

NUCLEAR REGULATORY COMMISSION ISSUANCES

OPINIONS AND DECISIONS OF THE NUCLEAR REGULATORY COMMISSION WITH SELECTED ORDERS

July 1, 2012 – December 31, 2012

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PREFACE

This is the seventy-sixth volume of issuances (1–612) of the Nuclear Regulatory Commission and its Atomic Safety and Licensing Boards, Administrative Law Judges, and Office Directors. It covers the period from July 1, 2012, to December 31, 2012.

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

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

On June 29, 1990, however, the Commission voted to abolish the Atomic Safety and Licensing Appeal Panel, and the Panel ceased to exist as of June 30, 1991. Since then, the Commission itself reviews Licensing Board and other adjudicatory decisions, as a matter of discretion. *See* 56 FR 29403 (1991).

The Commission also may appoint Administrative Law Judges 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

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alan S. Rosenthal, Chairman
E. Roy Hawkens
Dr. Anthony J. Baratta

In the Matters of

ALL OPERATING BOILING WATER REACTOR LICENSEES WITH MARK I AND MARK II CONTAINMENTS: ORDER MODIFYING LICENSES WITH REGARD TO RELIABLE HARDENED CONTAINMENT VENTS (EFFECTIVE IMMEDIATELY)	Docket No. EA-12-050 (ASLBP No. 12-918-01-EA-BD01)
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ALL POWER REACTOR LICENSEES AND HOLDERS OF CONSTRUCTION PERMITS IN ACTIVE OR DEFERRED STATUS: ORDER MODIFYING LICENSES WITH REGARD TO RELIABLE SPENT FUEL POOL INSTRUMENTATION (EFFECTIVE IMMEDIATELY)	Docket No. EA-12-051 (ASLBP No. 12-918-01-EA-BD01)
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July 10, 2012

In this proceeding regarding challenges to two enforcement orders, each of which implements lessons learned from the Fukushima Dai-ichi accident, ruling on petitions to intervene and requests for hearing on claims that the enforcement orders are inadequate to ensure adequate safety, the Licensing Board denies the petitions as outside the scope of the proceeding.

ENFORCEMENT PROCEEDING: SCOPE OF PROCEEDING

Section 189a of the Atomic Energy Act of 1954 confers upon the Commission authority to define the scope of its proceedings, which, in enforcement proceedings, the Commission takes to permit challenges solely on whether an order should be sustained. Challenges seeking the imposition of additional license modifications are beyond the scope of such proceedings. *Bellotti v. NRC*, 725 F.2d 1380, 1381 (D.C. Cir. 1983), *aff'g, sub nom., Boston Edison Co.* (Pilgrim Nuclear Power Station), CLI-82-16, 16 NRC 44 (1982); *see also Detroit Edison Co.* (Fermi Power Plant Independent Spent Fuel Storage Installation), CLI-10-3, 71 NRC 49, 53 (2010); *Alaska Department of Transportation and Public Facilities*, CLI-04-26, 60 NRC 399, 404 (2004); *Maine Yankee Atomic Power Co.* (Maine Yankee Atomic Power Station), CLI-04-5, 59 NRC 52, 58 (2004).

MEMORANDUM AND ORDER **(Denying Petitions for Hearing)**

I. BACKGROUND

Before the Board are two petitions for hearing, filed by Pilgrim Watch, that challenge the adequacy, respectively, of two orders issued by the NRC Staff in the wake of the March 2011 Fukushima Dai-ichi nuclear power plant accident.¹ According to the Staff, while events like those at Fukushima are unlikely to occur in the United States because of present NRC requirements and plant capabilities, the Fukushima events nonetheless highlighted vulnerabilities that must be addressed in the interest of the protection of public health and safety. As a step in addressing these vulnerabilities, on March 19, 2012, the Staff issued challenged orders EA-12-050 and EA-12-051.²

¹ Pilgrim Watch Request for Hearing Regarding Insufficiency of Order Modifying Licenses with Regard to Reliable Hardened Containment Vents (Apr. 2, 2012) (Petition on Hardened Vents); Pilgrim Watch Request for Hearing Regarding Insufficiency of Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Apr. 2, 2012) (Petition on Spent Fuel Pool Instrumentation); *see also* Pilgrim Watch Request for Leave to Supplement Request for Hearing Regarding Insufficiency of Order Modifying Licenses with Regard to Reliable Hardened Containment Vents (Apr. 2, 2012); Pilgrim Watch Supplement to Request for Hearing Regarding Insufficiency of Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Apr. 12, 2012). Pilgrim Watch's motions to supplement its petitions are hereby *granted*.

² In the Matter of All Operating Boiling Water Reactor Licensees with Mark I and Mark II Containments; Order Modifying Licenses with Regard to Reliable Hardened Containment Vents (Effective Immediately), 77 Fed. Reg. 16,098 (Mar. 19, 2012) (EA-12-050); In the Matter of All

(Continued)

The first order, EA-12-050, requires that licensees of boiling water reactor (BWR) facilities with Mark I and Mark II containments (such as those at the Fukushima Dai-ichi facility) “take the necessary actions to install reliable hardened venting systems.”³ Such venting systems would, in the Commission’s estimation, assist in efforts to cool the reactor core in an accident scenario.⁴ The second order, EA-12-051, requires that all power reactor licensees and construction permit holders “have a reliable means of remotely monitoring wide-range spent fuel pool levels”⁵ According to the NRC Staff, “Fukushima demonstrated the confusion and misapplication of resources that can result from beyond-design-basis external events when adequate instrumentation is not available.”⁶

Pilgrim Watch⁷ alleges that the two orders adversely affect its members, many of whom, according to petitioner, reside within close proximity of the Pilgrim Nuclear Power Station located in Plymouth, Massachusetts.⁸ As to the order on hardened vents, Pilgrim Watch asserts that the events at Fukushima reveal the order’s inadequacy in that (1) the order “lacks a requirement for licensees to install filters in the direct torus vents (DTVs)” and (2) the order “does not require the hardened DTV to be passively actuated by means of a rupture disc, so that neither water nor electrical supply is needed and operator intervention is not necessary to actuate the system.”⁹ As to the order on spent fuel pool instrumentation, Pilgrim Watch maintains that the events at Fukushima reveal the order’s inadequacy in that the order “lacks a requirement for licensees to re-equip their spent fuel pools to low-density, open-frame design and storage of assemblies >5 years removed from the reactor core placed in dry casks.”¹⁰

Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status: Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Effective Immediately), 77 Fed. Reg. 16,082 (Mar. 19, 2012) (EA-12-051). These enforcement orders do not represent the final NRC response to the events at Fukushima Dai-ichi or to the lessons learned arising from those events. Rather, they represent just one part of a developing response on multiple fronts. *See* 77 Fed. Reg. at 16,099; *id.* at 16,083; *see also* Staff Requirements Memorandum for SECY-11-0093, Near-Term Report and Recommendations for Agency Actions Following the Events in Japan (Aug. 19, 2011).

³ 77 Fed. Reg. at 16,099.

⁴ *Id.* at 16,100.

⁵ *Id.* at 16,084.

⁶ *Id.*

⁷ At the outset of the proceeding, Pilgrim Watch was joined by Beyond Nuclear, as co-petitioner. However, Beyond Nuclear subsequently withdrew its co-petition. *See* Beyond Nuclear Withdrawal of Its April 3, 2012 Pleading and Request to Co-Petition with the Pilgrim Watch April 2, 2012 Petition for Leave to Intervene and Request for Public Hearing (May 9, 2012).

⁸ Petition on Hardened Vents at 1; Petition on Spent Fuel Pool Instrumentation at 1-2; Pilgrim Watch Reply to Answers to Pilgrim Watch Requests for Hearing at 2-3 (Apr. 27, 2012) (Reply Brief).

⁹ Petition on Hardened Vents at 3.

¹⁰ Petition on Spent Fuel Pool Instrumentation at 1.

In response, both the NRC Staff and the licensee for the Pilgrim facility, Entergy Nuclear Operating Co. and Entergy Nuclear Operations, Inc. (Entergy) oppose the grant of the Pilgrim Watch petitions, principally for the same reasons:¹¹ (1) Pilgrim Watch raises issues that are beyond the scope of the proceeding; (2) Pilgrim Watch fails to provide sufficient information to establish its standing to challenge the orders in question; and (3) Pilgrim Watch fails to offer an admissible contention under 10 C.F.R. § 2.309(f)(1).

For the reasons set forth below, we conclude Pilgrim Watch raises issues beyond the scope of the proceeding. Accordingly, its petitions must be *denied*.¹²

II. ANALYSIS

Although Entergy and the Staff oppose the grant of the Pilgrim Watch petitions on several independent grounds, we need consider here only their insistence that those petitions raise issues beyond the scope of the proceeding. For it is clear on the basis of both judicial and Commission precedent that enforcement orders such as the two here-involved are not open to challenge in an adjudicatory proceeding on Pilgrim Watch's claim of inadequacy.

We begin the discussion of the scope question with the 1983 decision of the United States Court of Appeals for the District of Columbia Circuit in *Bellotti v. NRC*.¹³

In *Bellotti*, finding deficiencies in the management of the same Pilgrim facility that is the focus of the Pilgrim Watch petitioners, the NRC issued an enforcement order to then-licensee Boston Edison, amending the Pilgrim operating license to require development of a plan for reappraisal and improvement of management functions as well as imposing a civil penalty.¹⁴ The enforcement order indicated that any subsequent proceeding regarding the order would be limited in scope to the issue of whether, "on the basis of matters set forth [therein, the] order should be sustained."¹⁵ Thereafter, Francis X. Bellotti, the Attorney General of the Commonwealth of Massachusetts, petitioned to intervene and requested a hearing to address the adequacy of the plan, the plant's continued operation,

¹¹ So too, numerous *amicus curiae*, representing licensees affected by the respective enforcement orders, opposed the petitions on much the same grounds.

¹² In reaching this decision on the petitions we also hereby *grant* the Pilgrim Watch Motion for Leave to File Transcript Corrections (June 15, 2012), and we *deny* the Pilgrim Watch Motion to Strike Staff Response of June 26, 2012 (June 27, 2012).

¹³ *Bellotti v. NRC*, 725 F.2d 1380 (D.C. Cir. 1983), *aff'g, sub nom.*, *Boston Edison Co.* (Pilgrim Nuclear Power Station), CLI-82-16, 16 NRC 44 (1982).

¹⁴ *Id.* at 1381.

