 2 data are described above. Unit 3 was in an outage at this time and identified a total of 20 axial indications. Regarding the performance of more extensive testing to confirm the existence of circumferential crack indications at the expansion-transition area, the Licensee has performed inspections in this region. In general, the Licensee's SG tube inspection program consists of an initial inspection sample which is expanded, if necessary, based on the initial inspection sample results. The Licensee has been examining the expansion-transition locations with a motorized rotating pancake coil (MRPC) probe since at least 1993. These examinations permit the Licensee to detect circumferential crack indications. In its SEs and meeting summaries, the NRC Staff has reviewed the Licensee's results from its MRPC inspections and found them acceptable.<sup>16</sup> To date, Palo Verde Units 2 and 3 have each exhibited a small number of circumferential crack indications per unit. Unit 1 has

<sup>14</sup> Voltage is electrical force or potential difference. Voltage measurements can be used to estimate the severity of an indication.

<sup>15</sup> In situ pressure tests were conducted to determine whether the tubes could withstand the pressure loading specified in NRC Regulatory Guide 1.121 (i.e., whether the SG tubes have adequate structural integrity).

<sup>16</sup> The Staff's reviews are documented in SEs dated August 19, 1993, and June 22, 1994, and also in meeting summaries dated August 22, 1995, March 22, 1994, October 19, 1994, August 22, 1995, and September 20, 1995.

exhibited the most extensive circumferential cracking both in terms of number of indications and the severity of the indications when compared to Units 2 and 3. Nonetheless, the Staff concluded in a meeting summary dated October 19, 1994, that operating Unit 1 to the end of the operating cycle (April 1995) did not pose an undue risk to public health and safety in view of (1) the absence of detectable axial free-span cracks during the previous refueling outage inspection; (2) the improved secondary water chemistry performance at Palo Verde; (3) the reduced hot-leg temperature, which is expected to reduce crack growth rates; and (4) the implementation of enhanced MRPC inspection techniques at the expansion-transition locations. The Licensee will continue to perform extensive SG inspections at the end of each operating cycle to ensure continued safe operation of SGs.

#### ***Lead Content in Steam Generator Tube Sludge***

The Petitioners assert without providing any supporting basis that the SG sludge of Units 1 and 2 has a lead content of 4000-6000 ppm (Petition Supplement, Basis 4). The Licensee performed sludge analyses during two consecutive Unit 1 outages. The data, which were reported in a letter from the Licensee dated November 2, 1993, indicate a lead content of 78 ppm (from Unit 1, Refueling 3) and 98 ppm (Unit 1, Refueling 4).<sup>17</sup> Sludge samples were obtained from both Unit 2 SGs after the March 1993 SGTR event. The data were documented in the Licensee's report, "Equipment Root Cause of Failure." Both the Licensee and outside contractors analyzed the samples; all analyses indicated a lead content of 100 ppm or less.

The NRC Staff conducted two Palo Verde chemistry inspections (Inspection Reports 94-15 and 94-27 on Units 50-528/50-529/50-530). The Staff reviewed films and sludge for their lead content, and the data were consistent with the Licensee's reports. Inspection Report 50-528/50-529/50-530/94-15 specifically referred to the inspector's determination to note "whether lead was detected, because of recent work which indicated it may have a deleterious effect." In referring to examinations of the burst region<sup>18</sup> of pulled tubes, the report stated that insignificant levels of lead were found in the sludge and in the films examined.

<sup>17</sup> During the Unit 2 midcycle outage in early 1994, the SGs were chemically cleaned before sludge lancing; therefore, the composition of the sludge was not tested.

<sup>18</sup> Burst region refers to the section of the crack in a pulled tube that is exposed as the result of a burst or rupture due to an applied pressure either during plant operation or laboratory testing.

Inspection Report 50-528/50-529/50-530/94-15 also reviewed the Licensee's secondary water chemistry control program.<sup>19</sup> The NRC inspection team found that the program requirements had fully conformed to the EPRI guidelines throughout Palo Verde's operating history with respect to chemical parameters, analytical frequency, limits for critical parameters, and required actions when critical parameters were exceeded. In summary, the Petitioners' assertions regarding lead content have not been substantiated and do not agree with available data. The Licensee has verified<sup>20</sup> that lead content in both Units 1 and 2 SGs is 100 ppm or less, not 4000-6000 ppm as asserted by the Petitioners. Additionally, NRC Inspection Reports 94-15 and 94-27 on Units 50-528/50-529/50-530 have not revealed any information about elevated lead content.

#### ***Steam Generator Tube Degradation and Operation at a Reduced Power Level***

The Petitioners also assert that the operation of Palo Verde units at above 86% power is unacceptable due to severe degradation of SG tubes (Petition Supplement, Basis 14). In December 1993, the Licensee volunteered to reduce power in all three units to approximately 86% as an interim measure to curtail SG degradation. The primary purpose of this administrative power limit was to operate with a lower reactor coolant system hot-leg temperature in order to reduce tube degradation. This specific power level had been selected because it provided for a  $T_{\text{hot}}$  that approximated the value that would be implemented if the Licensee's proposed TS changes for operating at 100% power with a reduced  $T_{\text{hot}}$  were approved by the NRC. Additionally, the Licensee's thermal-hydraulic analysis indicated that, at this reduced power level, the potential for free-span tube degradation from corrosion is reduced. The Licensee took this action voluntarily to minimize further degradation of the SGs until corrective, mitigative, and preventive actions could be implemented to reduce SG tube degradation.

On June 7, 1994, the NRC issued a TS change for Units 1 and 3 that permitted the Licensee to operate at full power with a lower  $T_{\text{hot}}$  temperature.<sup>21</sup> The Unit 2 TS change was reviewed separately because the Licensee was continuing to perform analyses arising from the SG tube plugging in Unit 2. The Staff issued

<sup>19</sup> The NRC inspection team compared Electric Power Research Institute (EPRI) NP-6239, "PWR Secondary Water Chemistry Guidelines," Revisions 1 through 2, and EPRI TR-101230, "Interim PWR Secondary Water Chemistry Recommendations for IGA/IGSCC Control," with the Licensee's secondary water chemistry control program for PVNGS.

<sup>20</sup> PVNGS performed its own inspections and also utilized contractors, ABB-Combustion Engineering (ABB-CE) and Babcock, and Wilcox Nuclear Technologies (BWNT), to perform metallurgical examinations. The inspections revealed minor quantities of lead in surface deposits and films. See NRC Inspection Report 50-528/50-529/50-530/94-15, dated June 23, 1994.

<sup>21</sup> Noticed in the *Federal Register* on June 22, 1994 (59 Fed. Reg. 32,240).



this TS change on August 12, 1994.<sup>22</sup> These TS changes permitted operation at a power level of 100% as did the Staff's post-March 1993 SGTR SEs dated August 19, 1993, and June 22, 1994, regarding the length of operating cycles of the Palo Verde units. Furthermore, as stated above, the Staff did not impose any power restrictions or limits on the Licensee.

In summary, the Petitioners' concerns regarding operation of the Palo Verde units above 86% power (including bases relating to the March 1993 SGTR event, identification of axial and circumferential SG tube indications, alleged elevated lead contents in SG sludge) have been satisfactorily addressed, and do not warrant any further action by the NRC Staff.

### C. Need to Reanalyze the Design-Basis SGTR Event

Request 5 (of the Petition Supplement) is that the NRC require the Licensee to analyze a design-basis SGTR event to show that the offsite radiological consequences do not exceed a small fraction of the limits of 10 C.F.R. Part 100. The Staff requires an analysis such as this to be completed for all pressurized-water reactors (PWRs) and documented in a final safety analysis report (FSAR) before plant operation. The Licensee complied with this requirement.<sup>23</sup>

The Petitioners assert in the basis (Petition Supplement, Bases 8, 9, 10, 11, and 13) that the Licensee cannot ensure that the dose limits are satisfied for applicable postulated SGTR events; the offsite dose limits would be exceeded during an SGTR event and adequate protection to the public would not be maintained; the Licensee cannot demonstrate that the plant can be safely shut down and depressurized to stop SG tube leakage before reactor water storage tank inventory is lost; the NRC and the Licensee must carefully consider SGTR; and "the licensee has failed to comply with NRC requirements under NUREG-0800 insofar as the licensee is required to analyze the consequences of a design basis SGTR event to show that the offsite conditions and single failure do not exceed a small fraction of limits of 10 C.F.R. Part 100."