¹⁵ 47 Fed. Reg. 4171, 4173 (Jan. 28, 1982).

the nature of necessary improvements, and the adequacy of implementation of required changes.¹⁶

The Commission concluded that Attorney General Bellotti's challenges were beyond the scope of the proceeding because he "[did] not oppose the issuance of the order nor [did] he raise in his petition or brief any suggestion that it [was] unsupported by the facts it set[] forth. . . . If anything, the Attorney General suggest[ed] that [the] facts not only support[ed] [the] order but also support[ed] further NRC action."¹⁷ As a result of this determination, the Commission denied the petition.¹⁸

On the *Bellotti* appeal, the District of Columbia Circuit affirmed the Commission's decision, holding that Massachusetts had no cognizable adverse interest in the license amendment proceeding, given the scope of the proceeding the Commission established.¹⁹ The court concluded that, by its terms, section 189a of the Atomic Energy Act of 1954²⁰ conferred upon the Commission authority to define the scope of its proceedings, which, in enforcement proceedings, the Commission took to permit challenges solely on whether an order should be sustained.²¹ In the court's opinion, that conclusion was also administratively proper because, if the opposite were true and petitioners could raise any issue regarding an enforcement order issued to a facility, then proceedings would be expanded into "virtually interminable, free-ranging investigations."²² Attorney General Bellotti's petition, which did not seek rescission of the enforcement order, but rather sought additional enforcement measures beyond those prescribed by the order, therefore had been properly denied.²³

More recently, in a similar factual context, the Commission returned to the question of an enforcement proceeding's scope in *Alaska Department of Transportation*.²⁴ As in *Bellotti*, the NRC had issued an enforcement order

¹⁶ *Bellotti*, 725 F.2d at 1381.

¹⁷ *Pilgrim*, CLI-82-16, 16 NRC at 46.

¹⁸ *Id.* at 47.

¹⁹ *Bellotti*, 725 F.2d at 1381, 1383.

²⁰ 42 U.S.C. § 2239a.

²¹ *Bellotti*, 725 F.2d at 1381. Also underpinning the court's decision was what it considered the NRC's "larger regulatory structure" available to petitioners. *Id.* at 1382. The court observed that as part of that structure, petitioners denied a hearing for raising an issue outside the scope of a proceeding could still raise the issue through a petition for enforcement under 10 C.F.R. § 2.206. *Id.* at 1382-83.

²² Under such a regime, "[f]ew formal proceedings would be scheduled, and the Commission's substantive discretion to decide what is important enough to merit examination would be subverted by a procedural provision requiring the Commission to consider any issue any intervenor might raise." *Id.* at 1381.

²³ *Id.* at 1383.

²⁴ *Alaska Department of Transportation and Public Facilities*, CLI-04-26, 60 NRC 399 (2004), *rev'g* LBP-04-16, 60 NRC 99 (2004).

against a licensee (the Alaska Department of Transportation) charging it with discriminatory acts against the state's radiation safety officer in violation of 10 C.F.R. § 30.7.²⁵ As in *Bellotti*, a petitioner requested a hearing, seeking additional enforcement relief beyond that prescribed in the order — civil penalties and enforcement actions against individual managers.²⁶ Reversing a licensing board's grant of the petition, the Commission held, citing *Bellotti*, that “[t]he only issue in an NRC enforcement proceeding is whether the order should be sustained. . . . Boards are not to consider whether such orders need strengthening.”²⁷

It is true that, unlike the enforcement orders issued in *Bellotti* and *Alaska Department of Transportation*, the two orders now in front of us do not involve a response to determined violations of Commission regulations. That fact is, however, of no significance given the Commission's ruling in *Maine Yankee Atomic Power Co.* (Maine Yankee Atomic Power Station), CLI-04-5, 59 NRC 52 (2004), and *Detroit Edison Co.* (Fermi Power Plant Independent Spent Fuel Storage Installation), CLI-10-3, 71 NRC 49 (2010).

Maine Yankee involved a challenge to an NRC enforcement order, issued under 10 C.F.R. § 2.202, that modified the licenses of all 10 C.F.R. Part 50 licensees that stored or had near-term plans to store spent fuel in an independent spent fuel storage installation.²⁸ On reviewing the content of a challenge to that order, the licensing board determined that the challenge could not be entertained. This was because the petitioner was not opposing the substance of the order, but rather was seeking the imposition of additional license modifications.²⁹ Affirming the licensing board's rejection of the challenge, the Commission cited *Bellotti* and added that “[i]f a petitioner could avoid the Commission's limitation on the scope of an enforcement order simply by characterizing its petition as opposing the order unless additional measures are granted, the Commission would never be able to limit its proceedings.”³⁰

Similarly, in *Fermi*, the Commission affirmed a licensing board's application of *Bellotti* to deny a hearing request by petitioners who sought to challenge an immediately effective enforcement order requiring Detroit Edison to take “certain physical security measures, in addition to those already required by [NRC]

²⁵ *Id.* at 401-02.

²⁶ *Id.* at 401-03.

²⁷ *Id.* at 404.

²⁸ *Maine Yankee*, CLI-04-5, 59 NRC at 54 n.2 (citing Order Modifying Licenses (Effective Immediately), 67 Fed. Reg. 65,152 (Oct. 23, 2002)).

²⁹ *Id.* at 56-58.

³⁰ *Id.* at 58 (internal quotations omitted).

regulations, to protect the spent fuel it plan[ned] to store” at its power plant site.³¹ Petitioners endeavored to bring their claim within the *Bellotti* rule by arguing that they would be better off if the order were rescinded because, otherwise, the order could have “negative effects” by creating a “false sense of security by emphasizing the formation of human security workforce over the substance of putting into place physical barriers and important technologies to protect the plant itself”³² The Commission rejected this argument as being “both cursory and unsupported,” holding that petitioners “do not explain why the ‘false sense of security’ purportedly created by the Staff Order — whose security benefits Petitioners do not question — would be ameliorated by revoking the Order.”³³

In the instant case, Pilgrim Watch’s contentions — on their face — fall squarely within the *Bellotti* rule because those contentions explicitly complain that the safety enhancements in the Enforcement Orders are insufficient and require additional safety measures.³⁴

At oral argument, we provided Pilgrim Watch every opportunity to distinguish *Bellotti* and its progeny. Pilgrim Watch’s counsel made it crystal clear that the claim is not that the implementation of the challenged orders would reduce the existing level of safety but, rather, that safety of plant operation would be enhanced if additional measures were required.³⁵ As such, the claim falls squarely within the *Bellotti* rule and must be rejected.³⁶

³¹ CLI-10-3, 71 NRC at 50. These physical security measures were developed by the Commission in the wake of the September 11 terrorist attacks and had been deemed “necessary to protect the public health and safety in the ‘current threat environment’ and [were] intended ‘to strengthen licensees’ capabilities and readiness to respond to a potential attack on a nuclear facility.’” *Detroit Edison Co.* (Fermi Power Plant Independent Spent Fuel Storage Installation), LBP-09-20, 70 NRC 565, 568 (2009).

³² *Fermi*, CLI-10-3, 71 NRC at 52-53.

³³ *Id.* at 53.

³⁴ See *supra* text accompanying notes 9-10.

³⁵ See, e.g., Tr. at 62 (Pilgrim Watch counsel indicates that petitioner does not maintain that safety would be diminished by implementing the enforcement orders; rather “[w]hat we’re saying is that the level of safety enhancement that’s required by these orders is insufficient.”); *id.* (Pilgrim Watch counsel acknowledges the orders will result in implementation of “some safety measures.”); *id.* at 65 (Pilgrim Watch counsel concedes that “both orders will provide some enhanced safety.”).

³⁶ For the first time in its Reply Brief and later at oral argument, Pilgrim Watch attempted to recast its claim to fit it within the *Bellotti* rule. See, e.g., Reply Brief at 7; Tr. at 81 (Pilgrim Watch counsel asserts that the enforcement orders “should not be sustained We’re not saying these orders erode public safety. We’re saying they erode the ability of the public to achieve adequate protection”). Even assuming *arguendo* that we should entertain this late-filed argument, we find it utterly inadequate to remove Pilgrim Watch’s contentions from the *Bellotti* rule. To the extent Pilgrim Watch seeks to have Entergy implement additional safety measures, its recourse is to petition for rulemaking pursuant to 10 C.F.R. § 2.802, or to petition for license modification, suspension, or revocation pursuant to 10 C.F.R. § 2.206.

(Continued)

III. CONCLUSION

For the reasons set forth above, the two petitions are *denied*.³⁷
It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Alan S. Rosenthal, Chairman
ADMINISTRATIVE JUDGE

E. Roy Hawkens
ADMINISTRATIVE JUDGE

Dr. Anthony J. Baratta
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 10, 2012

The additional opinion of Judge Rosenthal follows.

Contrary to the view expressed *infra* in the Additional Opinion of Judge Rosenthal, and guided by the maxim that adjudicative bodies are to “accord Government records and official conduct a presumption of legitimacy,” *United States Department of State v. Ray*, 502 U.S. 164, 179 (1991), Judges Hawkens and Baratta find that the record before the Board falls far short of rebutting the presumption that 10 C.F.R. § 2.206 is a meaningful avenue for seeking administrative relief.

³⁷ The Pilgrim Watch Motion for Leave to File a Reply to Entergy’s Comments on NRC Staff Response to the Board Order Regarding Petitions Under 10 C.F.R. § 2.206 of July 3, 2012 (July 10, 2012) is hereby *granted*.

Additional Opinion of Judge Rosenthal

I fully subscribe to the Board's decision. It is beyond cavil that Pilgrim Watch's hearing requests are entirely foreclosed by the teachings of *Bellotti* and its progeny.

I am nonetheless constrained to write separately to address a statement in the Commission's *Bellotti* decision, later upheld by the United States Court of Appeals for the District of Columbia Circuit. Although entirely unnecessary to the result reached therein (i.e., the denial at the threshold of a hearing requester's challenge to the adequacy of an NRC enforcement order), the Commission pointed to one of its Rules of Practice¹ as providing an alternative avenue for the presentation of the concerns that undergirded that unsuccessful challenge.²

Section 2.206 provides in relevant part that "[any] person may file a request to institute a proceeding pursuant to [section] 2.202 to modify, suspend, or revoke a license, or for any other action as may be proper." For its part, section 2.202 specifically authorizes the institution of such a proceeding; indeed, the Fukushima-related enforcement orders that are the subject of the proceeding now before us were issued under that authority.³

Bellotti was scarcely the first or last occasion on which the filing of a section 2.206 petition has been cited as an available alternative to the seeking, in an adjudicatory context, of such substantive relief as the modification, suspension, or revocation of an NRC-issued license. To the contrary, over the course of the many years that I have been associated with this agency, as first an Appeal Panel member and more recently a member of the Licensing Board Panel, seekers of some form of substantive relief have often been told by the NRC Staff, if not by the Commission itself, something along the lines of the following: You have not met the standing and/or contention admissibility requirements that are a condition precedent to obtaining an adjudicatory hearing on your safety or environmental concerns but there remains available the opportunity to present those concerns in a petition filed with the appropriate NRC official.

Over the course of the same number of years, there has been considerable speculation regarding just how meaningful the section 2.206 remedy has proven to be in practice. Beyond question, there has been the grant of requests for such procedural action as, e.g., the institution of an investigation into asserted misconduct. There equally can be no doubt that, in many instances, the petitioner derived benefit from the action taken. At the same time, there was uncertainty

¹ 10 C.F.R. § 2.206.