The AIT report documents findings regarding the Unit 2 SGTR event of March 1993. The report stated that the plant was safely brought to cold shutdown and no radioactivity was released off site. Additionally, the Staff's SE, dated August 19, 1993, assessed a single SGTR event and single and multiple tube ruptures induced by a major secondary-side rapid depressurization and concluded

<sup>22</sup> Noticed in the *Federal Register* on August 31, 1994 (59 Fed. Reg. 45,038).

<sup>23</sup> Updated Final Safety Analysis Report (UFSAR) §15.6.3.1.3.2 describe the radiological consequences of an SGTR, and the results are shown in UFSAR Table 15.6.3-5. The Staff initially reviewed PVNGS's UFSAR in November 1981.



that the radiological consequences were within applicable limits.<sup>24</sup> Finally, in a memorandum dated January 26, 1996, the Staff performed a confirmatory review of the Licensee's updated SGTR event analysis, submitted with Revision 6 to the FSAR (March 10, 1994), and concluded that the results are acceptable. The Petitioners also assert in the basis (Petition Supplement, Basis 12) that the Licensee cannot demonstrate compliance with certain criteria of Appendix A to 10 C.F.R. Part 50,<sup>25</sup> which establishes the fundamental requirements for SG tube integrity. However, the Petitioners have failed to provide any details or support for this assertion.

In summary, on the basis of the NRC Staff's review of the Licensee's design-basis SGTR event and more recent confirmatory review, the Staff has concluded that the Petitioners have not presented a basis for further NRC action.

#### **D. Adequacy of Training and Procedures for an SGTR Event**

Regarding Request 6 of the Petition Supplement, that the NRC require the Licensee to demonstrate that its emergency operating procedures (EOPs) for SGTR events are adequate and the plant operators are sufficiently trained in EOPs, the Staff has already taken sufficient action. The Petitioners allege (Petition Supplement, Bases 5, 6, and 7, respectively) that the Licensee failed to properly implement operational procedures regarding the SGTR event of March 14, 1993, citing eight instances in Basis 5;<sup>26</sup> that the Licensee's failure to comply with approved procedures in this event is indicative of a problem plant that warrants further NRC attention (Basis 6); and that the NRC is aware of additional Licensee weaknesses regarding the SGTR event, citing four instances

<sup>24</sup> In 10 C.F.R. Part 100, acceptance criteria are specified for the dose analyzed during initial plant licensing at the exclusion area boundary (EAB) and low population zone (LPZ) for design-basis accidents. The dose in 2 hours at the EAB is not to exceed 25 rem to the whole body or 300 rem to the thyroid. The dose in 30 days at the boundary of the LPZ is not to exceed 25 rem to the whole body or 300 rem to the thyroid. The Staff reviewed the Licensee's Unit 2 SGTR analysis, submitted by letter dated July 18, 1993, and concluded that the methods used by the Licensee were acceptable. See the NRC Staff's safety evaluation dated August 19, 1993.

The Petitioners assert that the Licensee has failed to comply with NUREG-0800 requirements regarding consequences of a design-basis SGTR event. However, NUREG-0800 does not set forth requirements; rather, it sets forth acceptable approaches to satisfying NRC requirements.

<sup>25</sup> The Petitioners reference portions of General Design Criteria (GDC) 14, 15, 30, and 31 of Appendix A to 10 C.F.R. Part 50.

<sup>26</sup> The Petitioners assert (Petition Supplement, Basis 5) that the Licensee (a) failed to classify the event in accordance with the EOPs; (b) failed to actuate the Emergency Operations Facility for the 1-hour time; (c) failed to activate the Emergency Response Data System; (d) violated 10 C.F.R. § 50.72 requirements, activation of the Emergency Response Data System; (e) failed to take prompt corrective actions to repair the condenser vacuum pump exhaust radiation monitor; (f) failed to obtain required approvals for alarm setpoint change on waste-gas-area combined ventilation exhaust monitor; (g) failed to fully implement an alarm response procedure and; (h) failed to check the owner-controlled area.

in Basis 7.<sup>27</sup> These bases largely concern areas the Staff reviewed after the SGTR event on March 14, 1993. Specifically, the Petitioners repeated several of the procedural and operator weaknesses that were described and evaluated in the Staff's AIT report (Inspection Report 50-529/93-14, dated April 16, 1993).<sup>28</sup> Specifically, the AIT report stated that the use of a diagnostic logic tree caused the operators to misdiagnose the SGTR event twice and subsequently enter a Functional Recovery Procedure, contributing substantially to the delay in isolating the faulted SG. The Staff concluded in its safety evaluation of August 19, 1993, that the Licensee's modifications to the EOPs and the subsequent operator training provide sufficient enhancement for both diagnosis and mitigation of various SGTR scenarios.