² *Boston Edison Co. (Pilgrim Nuclear Power Station)*, CLI-82-16, 16 NRC 44, 47 (1982), *aff'd, sub nom.*, *Bellotti v. NRC*, 725 F.2d 1380 (D.C. Cir. 1983).

³ 77 Fed. Reg. 16,098, 16,100 (Mar. 19, 2012) (EA-12-050); 77 Fed. Reg. 16,082, 16,084 (Mar. 19, 2012) (EA-12-051).

regarding the extent to which there had been the like grant of requests for such substantive relief as was being sought in *Bellotti* and is now being sought in the matter at bar.

Believing this to be an appropriate occasion to endeavor to remove that uncertainty, with the indulgence of Judges Hawken and Baratta I issued an order on May 17, 2012, in which I directed the Staff to provide the Board with a list of those section 2.206 petitions filed with it since January 1975 (the birth of the agency) in which *substantive* relief had been sought and granted.⁴ In the case of each petition so listed, a summary of the granted relief was also to be supplied.

On June 15, the Board received the Staff response. We were told that the Staff had examined a total of 387 Directors' Decisions. It had then "screened out" those that had been denied. That left two petitions that were said to have been granted in full in the 37 years under scrutiny, and 140 that, according to the Staff, had either been granted in part or "although denied, either prompted responsive action by the Staff or were already being addressed by the Staff."⁵ A summary was provided of the substantive relief said to have been granted in each instance.⁶

The most cursory examination of the 142 items left me in no doubt that there had been a total failure by the Staff to have understood the direction contained in the May 17 order. For one thing, how possibly could the outright denial of a petition be considered the according of substantive relief simply because the matter in question was already being addressed by the Staff? And was it reasonable to accept that, in every one of those many instances in which the petition was granted in part and denied in part, the granted part represented the totality of the substantive relief that had been sought?

Had there been room for doubt, however, it would have been dispelled by an examination of one of the two items that the Staff represented to be the grant of full substantive relief.⁷ In response to a section 2.206 petition alleging that the Pacific Gas & Electric Company (PG&E) had violated certain antitrust conditions in the Diablo Canyon operating licenses, the Director of the Office of Nuclear Reactor Regulation withheld action on the petition until the issuance of a ruling by a federal district court on related issues. That ruling being adverse to PG&E, unsurprisingly the utility was then directed by the Staff to submit a report

⁴ Licensing Board Memorandum and Order (Requesting Filing on Petitions Under 10 C.F.R. § 2.206) at 1-2 (May 17, 2012) (unpublished).

⁵ NRC Staff Response to the Board Order Regarding Petitions Under 10 C.F.R. § 2.206, at 2 (June 15, 2012).

⁶ *Id.*, Attach. (Listing of Section 2.206 Substantive Relief).

⁷ Listing of Section 2.206 Substantive Relief at 16, 22 (citing *Battelle Memorial Institute Columbus Operations* (Columbus, Ohio), DD-94-11, 40 NRC 359 (1994) and *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), DD-90-3, 31 NRC 595 (1990)).

regarding the steps the utility had taken and planned to take to comply with it.⁸ In short, far from providing substantive relief itself in response to the section 2.206 petition, the Staff simply had given effect, as was its clear obligation, to a judicial determination that there had been a violation of the terms of an NRC-issued license.

In the circumstances, it appeared that the appropriate course was to give the Staff a second opportunity to specify which of the 142 items identified in the June 15 filing in fact represented, for the present purposes of ascertaining the meaningfulness of the section 2.206 remedy, the grant of substantive relief requested in a section 2.206 petition. That opportunity was provided in a June 19 order,⁹ to which the Staff responded in a June 26 submission that insisted that the June 15 filing had been in full compliance with the Board's May 17 directive.¹⁰ We were told in emphatic terms that "the Staff stands by its initial determination and continues to maintain that each of the [142] instances [cited in the June 15 filing] reflects substantive relief provided to the petitioner."¹¹

With respect to the PG&E matter alluded to above, the Staff would have it that the Notice of Violation that inevitably followed the district court ruling qualified as the grant of substantive relief despite the fact that, apparently, no civil penalty was assessed against PG&E on the strength of that notice. It is not necessary, however, to quarrel with the Staff's assertion on that score in order to establish the total lack of substance to its remarkable insistence that, without a single exception, every one of the 140 partial grants of section 2.206 petitions accorded substantive, rather than simply procedural, relief to the petitioner.

It might be, as the Staff further maintains, "that reasonable minds can differ with respect to whether a particular matter is one of procedure or of substance."¹² And it might also be that there are some forms of substantive relief that do not involve the modification, suspension, or revocation of a license. That said, no reasonable mind applying the most expansive definition of "substantive" could possibly apply such a characterization in the case of, to cite but one example, the section 2.206 petition acted upon in 1997 with regard to the St. Lucie and Turkey Point facilities that, the Staff would have it, provided substantive relief.¹³

⁸ *Diablo Canyon*, DD-90-3, 31 NRC at 602-04.

⁹ Licensing Board Memorandum and Order (Directing Staff to Amend Filing on 10 C.F.R. § 2.206) (July 19, 2012) (unpublished).

¹⁰ NRC Staff Response to the Board Order Directing Staff to Amend Filing on 10 C.F.R. § 2.206 at 3 (June 26, 2012).

¹¹ *Id.*

¹² *Id.* at 2.

¹³ See *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2; Turkey Point Nuclear Generating Plant, Units 3 and 4), DD-97-20, 46 NRC 96 (1997).

There, petitioners requested that the NRC take enforcement actions with respect to Florida Power & Light Co. (FPL) and certain employees for allegedly retaliating against one of the petitioners, who, when an FPL employee, had raised nuclear safety concerns with his management.¹⁴ Among the various forms of relief sought, petitioners requested that the NRC modify, suspend, or revoke FPL's operating licenses for the St. Lucie and Turkey Point facilities; conduct a public hearing before a licensing board on whether FPL had violated NRC regulations; impose a civil penalty on certain FPL employees; and conduct an interview with petitioners regarding the substance of their section 2.206 petition.¹⁵ In response, the NRC Staff held a public meeting with a petitioner, during which he elaborated on the bases for the petition and raised other concerns.¹⁶ All other relief sought by petitioners was denied.¹⁷ Yet, the Staff offers this as one of 142 instances on which substantive relief sought in the petition was granted.

The short of the matter thus is that, with regard to 2 of the 142 section 2.206 petitions on the Staff's list, there has been an egregious and mystifying mischaracterization of the nature of the relief granted to the petitioner. There remains, however, the 140 other petitions on the Staff's list. In the present circumstances, must one now examine the relief granted with respect to each of those petitions in order to determine whether there has been a like misrepresentation that that relief had been substantive in character?

Upon analysis, I have concluded that no such exceedingly laborious undertaking is required in order to reach a sufficient level of confidence that very few, if any, of the section 2.206 petitions had led either to the modification, suspension, or revocation of an NRC license or to some other administrative action of equally consequential effect. To reach that conclusion, one need not rely entirely, or even primarily, on the high degree of improbability that, with respect to each of the partially granted petitions, the relevant Office Director had granted the most consequential relief sought while, at the same time, denying that of appreciably less significance. Rather, the conclusion can rest on this wholly reasonable inference: had there been indisputable instances of grants of substantive relief, such as significant affirmative administrative action taken with regard to a licensee or license, in compliance with the Board's first order those instances would have been simply identified by the Staff without the addition of the patently absurd and demonstrably false claim that all partial grants were substantive.¹⁸

¹⁴ *Id.* at 99-100.

¹⁵ *Id.* at 97-98.

¹⁶ *Id.* at 98.

¹⁷ *Id.* at 106-07.

¹⁸ In a July 3, 2012 filing, Entergy points to four of the section 2.206 petitions on the Staff's list that, according to Entergy, produced substantive relief. *See* Entergy's Comments on NRC Staff Response

(Continued)

Although deemed very remote, I cannot exclude the possibility that the drawn inference gives too much credit to the Staff. Should, however, the inference be on target, I question the justification for the often reference, both in Commission decisions and in Staff briefs filed with licensing boards, to the broad availability of the section 2.206 remedy as a realistic alternative to an adjudicatory hearing. Where it has been determined that the hearing requester, such as Pilgrim Watch here, has not established an entitlement to a licensing board's evidentiary consideration of a claim for what manifestly amounts to substantive relief (here the further modification of reactor operating licenses), the matter should be left at that. An unsuccessful hearing requester is, of course, always free to invoke the section 2.206 remedy. But, at least where truly substantive relief is being sought (i.e., some affirmative administrative action taken with respect to the licensee or license), there should be no room for a belief on the requester's part that the pursuit of such a course is either being encouraged by Commission officialdom or has a fair chance of success.¹⁹

to the Board Order Regarding Petitions Under 10 C.F.R. § 2.206 (July 3, 2012). In none of the cited instances, however, was any affirmative administrative action taken with respect to the licensee or license in question. Yet, the petitioner in each instance had sought, directly or indirectly, such action.

¹⁹ My colleagues disagree with the conclusion reached in this opinion. Their reliance in footnote 36 of the Board decision upon the well-established presumption of legitimacy of official action is, however, unavailing. To begin with, the question here is not whether section 2.206 is "a meaningful avenue for seeking administrative relief." It is, instead, whether in practice, petitions filed under that section have often, if ever, provided truly substantive relief (i.e., requested action of consequence taken against a licensee or license). On that score, the record must speak for itself.

Moreover, it is not my view that section 2.206 provides a totally meaningless remedy. As noted in the text, *supra* p. 9, there doubtless have been many occasions upon which section 2.206 petitioners have received beneficial, if not substantive, responses to their petitions.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
William J. Froehlich
Nicholas G. Trikouros

In the Matter of

Docket No. 50-483-LR
(ASLBP No. 12-919-06-LR-BD01)

UNION ELECTRIC COMPANY
(Callaway Plant, Unit 1)

July 17, 2012

In this 10 C.F.R. Part 54 proceeding regarding the application of Union Electric Company d/b/a Ameren Missouri (Ameren) for the renewal of its 10 C.F.R. Part 50 operating license for the Callaway Plant, Unit 1, that would authorize Ameren to operate that facility in Callaway County, Missouri, for an additional 20 years, the Licensing Board concludes that petitioner Missouri Coalition for the Environment (MCE), while having provided sufficient support to establish its representational standing “as of right” to intervene in the proceeding, failed to demonstrate that any of its three National Environmental Policy Act (NEPA)/environmental-related contentions alleging deficiencies in the Ameren environmental report (ER) was admissible so as to warrant granting MCE’s hearing petition.