Additionally, the Licensee recently revised its EOPs to make them consistent with Combustion Engineering Owners Group (CEOG) guidance (CEN 0152, Rev. 3<sup>29</sup>). NRC Inspection Report 50-528/50-529/50-530/95-12, dated July 27, 1995, documents the Staff's observations on the "high-intensity team" training conducted for each crew in preparation for implementing the EOPs. In the inspection report, the Staff stated that the EOPs enhanced crew performance and allowed for greater flexibility in responding to events. As an example, during the simulator-based SGTR scenario, the crew was able to isolate the faulted SG within 14 minutes of the start of the event. In contrast, during the March 1993 Unit 2 SGTR event, operators took about 3 hours to isolate the faulted SG, partly because of restrictions in the EOPs in use at the time. The Staff will further evaluate the effectiveness of EOPs during future licensed-operator examinations.

On the basis of its review of the Petitioners' request that the Licensee demonstrate that its EOPs for SGTR events are adequate and that plant operators are sufficiently trained in EOPs, the Staff has concluded that the Petitioners have not presented a basis for further NRC action.

<sup>27</sup> The Petitioners assert (Petition Supplement, Basis 7) that the Licensee's (a) alert and alarm setpoints for condenser vacuum pump exhaust and main steam line radiation monitor limits appear to be based on offsite dose limits rather than on an SGTR event, (b) simulator alarms occur within 2-3 minutes of an SGTR event, contrary to control room indications; (c) plant staff failed to fully respond to assembly notification; (d) plant staff failed to perform a formal evaluation of the safety significance of an abnormal crack growth in the Unit 2 SG.

<sup>28</sup> The Licensee addressed the issues raised in the AIT report by implementing the necessary procedural changes and providing training. For example, with regard to the AIT finding (summarized by the Petitioners) regarding differences between alarm response on the simulator and in the control room, the Staff's safety evaluation of August 19, 1993, stated that "the simulator has been modified to more realistically model the plant, particularly the response of the radiation monitoring system to an SGTR."

<sup>29</sup> A letter from the NRC to Combustion Engineering, dated August 2, 1988, stated that, "pending NRC final review and approval, CE facilities may base their plant-specific emergency operating procedures on Revision 3 of CEN-152. Should future NRC review reveal modifications to Revision 3 to be necessary, CE facilities would be expected to update their procedures to reflect the identified changes. Schedules for such changes should be based on perceived safety significance of the changes." The objective of the CEN-152 report is to describe the CEOG emergency procedure guidelines system. The report contains the methodology used to develop and validate the Licensee's emergency procedure guidelines and information on the implementation of guidelines.

### III. CONCLUSION

The institution of proceedings in response to a request pursuant to Section 2.206 is appropriate only when substantial health or safety issues have been raised. See *Consolidated Edison Co. of New York* (Indian Point, Units 1, 2, and 3), CLI-75-8, 2 NRC 173, 176 (1975), and *Washington Public Power Supply System* (WPPSS Nuclear Project No. 2), DD-84-7, 19 NRC 899, 923 (1984). This standard has been applied to the concerns raised by the Petitioners to determine whether the actions requested by the Petitioners are warranted. With regard to the specific requests made by the Petitioners discussed herein, the NRC Staff finds no basis for taking additional actions beyond those described above. Accordingly, the Petitioners' requests for additional actions pursuant to section 2.206, specifically Requests 1, 2, 3, 5, and 6 submitted in the Petitioners' Supplement dated July 8, 1994, are denied. Accordingly, no action pursuant to section 2.206 is being taken in this matter.

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

FOR THE NUCLEAR  
REGULATORY COMMISSION

William T. Russell, Director  
Office of Nuclear Reactor  
Regulation

Dated at Rockville, Maryland,  
this 25th day of June 1996.

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