RULES OF PRACTICE: STANDING TO INTERVENE

For an individual or organization to be deemed a “person whose interest may be affected by the proceeding” under Atomic Energy Act (AEA) § 189a, 42 U.S.C. § 2239(a)(1)(A), so as to have standing “as of right” such that party status can be granted in an agency adjudicatory proceeding, the intervention petition must include a statement of (1) the petitioner’s name, address, and telephone

contact information; (2) the nature of the petitioner's right under the AEA to be made a party; (3) the nature of the petitioner's interest in the proceeding, whether property, financial, or otherwise; and (4) the possible effect of any decision or order that might be issued in the proceeding on the petitioner's interest. *See* 10 C.F.R. § 2.309(d)(1)(i)-(iv). In assessing this information in a section 189a adjudicatory proceeding to determine whether the petitioner has established its standing, the Commission generally applies contemporaneous judicial standing concepts, inquiring whether the participant has established that (1) it has suffered or will suffer a distinct and palpable injury that constitutes injury-in-fact within the zones of interest arguably protected by the governing statutes (e.g., the AEA, NEPA, 42 U.S.C. § 4321 et seq.); (2) the injury is fairly traceable to the challenged action; and (3) the injury is likely to be redressed by a favorable decision. *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996).

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

An entity may seek to demonstrate its standing to intervene on behalf of its members, i.e., representational standing, but that entity must then show it has an individual member who can fulfill all the necessary standing elements and who has authorized the entity to represent his or her interests. *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 163 (2000).

**RULES OF PRACTICE: STANDING TO INTERVENE (POWER
REACTOR LICENSE RENEWAL; PRESUMPTION BASED ON
GEOGRAPHIC PROXIMITY)**

In assessing a petition submitted in a 10 C.F.R. Part 54 power reactor license renewal proceeding to determine whether these standing elements are met, which a licensing board must do even if there are no objections to a petitioner's standing, the board may apply the proximity presumption. Under this presupposition, for an entity seeking representational standing, the standing elements associated with causation are deemed fulfilled if a member of the entity that is seeking representational standing resides or has significant contacts in an area within a 50-mile radius of the facility in question.

RULES OF PRACTICE: CONTENTIONS (SPECIFICITY AND BASIS; SUPPORTING INFORMATION OR EXPERT OPINION; CHALLENGE TO LICENSE APPLICATION; SCOPE OF THE PROCEEDING; MATERIALITY)

Section 2.309(f)(1) of the Commission's rules of practice specifies the requirements that must be met if a contention is to be deemed admissible. Specifically, a contention must provide (1) a specific statement of the legal or factual issue sought to be raised; (2) a brief explanation of its basis; (3) a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (4) sufficient information demonstrating that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief. *See* 10 C.F.R. § 2.309(f)(1)(i), (ii), (v), (vi). In addition, the petitioner must demonstrate that the issue raised in the contention is both "within the scope of the proceeding" and "material to the findings the NRC must make to support the action that is involved in the proceeding." *Id.* § 2.309(f)(1)(iii), (iv). Failure to comply with any of these requirements is grounds for dismissing a contention. *See South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 7 & n.33 (2010).

RULES OF PRACTICE: CONTENTIONS (SCOPE OF PROCEEDING)

All proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and directive referring the proceeding to the Licensing Board. *See* 10 C.F.R. § 2.309(f)(1)(iii); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 329 (2000); *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985). As a consequence, any contention that falls outside the specified scope of the proceeding must be rejected. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 435-36 (2011).

RULES OF PRACTICE: CONTENTIONS (MATERIALITY)

To be admissible, the regulations require that all contentions assert an issue of law or fact that is material to the outcome of a licensing proceeding, meaning that the subject matter of the contention must impact the grant or denial of a pending

license application. *See* 10 C.F.R. § 2.309(f)(1)(iv); *see Luminant Generation Co., LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 388-89 (2012). This requirement of materiality often dictates that any contention alleging deficiencies or errors in an application also indicate some significant link between the claimed deficiency and either the public health and safety or the environment. *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 75-76 (1996), *rev'd in part on other grounds*, CLI-96-7, 43 NRC 235 (1996); *see also Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 439-41 (2002), *petition for review denied*, CLI-03-12, 58 NRC 185, 191 (2003).

RULES OF PRACTICE: CONTENTIONS (SUPPORTING INFORMATION OR EXPERT OPINION)

It is the petitioner's obligation to present the factual allegations and/or expert opinion necessary to support its contention. *See* 10 C.F.R. § 2.309(f)(1)(v); *USEC Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 457 (2006). While a board may appropriately view a petitioner's supporting information in a light favorable to the petitioner, failure to provide such information regarding a proffered contention requires that the contention be rejected. *See Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991). Neither speculation nor conclusory assertions, even by an expert, alleging that a matter fails to satisfy the AEA or NEPA will suffice to allow the admission of a proffered contention. *See Diablo Canyon*, CLI-11-11, 74 NRC at 452 n.139; *Amer. Centrifuge Plant*, CLI-06-10, 63 NRC at 472; *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003). If a petitioner neglects to provide the requisite support for its contentions, it is not within the board's power to make assumptions or draw inferences that favor the petitioner, nor may the board supply information that is lacking. *See Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 553 (2009); *Palo Verde*, CLI-91-12, 34 NRC at 155. Likewise, simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support the admission of the contention. *See Fansteel*, CLI-03-13, 58 NRC at 204-05.

RULES OF PRACTICE: CONTENTIONS (CHALLENGE TO LICENSE APPLICATION; SUPPORTING INFORMATION OR EXPERT OPINION)

All properly formulated contentions must focus on the license application in

question, challenging either specific portions of, or alleged omissions from, the application (including the safety analysis report/technical report and the ER) so as to establish there is a genuine dispute with the application on a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(vi). Any contention that fails directly to controvert the application or that mistakenly asserts the application does not address a relevant issue will be dismissed. *See N. Trend Expansion Project*, CLI-09-12, 69 NRC at 557; *Amer. Centrifuge Plant*, CLI-06-10, 63 NRC at 462-63; *see also Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-6, 75 NRC 352, 371 (2012); *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 342-44 (2012), *petition for review filed sub nom. Beyond Nuclear v. NRC*, No. 12-1561 (1st Cir. May 7, 2012). Similarly, a petitioner that fails to provide sufficient factual or expert support for the claims in its contention in contravention of section 2.309(f)(1)(v) also may have failed to show a genuine dispute with the application as required under section 2.309(f)(1)(vi). *See FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 404, 405 (2012); *see also Comanche Peak*, CLI-12-7, 75 NRC at 390 & n.43.

NEPA: CONTENTIONS (PREMATURITY)

RULES OF PRACTICE: CONTENTIONS (PREMATURITY)

If at the time a hearing petition is filed, the exact nature of the measures that will be proposed by an applicant under an agency enforcement order are simply too uncertain to permit a determination whether one or more of them will require a NEPA analysis of their environmental impact implications as part of a license renewal proceeding, an appropriate challenge and a board determination will need to abide at least the applicant's proposal regarding the particular measures it intends to implement to comply with the requirements of the enforcement order.

NEPA: REQUIREMENT TO LIST/DESCRIBE STATUS OF COMPLIANCE WITH FEDERAL PERMITS, LICENSES, APPROVALS, AND OTHER ENTITLEMENTS

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.45(d))

Contention that NRC Staff enforcement order and information request are "approvals" under section 51.45(d), which has implication that any agency prerequisite with which a license renewal applicant must comply to operate a reactor facility during an extended term constitutes an "approval" under section 51.45(d), would entail an unreasonably strained definition of "approval." An applicant must comply with any number of NRC regulations to continue operating a reactor

facility, but those regulations cannot be considered “approvals” such that an applicant would be required to describe its compliance with each provision in its ER. This is clearly not the intent of section 51.45(d). Moreover, the plain meaning of the word “approval,” which requires an affirmative action on the part of an approver, clearly establishes that requiring compliance is different from granting an approval. *See Webster’s Third New International Dictionary* 106 (Philip B. Gove ed. in chief, unabridged, 1976) (defining “approval” as “the act of approving” and “certification as to acceptability”).

NEPA: REQUIREMENT TO LIST/DESCRIBE STATUS OF COMPLIANCE WITH FEDERAL PERMITS, LICENSES, APPROVALS, AND OTHER ENTITLEMENTS

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.45(d))

With regard to a Staff information request, if that information directive simply requires that licensees provide certain information to the agency and explains that the NRC will evaluate the information provided by licensees to determine whether further regulatory actions are required, but does not state that the information is required for the NRC to grant (or deny) a permit, license, approval, or other entitlement, the Staff’s information request is not an “approval” under section 51.45(d).

NEPA: REQUIREMENT TO LIST/DESCRIBE STATUS OF COMPLIANCE WITH FEDERAL PERMITS, LICENSES, APPROVALS, AND OTHER ENTITLEMENTS

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.45(d))

A Staff enforcement order is essentially a directive to a licensee to achieve compliance with the order’s requirements by a certain date. That an enforcement order has the unique feature of allowing a licensee to propose its own strategies for coming into compliance, rather than mandating a certain set of plant alterations, does not change the fundamental character of the order and transform it into an “approval.” Such an enforcement order, which will be treated by the licensing board as it would any other enforcement order, does not establish an “approval” process under section 51.45(d). A licensee, therefore, is not required to list that order, or the licensee’s compliance with the order’s terms, in the ER supporting its application for renewal of its reactor operating license.

NEPA: REQUIREMENT TO LIST/DESCRIBE STATUS OF COMPLIANCE WITH FEDERAL PERMITS, LICENSES, APPROVALS, AND OTHER ENTITLEMENTS

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.45(d))

Even if compliance with an information request and/or an enforcement order were deemed to be a prerequisite for license renewal, an applicant arguably would have already satisfied its duty under section 51.45(d) in an instance when its ER notes that one of the “Federal permits, licenses, approvals [or] other entitlements” that it must receive is a license renewal from the NRC. By noting that it must receive a license renewal from the NRC, the applicant necessarily implies that it must satisfy all of the requirements established by the NRC to receive that renewal. Section 51.45(d) surely does not require that an applicant explain every aspect of the process it must pursue in the course of obtaining a federal permit, license, or approval. *See Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-12-12, 75 NRC 742, 764-65 (2012). Accordingly, the applicant would not have to list either of these items as a required permit, license, or approval given that the applicant already has listed its NRC license renewal generally as a federal permit, license, or approval.

NEPA: CONSIDERATION OF IMPACTS (REASONABLY FORESEEABLE IMPACTS)

In implementing NEPA § 102, 42 U.S.C. § 4332(2)(C)(i)-(iii), section 51.53(c)(2) of the Commission’s regulations requires that an ER submitted by a license renewal applicant address the environmental impacts of the proposed action and compare those impacts to the impacts of alternative actions. But the Commission has held repeatedly that an applicant need only consider those alternatives that are reasonable. *See, e.g., Seabrook*, CLI-12-5, 75 NRC at 341.

NEPA: CONSIDERATION OF ALTERNATIVES (ENVIRONMENTAL IMPACT STATEMENT; ENVIRONMENTAL REPORT)

The Commission has held that the Staff’s environmental impact statement (EIS) “need only discuss those alternatives that . . . ‘will bring about the ends’ of the proposed action,” *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 55 (2001) (quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195 (D.C. Cir.), *cert. denied*, 502 U.S. 994 (1991)), a principle equally applicable to an ER, *see Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 263, *aff’d*, CLI-09-22, 70 NRC 932 (2009).

**NEPA: CONSIDERATION OF ALTERNATIVES (WIND
GENERATION AS ALTERNATIVE IN REACTOR LICENSE
RENEWAL PROCEEDING)**

In its reactor license renewal rulings on wind-related NEPA alternatives contentions, the Commission was very clear that petitioners must demonstrate that wind generation can provide sufficient baseload power to replace the nuclear plant at issue by showing that such wind power is both technically feasible and commercially viable in the near future. *See Davis-Besse*, CLI-12-8, 75 NRC at 402; *Seabrook*, CLI-12-5, 75 NRC at 342.

**NEPA: CONSIDERATION OF ALTERNATIVES (WIND
GENERATION AS ALTERNATIVE IN REACTOR LICENSE
RENEWAL PROCEEDING)**

The showing needed under the Commission's *Seabrook* and *Davis-Besse* cases relates to the discussion necessary to support a NEPA alternatives contention in a 10 C.F.R. Part 54 reactor license renewal proceeding, which involves the replacement of an existing electrical generation source with an alternative source that likely has yet to be constructed, rather than in a Part 52 combined license proceeding, in which the proposed construction of an entirely new generation source seemingly would involve a different, and likely broader, set of considerations.

**NEPA: CONSIDERATION OF ALTERNATIVES (WIND
GENERATION AS ALTERNATIVE IN REACTOR LICENSE
RENEWAL PROCEEDING)**

Per the Commission's *Seabrook* decision, *see* CLI-12-5, 75 NRC at 342, 343, the use of the terms "in the relatively near term" and "in the near future" describe the period within which an otherwise technically feasible generation alternative would become commercially viable. These terms clearly denote temporal proximity to the present rather than measuring possible feasibility nearer to the extended term of the subject reactor, at least absent a showing that the technology "while not commercially viable at the time of the application, is under development for large-scale use and is 'likely to' be available during the period of extended operation," *id.* at 342 & n.245.

MEMORANDUM AND ORDER
(Ruling on Standing and Hearing Petition Contention Admissibility)

By application dated December 15, 2011, Union Electric Company, d/b/a Ameren Missouri (Ameren), seeks a 20-year extension of the October 18, 2024 expiration date on the 10 C.F.R. Part 50 operating license for its Callaway Plant, Unit 1, located in Callaway County, Missouri. *See* Ameren, License Renewal Application, Callaway Plant Unit 1, Facility Operating License No. NPF-30, at 1.1-1 (Dec. 15, 2011) (ADAMS Accession No. ML113530372). Pending with this Licensing Board is a hearing request/intervention petition submitted by petitioner Missouri Coalition for the Environment (MCE) challenging certain aspects of the environmental report (ER) Ameren also submitted in support of its renewal application. Specifically, MCE's petition contests the ER's failure to include (1) information regarding the impacts of, and status of compliance with, a recent agency order outlining required responses to the events at the Fukushima Dai-ichi facility following the March 2011 earthquake and tsunami in Japan; and (2) an adequate discussion of wind as an alternative energy source. Both Ameren and the Nuclear Regulatory Commission (NRC) Staff assert that none of the three contentions proffered by MCE regarding these subjects is admissible, so that its hearing request should be denied.

For the reasons set forth below, we conclude that although MCE has established its standing as of right to intervene in this proceeding, none of the contentions set forth in its hearing petition is admissible.

I. BACKGROUND

Subsequent to the December 2011 submission of Ameren's license renewal application for Callaway Unit 1 and in response to a February 16, 2012 hearing opportunity notice, *see* Renewal of Facility Operating License No. NPF-30, Union Electric Company, Callaway Plant, Unit 1, 77 Fed. Reg. 11,173 (Feb. 24, 2012), on April 24, 2012, MCE submitted a hearing request in which MCE maintains that it has standing to intervene in this license renewal proceeding and has provided three admissible National Environmental Policy Act (NEPA)-related contentions. *See* [MCE] Hearing Request and Petition to Intervene in License Renewal Proceeding for Callaway Nuclear Power Plant (Apr. 24, 2012) at 1-2 [hereinafter MCE Hearing Request]. Following the NRC Secretary's April 27 referral of the MCE petition, the Atomic Safety and Licensing Board Panel's Chief Administrative Judge established this Licensing Board to rule upon the validity of that hearing request and conduct an adjudicatory proceeding on the merits of any admissible contentions. *See* Memorandum from Andrew L. Bates, Acting Secretary of the Commission, to E. Roy Hawkens, Chief Administrative

Judge (Apr. 27, 2012); Union Electric Company; Establishment of Atomic Safety and Licensing Board, 77 Fed. Reg. 26,792 (May 7, 2012).

By filings dated May 21, 2012, although not contesting MCE's standing as of right to intervene, both Ameren and the Staff opposed the grant of the MCE petition for failing to provide an admissible contention. *See* Ameren's Answer Opposing the [MCE] Hearing Request and Petition to Intervene (May 21, 2012) at 1-2 & n.3 [hereinafter Ameren Answer]; NRC Staff's Answer to [MCE] Hearing Request and Petition to Intervene (May 21, 2012) at 1 [hereinafter Staff Answer]. In a reply submitted on May 29, 2012, MCE reasserted that all three of its environmental contentions were admissible. *See* [MCE] Reply to Ameren's and NRC Staff's Oppositions to Hearing Request and Petition to Intervene in License Renewal Proceeding for Callaway Nuclear Power Plant (May 29, 2012) at 1 [hereinafter MCE Reply]. Thereafter, during a half-day initial prehearing conference held in Fulton, Missouri, on June 7, 2012, the Board entertained arguments from the participants regarding the admissibility of the three contentions. *See* Tr. at 1-171.

II. ANALYSIS

A. MCE's Standing

1. *Standards Governing Standing*

For an individual or organization to be deemed a "person whose interest may be affected by the proceeding" under Atomic Energy Act (AEA) § 189a, 42 U.S.C. § 2239(a)(1)(A), so as to have standing "as of right" such that party status can be granted in an agency adjudicatory proceeding, the intervention petition must include a statement of (1) the petitioner's name, address, and telephone contact information; (2) the nature of the petitioner's right under the AEA to be made a party; (3) the nature of the petitioner's interest in the proceeding, whether property, financial or otherwise; and (4) the possible effect of any decision or order that might be issued in the proceeding on the petitioner's interest. *See* 10 C.F.R. § 2.309(d)(1)(i)-(iv). In assessing this information in a section 189a adjudicatory proceeding to determine whether the petitioner has established its standing, the Commission generally applies contemporaneous judicial standing concepts, inquiring whether the participant has established that (1) it has suffered or will suffer a distinct and palpable injury that constitutes injury-in-fact within the zones of interest arguably protected by the governing statutes (e.g., the AEA, NEPA, 42 U.S.C. § 4321 et seq.); (2) the injury is fairly traceable to the challenged action; and (3) the injury is likely to be redressed by a favorable decision. *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996). An entity may seek to demonstrate its standing to intervene on behalf

of its members, i.e., representational standing, but that entity must then show it has an individual member who can fulfill all the necessary standing elements and who has authorized the entity to represent his or her interests. *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 163 (2000).

Finally, in assessing a petition submitted in a 10 C.F.R. Part 54 power reactor license renewal proceeding to determine whether these elements are met, which a licensing board must do even if there are no objections to a petitioner's standing, the board may apply the proximity presumption. Under this presupposition, for an entity seeking representational standing, the standing elements associated with causation are deemed fulfilled if a member of the entity that is seeking representational standing resides or has significant contacts in an area within a 50-mile radius of the facility in question.¹

2. Ruling on Standing

DISCUSSION: MCE Hearing Request at 1-2; Ameren Answer at 2 n.3; Staff Answer at 4-5; MCE Reply at 1; Tr. at 6.

RULING: Based on the showing provided in MCE's petition and the five accompanying affidavits of individuals in which each asserts that he or she (1) resides from between 15 and 35 miles of the Callaway facility; and (2) authorizes MCE to represent his or her interests in challenging the Ameren renewal application because it poses safety or environmental concerns,² both applicant Ameren and the Staff have indicated that they do not contest MCE's representational standing to intervene in this proceeding. After assessing the petition and these affidavits under the standards set forth in section II.A.1, above,

¹From the earliest 10 C.F.R. Part 54 contested operating license renewal (OLR) proceedings, licensing boards consistently have applied the same 50-mile proximity presumption that has been employed in Part 50 reactor construction permit and operating license (OL) cases and in Part 52 early site permit and combined license (COL) proceedings. *See, e.g., Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 150 (applying proximity presumption in reactor OLR proceeding), *aff'd on other grounds*, CLI-01-17, 54 NRC 3, 26 n.20 (2001) (Commission need not reach question of whether proximity presumption applies to reactor OLR proceedings). Although the Commission has never explicitly endorsed utilizing this presumption in an OLR proceeding, in the context of a COL hearing it did cite favorably to a licensing board's application of the presumption in a reactor life extension case. *See Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915 n.15 (2009).

²*See* MCE Hearing Request, exh. 1A (Declaration of Ruth Schaefer (Apr. 23, 2012)); *id.* exh. 1B (Declaration of Mary A. Mosley (Apr. 13, 2012)); *id.* exh. 1C (Declaration of Mark Haim (Apr. 23, 2012)); *id.* exh. 1D (Declaration of Carla T. Klein (Apr. 23, 2012)); *id.* exh. 1E (Declaration of Patrick J. Wilson (Apr. 23, 2012)).

we agree that MCE as an organization has established its representational standing to intervene as of right in accord with 10 C.F.R. § 2.309(d)(1).

B. Admissibility of MCE's Contentions

With MCE having established its standing, we turn to the question of the admissibility of its three proffered contentions.

1. Contention Admissibility Standards

Section 2.309(f)(1) of the Commission's rules of practice specifies the requirements that must be met if a contention is to be deemed admissible. Specifically, a contention must provide (1) a specific statement of the legal or factual issue sought to be raised; (2) a brief explanation of its basis; (3) a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (4) sufficient information demonstrating that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief. *See* 10 C.F.R. § 2.309(f)(1)(i), (ii), (v), (vi). In addition, the petitioner must demonstrate that the issue raised in the contention is both "within the scope of the proceeding" and "material to the findings the NRC must make to support the action that is involved in the proceeding." *Id.* § 2.309(f)(1)(iii), (iv). Failure to comply with any of these requirements is grounds for dismissing a contention. *See South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 7 & n.33 (2010).

Moreover, as is pertinent to this proceeding, NRC case law has further developed these requirements, as summarized below:

a. Challenges Outside Scope of Proceeding

All proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and directive referring the proceeding to the Licensing Board. *See* 10 C.F.R. § 2.309(f)(1)(iii); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 329 (2000); *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985). As a consequence, any contention that falls outside the specified scope of the proceeding must be

rejected. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 435-36 (2011).

b. Materiality

To be admissible, the regulations require that all contentions assert an issue of law or fact that is material to the outcome of a licensing proceeding, meaning that the subject matter of the contention must impact the grant or denial of a pending license application. *See* 10 C.F.R. § 2.309(f)(1)(iv); *see Luminant Generation Co., LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 388-89 (2012). This requirement of materiality often dictates that any contention alleging deficiencies or errors in an application also indicate some significant link between the claimed deficiency and either the public health and safety or the environment. *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 75-76 (1996), *rev'd in part on other grounds*, CLI-96-7, 43 NRC 235 (1996); *see also Pacific Gas & Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 439-41 (2002), *petition for review denied*, CLI-03-12, 58 NRC 185, 191 (2003).

c. Need for Adequate Factual Information or Expert Opinion

It is the petitioner's obligation to present the factual allegations and/or expert opinion necessary to support its contention. *See* 10 C.F.R. § 2.309(f)(1)(v); *USEC Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 457 (2006). While a board may appropriately view a petitioner's supporting information in a light favorable to the petitioner, failure to provide such information regarding a proffered contention requires that the contention be rejected. *See Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991). Neither speculation nor conclusory assertions, even by an expert, alleging that a matter fails to satisfy the AEA or NEPA will suffice to allow the admission of a proffered contention. *See Diablo Canyon*, CLI-11-11, 74 NRC at 452 n.139; *Amer. Centrifuge Plant*, CLI-06-10, 63 NRC at 472; *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003). If a petitioner neglects to provide the requisite support for its contentions, it is not within the board's power to make assumptions or draw inferences that favor the petitioner, nor may the board supply information that is lacking. *See Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 553 (2009); *Palo Verde*, CLI-91-12, 34 NRC at 155. Likewise, simply attaching material or documents as a basis for a contention, without setting forth

an explanation of that information's significance, is inadequate to support the admission of the contention. *See Fansteel*, CLI-03-13, 58 NRC at 204-05.

d. Insufficient Challenges to the Application

All properly formulated contentions must focus on the license application in question, challenging either specific portions of, or alleged omissions from, the application (including the safety analysis report/technical report and the ER) so as to establish there is a genuine dispute with the application on a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(vi). Any contention that fails directly to controvert the application or that mistakenly asserts the application does not address a relevant issue will be dismissed. *See N. Trend Expansion Project*, CLI-09-12, 69 NRC at 557; *Amer. Centrifuge Plant*, CLI-06-10, 63 NRC at 462-63; *see also Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-6, 75 NRC 352, 371 (2012); *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 342-44 (2012), *petition for review filed sub nom. Beyond Nuclear v. NRC*, No. 12-1561 (1st Cir. May 7, 2012). Similarly, a petitioner that fails to provide sufficient factual or expert support for the claims in its contention in contravention of section 2.309(f)(1)(v), *see supra* section II.B.1.c, also may have failed to show a genuine dispute with the application as required under section 2.309(f)(1)(vi). *See FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 404, 405 (2012); *see also Comanche Peak*, CLI-12-7, 75 NRC at 390 & n.43.

2. MCE's Contentions

a. Contention 1: Environmental Report Lacks Information Regarding Proposed Modifications to Callaway Facility

CONTENTION: The Environmental Report fails to satisfy 10 C.F.R. § 51.53(c)(2) because it does not include information about Ameren's plans to modify the Callaway facility in response to post-Fukush[i]ma enforcement order EA-12-049 (March 12, 2012), Order Modifying Licenses With Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Effective Immediately) ("Order EA-12-049") (ML12056A045). As also required by 10 C.F.R. § 51.53(c)(2), the Environmental Report must include a discussion of a reasonable array of alternative measures for modifying the facility in accordance with Order EA-12-049.

DISCUSSION: MCE Hearing Petition at 2-6; Ameren Answer at 11-17; Staff Answer at 11-19; MCE Reply at 1-5; Tr. at 19-43, 45-82, 83-96.

RULING: *Inadmissible*, in that with this contention MCE fails to demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the proposed reactor operating license renewal action and that a genuine dispute exists with the applicant on a material issue of law or fact. *See* 10 C.F.R. §§ 2.309(f)(1)(iv), (vi).

As the principal support for this issue statement, MCE cites 10 C.F.R. § 51.53(c)(2), which provides in pertinent part:

The [ER] must contain a description of the proposed action, including the applicant's plans to modify the facility or its administrative control procedures as described in accordance with § 54.21 of this chapter. This report must describe in detail the modifications directly affecting the environment or affecting plant effluents that affect the environment. In addition, the applicant shall discuss in this report the environmental impacts of alternatives and any other matters described in § 51.45.

According to MCE, this provision is implicated by the agency's March 12, 2012 immediately effective enforcement order, EA-12-049, that is intended to address the March 2011 events at the Fukushima Dai-ichi facility. As the order outlines, following an earthquake and an associated tsunami in Japan, that facility suffered a loss of offsite and onsite power that ultimately resulted in a loss of core, containment, and spent fuel pool cooling capabilities in Units 1, 2, and 3 that, in turn, caused damage to the nuclear fuel in the reactors. In response to this unfortunate circumstance, in EA-12-049 the agency directs the licensee at each operating reactor facility, including Callaway Plant, Unit 1, to take two actions. First, by no later than February 28, 2013, provide the agency with an overall integrated plan (OIP), including a description of how the licensee intends to comply with requirements being imposed to achieve the necessary mitigation strategies for maintaining and restoring core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event that might result in an extended loss of power. Thereafter, by no later than December 31, 2016, implement those strategies per the agency-reviewed OIP, including having in place necessary procedures, guidance, and training as well as the acquisition, staging, and installation of any needed equipment. *See* Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Effective Immediately), 77 Fed. Reg. 16,091, 16,093, 16,098 (Mar. 19, 2012) [hereinafter EA-12-049].

As its primary claim in support of this contention, MCE maintains that the Staff anticipates that the response to this order by a licensee such as Ameren will cause the licensee to "supplement those of the permanently installed plant structures, systems, and components that could become unavailable following beyond-design-basis external events." MCE Hearing Request at 3 (quoting EA-12-049, 77 Fed. Reg. at 16,092). That being the case, MCE asserts, regardless of whether

they are imposed in the context of a required Part 54 analysis (i.e., as an integrated plant assessment or time-limited aging analysis) or otherwise bear any relationship to age-related degradation or aging management, those measures nonetheless will be causally related to license renewal because they will be safe operation conditions for Callaway Unit 1 during any term of extended operation.³ See MCE Reply at 3. Further, according to MCE, NEPA consideration of the purported impacts of EA-12-049 clearly is mandated now because the design-associated measures the order will engender are unlikely to be the subject of a NEPA analysis under section 51.53(c)(2) before the final supplemental environmental impact statement (SEIS) is issued in this proceeding, which currently is scheduled for September 2013. See MCE Reply at 3; Tr. at 17-19. As a consequence, MCE declares, those impacts must be discussed in the Ameren ER, along with the relative effectiveness and cost of a range of alternatives for meeting the order's requirements. See MCE Hearing Request at 5.

In response to this asserted basis for the admission of contention 1, Ameren and the Staff claim that contention 1 is inadmissible under one or more of the requisite

³ Although not discussed in this context by any of the participants, it may well be that the best support for this more expansive MCE approach can be found in the agency's inclusion of severe accident mitigation alternatives (SAMAs) as category 2 items under the 10 C.F.R. Part 51, Subpart A, App. B generic environmental impact statement (GEIS) for reactor license renewal. In the original proposed rule for the license renewal GEIS, the agency indicated that a NEPA analysis of severe accident mitigation design alternatives (SAMDA), a predecessor to and close relative of the SAMA, would not be required because "Commission policy is to consider SAMDAs only at the initial construction stage (during which plant design features may be more easily incorporated). Accordingly, SAMDA evaluations at the license renewal stage are not necessary." Environmental Review of Renewal for Operating Licenses, 56 Fed. Reg. 47,016, 47,022 (Sept. 17, 1991). Subsequently, when a final rule was adopted that included SAMDAs as category 2 items requiring a plant-specific analysis if one had not been done previously, the agency made no reference to SAMDAs having any relationship to aging degradation or aging management concerns, but stated:

Based on an evaluation of the comments, the Commission has reconsidered its previous conclusion in the draft GEIS concerning site-specific consideration of severe accident mitigation. The Commission has determined that a site-specific consideration of alternatives to mitigate severe accidents will be required at the time of license renewal unless a previous consideration of such alternatives regarding plant operation has been included in a final environmental impact statement or a related supplement. Because the third criterion required to make a Category 1 designation for an issue requires a generic consideration of mitigation, the issue of severe accidents must be reclassified as a Category 2 issue that requires a consideration of severe accident mitigation alternatives, provided this consideration has not already been completed. The Commission's reconsideration of the issue of severe accident mitigation for license renewal is based on the Commission's NEPA regulations that require a consideration of mitigation alternatives in its [EISs] and supplements to EISs, as well as a previous court decision that required a review of severe mitigation alternatives (referred to as SAMDAs) at the operating license stage. See, *Limerick Ecology Action v. NRC*, 869 F.2d 719 (3d Cir. 1989).

Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 28,467, 28,480 (June 5, 1996).

elements of 10 C.F.R. § 2.309(f)(1)(ii)-(vi), in that the contention raises issues that are outside the scope of this license renewal proceeding, lacks sufficient basis, is immaterial to this proceeding, lacks adequate factual or expert support, and otherwise fails to demonstrate a genuine dispute with the Ameren application.

In sum, in seeking the admission of contention 1, what MCE essentially requests from us is a declaratory judgment that any EA-12-049-related measures must, by their very nature, have NEPA implications in this license renewal proceeding that must be analyzed by Ameren in its ER. In contrast, the clear implication of the arguments made by Ameren and the Staff is that any EA-12-049 measures that might be proposed and ultimately adopted by Ameren are wholly outside the bounds of the matters that are the appropriate subject of consideration in a Part 54 license renewal proceeding.

In the Board's estimation, however, there is a serious question about whether what is lacking or (perhaps better put) what still needs to be become choate relative to this contention is, at a minimum, a showing based on what measures Ameren actually proposes to adopt to address the terms of EA-12-049. Indeed, at this juncture we conclude that the exact nature of the measures that will be proposed by Ameren under the May 2012 enforcement order are simply too uncertain to permit a determination whether one or more of them will require a NEPA analysis of their environmental impact implications as part of this license renewal proceeding.⁴ Rather, in these circumstances, an appropriate challenge

⁴ In its May 31, 2012 draft interim guidance regarding compliance with EA-12-049, the Staff provides a general outline of the approach a licensee is expected to consider in attempting to mitigate beyond-design-basis external events (such as seismic activity, external flooding, high winds, snow/ice/extreme cold, or extreme high temperatures) so as to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following such events. According to that guidance, this would entail three phases: an initial response phase using installed equipment and resources; a transition phase using portable equipment and consumables; and a third phase of indefinite sustainment using offsite resources. *See* Japan Lessons-Learned Project Directorate, NRC, Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, JLD-ISG-2012-01, at 2 (rev. 0 May 31, 2012) (draft issued for public comment) (ADAMS Accession No. ML12146A014) [hereinafter Draft Interim Staff Guidance Memorandum]. Relative to these phases, the Staff also provides guidance on various strategy elements that must be considered, including evaluating external hazards; command, control, and communications; operations actions; damage assessment; core cooling strategies; decay heat removal; engineering basis for flow; cool down/depressurization rate control; reactor coolant system inventory management; fuel condition monitoring; human factors; spent fuel pool and containment functions strategies; equipment quality, protection, storage, and deployment; offsite resources; strategy maintenance; and reporting requirements. *See id.* attach. 1, at 1-12 (Guidance for Developing, Implementing and Maintaining Mitigation Strategies). While the Staff indicates that it is endorsing, with some exceptions, the methodologies developed by the Nuclear Energy Institute (NEI) for satisfying these various strategies, *see* Draft Interim Staff Guidance Memorandum at 1 (citing NEI, *Diverse and Flexible Coping Strategies (FLEX) Implementation Guide*, NEI 12-06 (rev. B1 May 2012) (ADAMS (Continued)

and a board determination will need to abide at least the Ameren proposal, now due by the end of February 2013, regarding the particular measures it intends to implement to comply with the requirements of EA-12-049. At that point, which under the current Staff review schedule for this proceeding would be roughly contemporaneous with the issuance of the Staff's draft SEIS, MCE (or any other interested person) could submit a contention supported by the specific information (not now available) about those measures that might meet the requirements for an admissible contention under section 2.309(f)(1).

But with regard to contention 1 as it is now before us, that issue statement lacks the necessary materiality and fails to frame a genuine dispute with the requisite licensing document, missing elements that render contention 1 inadmissible under section 2.309(f)(1)(iv), (vi).

b. Contention 2: Environmental Report Lacks Information on Status of Compliance with Federal Requirements and Approvals

CONTENTION: In violation of 10 C.F.R. § 51.45(d), the Environmental Report fails to describe the status of Ameren's compliance with NRC post-Fukushima orders and requests for additional information relevant to the environmental impacts of the Callaway nuclear power plant during the license renewal term. These requests for information and orders for actions originate with both the NRC and the U.S. Congress. *See* Order EA-12-049 at 4-7; Requirements of Request for Information Pursuant to Title 10 of the Code of Federal Regulations, 50.54(f) Regarding Recommendations 21.1, 2.3, and 9.3 of the Near-Term Task Force Review of Insights From the Fukushima Dai-ichi Accident at 2 (March 12, 2012) ("3/12/12 Information Request") (ML12053A340).

The Environmental Report for renewal of the Callaway operating license is inadequate to comply with NEPA and NRC implementing regulations because it lacks the following information regarding Ameren's compliance with NRC requirements and approvals:

(a) Requirement of Order EA-12-049 to: "develop, implement and maintain guidance and strategies to restore or maintain core cooling, containment, and SFP [spent fuel pool] cooling capabilities in the event of a beyond-design-basis external event." *Id.* at 6.

(b) The following requirements of the 3/12/12 Information Request:

(i) "Requested Information" regarding Seismic Hazard Evaluation and Seismic Risk Evaluation. *Id.*, Enclosure 1 at 7-8.

Accession No. ML12143A232)), in our estimation neither of these guidance documents provides the specific information necessary to assess whether the measures taken by Ameren to comply with EA-12-049 require the NEPA assessment requested under MCE's contention 1.

(ii) “Required Response” related to item (i) above. *Id.*, Enclosure 1 at 9. Details of these requirements are provided in Attachment 1 to Enclosure 1.

(iii) “Requested Information” regarding Hazard Evaluation Report and Integrated Assessment Report. 3/12/12 Information Request, Enclosure 2 at 7-8.

(iv) “Required Response” related to item (iii) above. 3/12/12 Information Request, Enclosure 2 at 9-10. Details of these requirements are provided in Attachment 1 Enclosure 2.

(v) “Requested Actions,” “Requested Information,” and “Requested Response” regarding communication systems and equipment used during an emergency event, assuming that (a) the potential onsite and offsite damage is a result of a large scale natural event resulting in the loss of all alternating current (ac) power and (b) the large scale natural event causes extensive damage to normal and emergency communications systems both onsite and in the area surrounding the site. 3/12/12 Information Request, Enclosure 5 at 2-3.

Moreover, to the extent that Ameren proposes modifications to the Callaway facility in response to the 3/12/12 Request for Information, NEPA also requires the consideration of the effectiveness and relative costs of a range of alternatives for satisfying the NRC’s concerns. *See* 10 C.F.R. § 51.53(c)(2) and [*Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), LBP-12-8, 75 NRC 539 (2012).]

DISCUSSION: MCE Hearing Petition at 7-10; Ameren Answer at 17-20; Staff Answer at 20-25; MCE Reply at 5-7; Tr. at 43-45, 82-83.

RULING: *Inadmissible*, in that this contention is outside the scope of this proceeding and with this contention MCE fails to show that a genuine dispute exists with the applicant on a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(iii), (vi).

As was the case with contention 1, MCE’s contention 2 focuses on a single regulatory provision. In this instance, the provision in question is section 51.45(d) of the agency’s rules, which provides in pertinent part that an applicant’s ER “shall list all Federal permits, licenses, approvals and other entitlements which must be obtained in connection with the proposed action and shall describe the status of compliance with these requirements.” With this contention, MCE claims that, notwithstanding the requirements of section 51.45(d), Ameren has not set forth in its ER any information regarding its status of compliance with either EA-12-049 or a same-day Staff request for information directed to all power reactor construction permit and operating license holders, including Ameren. *See* MCE Hearing Petition at 9. In that regard, the March 12, 2012 information request is described as intended to gather information to support the evaluation of the Staff’s recommendations for the Near-Term Task Force review of the Fukushima Dai-ichi nuclear facility accident to enable the Staff to determine whether nuclear plant licenses should be modified, suspended, or revoked. *See* Letter from Eric J. Leeds, Director, NRC Office of Nuclear Reactor Regulation &

Michael R. Johnson, Director, NRC Office of New Reactors, to All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status at 1 (Mar. 12, 2012) (ADAMS Accession No. ML12053A340) [hereinafter Staff Information Request]. Further, that information request asks that each permit or license holder reevaluate the seismic and flooding hazards at its site using updated seismic and flooding hazard information and present-day regulatory guidance and methodologies and, if necessary, perform a risk evaluation. *See id.* at 4.

Ameren and the Staff both oppose the admission of contention 2. Ameren argues that “[n]one of the post-Fukushima orders or information requests can be characterized as approvals that must be obtained ‘in connection with the proposed action,’” which in this case is the renewal of the Callaway operating license. Ameren Answer at 18 (quoting 10 C.F.R. § 51.45(d)). The Staff agrees, claiming that “Ameren’s compliance with the Order and the [information request] is unrelated to license renewal.” Staff Answer at 22. The Staff also asserts that EA-12-049 and the March 2012 information request are not “approvals” under section 51.45(d), noting that this regulation “has only been applied to approvals needed from Federal, State, and local agencies other than the NRC such as permits issued by the U.S. Environmental Protection Agency and the U.S. Fish and Wildlife Service.” *Id.* at 21. As such, the Staff contends contention 2 is outside the scope of this proceeding. *See id.*

In its reply, MCE argues that EA-12-049 and the March 2012 information request constitute “approvals” under section 51.45(d) “because they must be complied with in order for Ameren to continue operating Callaway.” MCE Reply at 7. In addition, MCE states:

The approvals have a “connection with the proposed action” because (a) any modifications that result from Ameren’s compliance with the orders will apply during Callaway’s license renewal term, (b) the requirement has arisen while Ameren’s license renewal application is pending and will be resolved before issuance of the EIS, and (c) neither Ameren nor the NRC has previously analyzed the environmental implications of the modifications that may be imposed as a result of Ameren’s compliance with the orders.

Id.

As noted above, section 51.45(d) requires that an applicant provide in its ER information regarding its status of compliance with “Federal permits, licenses, approvals and other entitlements which must be obtained in connection with the proposed action.” The language of this regulation, in turn, presents two separate questions: first, whether EA-12-049 and/or the March 2012 information request constitute a federal permit, license, approval, or other entitlement within the meaning of this section; and second, if so, whether either EA-12-049 or the March

2012 information request must be “obtained in connection with the proposed action,” i.e., the Callaway Unit 1 operating license renewal.

Regarding the first question, as we observed above, MCE contends the March 2012 enforcement order and information request are “approvals” under section 51.45(d) “because they must be complied with in order for Ameren to continue operating Callaway.” MCE Reply at 7. But the implication of MCE’s argument, which is that any agency prerequisite with which Ameren must comply to operate the Callaway plant during an extended term constitutes an “approval” under section 51.45(d), would entail an unreasonably strained definition of “approval.” Ameren must comply with any number of NRC regulations to continue operating Callaway, but those regulations cannot be considered “approvals” such that an applicant would be required to describe its compliance with each provision in its ER. This is clearly not the intent of section 51.45(d). Moreover, the plain meaning of the word “approval,” which requires an affirmative action on the part of an approver, clearly establishes that requiring compliance is different from granting an approval. *See Webster’s Third New International Dictionary* 106 (Philip B. Gove ed. in chief, unabridged, 1976) (defining “approval” as “the act of approving” and “certification as to acceptability”).

This analysis does not, however, necessarily determine whether either EA-12-049 or the March 2012 information request constitutes an “approval.” Nonetheless, we find they do not. With regard to the March 2012 information request, as the name implies, that information directive simply requires that licensees provide certain information to the agency. *See* Staff Information Request at 3. While the information request does explain that the NRC will evaluate the information provided by licensees to determine whether further regulatory actions are required, *see id.* at 1, 5, it does not state that the information is required for the NRC to grant (or deny) a permit, license, approval, or other entitlement. As such, the Staff’s March 2012 information request is not an “approval” under section 51.45(d).⁵ And because section 51.45(d) does not obligate Ameren to list its compliance with the March 2012 information request in its ER, this portion of contention 2 is inadmissible as outside the scope of this proceeding and because it does not raise a genuine dispute with Ameren’s application. *See* 10 C.F.R. § 2.309(f)(1)(iii), (vi).

⁵ In addition, as Staff counsel noted at the prehearing conference, “requests for information are not terribly unusual, and . . . it would [be] a quite extensive list if applicants are required to include in their [ER] a list of their compliance with the various generic letters, bulletins, [and] information requests[] that have been issued over the years.” Tr. at 83. In our view, to consider any or all of these Staff documents as “approvals” by reason of the fact that they request information that will be used to assess compliance with agency requirements would impose a reporting encumbrance that section 51.45(d) was not intended to levy.

Similarly, we conclude that EA-12-049 does not constitute an “approval” for the purpose of section 51.45(d). By its terms, EA-12-049 requires that all licensees “develop, implement and maintain guidance and strategies to restore or maintain core cooling, containment, and SFP cooling capabilities in the event of a beyond-design-basis external event.” EA-12-049, 77 Fed. Reg. at 10,692. These strategies and guidance are to be submitted to the NRC in an OIP by no later than February 28, 2013. *See id.* at 10,693. Because the NRC will then review the OIP provided by Ameren and decide whether that plan satisfies EA-12-049, it might appear that this constitutes an “approval” under section 51.45(d) (i.e., the NRC must “approve” Ameren’s OIP). EA-12-049, however, is essentially a directive to all licensees to achieve compliance with the order’s requirements by a certain date. That EA-12-049 has the unique feature of allowing licensees to propose their own strategies for coming into compliance, rather than mandating a certain set of plant alterations, does not change the fundamental character of EA-12-049 and transform it into an “approval.” We thus treat EA-12-049 as we would any other enforcement order and hold that it does not establish an “approval” process under section 51.45(d). Ameren, therefore, is not required to list that order, or Ameren’s compliance with the order’s terms, in its ER. Consequently, with regard to EA-12-049, contention 2 is not admissible because it is outside of the scope of this proceeding and MCE has not raised a genuine dispute with Ameren’s application.⁶ *See* 10 C.F.R. § 2.309(f)(1)(iii), (vi).

c. Contention 3: Inadequate Discussion of Wind Energy Alternative

CONTENTION: The Environmental Report is inadequate to satisfy NEPA or 10 C.F.R. § 51.53(c)(2) because it dismisses and refuses to consider the relative merits of the reasonable energy alternative of wind energy operating in the Midwest Independent Transmission System Operator (“MISO”) grid. Wind energy operating in the MISO grid warrants serious consideration as an alternative because it is

⁶ We would add that even if compliance with the March 2012 information request and/or EA-12-049 were deemed to be a prerequisite for license renewal, Ameren arguably would have already satisfied its duty under section 51.45(d). In its ER, Ameren notes that one of the “Federal permits, licenses, approvals [or] other entitlements” that it must receive is a license renewal from the NRC. *See* Ameren, Callaway Plant Unit 1, Applicant’s Environmental Report; Operating License Renewal Stage, Final § 9.3, at 6 (tbl. 9-2) [hereinafter Ameren ER]. By noting that it must receive a license renewal from the NRC, Ameren necessarily implies that it must satisfy all of the requirements established by the NRC to receive that renewal. Section 51.45(d) surely does not require that an applicant explain every aspect of the process it must pursue in the course of obtaining a federal permit, license, or approval. *See Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-12-12, 75 NRC 742, 764-65 (2012). Accordingly, Ameren would not have to list either of these items as a required permit, license, or approval given that Ameren already has listed its NRC license renewal generally as a federal permit, license, or approval.

currently available and sufficient to entirely replace the energy to be generated by Callaway during the license renewal term. Wind energy also has the relative benefits that it is less dangerous than renewed operation of Callaway, depends on a renewable energy source and would save millions of gallons of water now used by Callaway every day.

DISCUSSION: MCE Hearing Petition at 10-12; Errata to Hearing Request and Petition to Intervene (May 7, 2012) at 1; Ameren Answer at 20-39; Staff Answer at 25-37; MCE Reply at 7-15; Tr. at 96-165.

RULING: *Inadmissible*, in that this contention lacks adequate factual or expert support and with this contention MCE fails to demonstrate that a genuine dispute exists with the applicant on a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(v)-(vi).

In support of its contention 3 challenge to the discussion of alternative energy sources in the Ameren ER, MCE states that Ameren's ER provides only a brief discussion of the wind alternative and dismisses the wind alternative as "not reasonable." MCE Hearing Petition at 10 (quoting Ameren ER § 7.2.1.5, at 15). Further, MCE proffers the declaration of Dr. Arjun Makhijani in which he declares that "Ameren should have examined wind energy operating in the MISO grid and compared it to nuclear operating in the grid, taking into account the specific patterns of unavailability of each, including unplanned outages." MCE Hearing Petition, attach. 2, at 3 (Declaration of Dr. Arjun Makhijani in Support of [MCE's] Hearing Request Regarding Callaway License Renewal Application) [hereinafter Makhijani Declaration]. More specifically in this regard, Dr. Makhijani asserts that energy generation from Callaway will not be constantly available during the license term due to planned and unplanned outages, so that a proper "apples-to-apples comparison" requires that Ameren analyze the patterns of unavailability of nuclear and wind and how the regional MISO grid would compensate for each during such outages. *Id.* at 4. Dr. Makhijani also states that electrical storage or full standby fossil fuel replacement capacity would not be needed because wind energy "is currently available and sufficient to entirely replace the energy generated by Callaway during the license renewal term." *Id.* at 3.

Ameren and the Staff oppose contention 3, stating that it fails to raise a genuine dispute with the application, is unsupported, is immaterial, and raises issues that are beyond the scope of the proceeding in contravention of 10 C.F.R. § 2.309(f)(1)(iii), (iv), (v), and (vi). *See* Ameren Answer at 1; Staff Answer at 2.

In implementing NEPA § 102, 42 U.S.C. § 4332(2)(C)(i)-(iii), section 51.53(c)(2) of the Commission's regulations requires that an ER submitted by a license renewal applicant address the environmental impacts of the proposed action and compare those impacts to the impacts of alternative actions. But the Commission has held repeatedly that an applicant need only consider those alternatives that are reasonable. *See, e.g., Seabrook*, CLI-12-5, 75 NRC at 341.

Ameren claims it has provided such an analysis in section 7 of its ER. *See* Ameren Answer at 23. Specifically, in ER § 7, Ameren analyzed several potential electrical supply alternatives to determine which were reasonable alternatives to replace Callaway Unit 1 and hence merited a full impacts critique. In addition to evaluating power supply strategies that would not involve additional Ameren generation, *see* Ameren ER § 7.2.1.3, at 12-13 (purchased power); *id.* § 7.2.1.4, at 13-14 (demand side management), Ameren also considered wind and solar power, both alone and in combination with fossil-fueled generation or energy storage facilities, *see id.* § 7.2.1, at 6-7; *id.* § 7.2.1.5, at 15-18. But because Ameren defined the proposed action as the replacement of the existing Callaway unit's generation capacity of 1190 megawatts electric (MWe) of "baseload power," the applicant determined that an in-depth alternatives analysis was only merited for those supply alternatives capable of producing 1190 MWe of baseload power.⁷ *See id.* § 7.2.1, at 6.

In that regard, before us Ameren references a definition of "baseload power" utilized by the United States Court of Appeals for the Seventh Circuit, and quoted by the Commission in its recent *Seabrook* decision, that declares "baseload power" as power generating "“energy intended to continuously produce electricity at or near full capacity, with high availability.”" Ameren Answer at 26 (quoting *Seabrook*, CLI-12-5, 75 NRC at 339 n.223 (quoting *Environmental Law & Policy Center v. NRC*, 470 F.3d 676, 679 (7th Cir. 2006))). Further, in this instance our consideration of MCE's wind power contention is governed by that same *Seabrook* decision. Considering the admissibility of a contention claiming that an applicant's license renewal ER had inadequately evaluated offshore wind farms as an electrical generation alternative, in *Seabrook* the Commission declared:

In sum, to submit an admissible contention on energy alternatives in a license renewal proceeding, a petitioner ordinarily must provide "alleged facts or expert opinion" sufficient to raise a genuine dispute as to whether the best information available today suggests that commercially viable alternative technology (or combination of technologies) is available now, or will become so in the near future, to supply baseload power. As a general matter, a "reasonable" energy alternative — one that must be assessed in the environmental review associated with a license renewal application — is one that is currently commercially viable, or will become so in the near term.

CLI-12-5, 75 NRC at 342 (footnote omitted). Here, the proposed action (i.e., license renewal for Callaway) involves the continued production of 1190 MWe

⁷ As a consequence, Ameren provided a full impacts analysis of the power supply alternatives of pulverized coal-fired generation, gas-fired generation, construction and operation of new nuclear generation, and purchased power. *See* Ameren ER § 7.2.2, at 21.

of baseload power during the license renewal term.⁸ As such, for an electrical generation alternative to qualify for the kind of in-depth review that MCE seeks here, the alternative must be able to provide 1190 MWe of baseload power during the license renewal term. *See Seabrook*, CLI-12-5, 75 NRC at 338-43; *see also Davis-Besse*, CLI-12-8, 75 NRC at 401-02 (rejecting admissibility of contention seeking full impacts generation alternative analysis of wind, either alone or in combination with solar and storage, as failing adequately to demonstrate the capacity to produce baseload power).

Apparently cognizant of the *Seabrook* and *Davis-Besse* decisions cited above, *see* Makhijani Declaration at 4, seeking to level the “baseload” playing field, MCE attempts to demonstrate that nuclear, like wind, is an intermittent generation source to the degree that nuclear plants like Callaway Unit 1 experience outages for which the surrounding MISO grid compensates, just as the grid will do for wind generation facilities that might be implemented as an alternative. As a consequence, according to MCE, if sufficient wind generation capacity is developed by Ameren, wind generation is just as capable of providing the necessary 1190 MWe as a renewed Callaway facility, and hence effectively should be considered as adequate to replace such a “baseload” source so as to merit a full alternatives analysis. *See* MCE Reply at 9-10.

Given the Commission’s recent *Seabrook* and *Davis-Besse* holdings, we see this proffer as deficient in several respects. In those reactor license renewal rulings on wind-related NEPA alternatives contentions, the Commission was very clear that petitioners must demonstrate that wind generation can provide sufficient baseload power to replace the nuclear plant at issue by showing that such wind power is both technically feasible and commercially viable in the near future.⁹ *See Davis-Besse*, CLI-12-8, 75 NRC at 402; *Seabrook*, CLI-12-5, 75 NRC at 342. Dr. Makhijani does claim that “Callaway can be replaced with wind energy with technology that is commercially available now.” Makhijani Declaration at 15. Yet, assuming arguendo this is sufficient to meet the technical feasibility prerequisite of the *Seabrook* and *Davis-Besse* decisions, nothing provided by

⁸The Commission has also held that the Staff’s EIS “need only discuss those alternatives that . . . ‘will bring about the ends’ of the proposed action,” *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 55 (2001) (quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195 (D.C. Cir.), *cert. denied*, 502 U.S. 994 (1991)), a principle equally applicable to an ER, *see Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 263, *aff’d*, CLI-09-22, 70 NRC 932 (2009).

⁹As was noted above, the showing needed under the Commission’s *Seabrook* and *Davis-Besse* cases relates to the discussion necessary to support a NEPA alternatives contention in a 10 C.F.R. Part 54 reactor license renewal proceeding, which involves the replacement of an existing electrical generation source with an alternative source that likely has yet to be constructed, rather than in a Part 52 combined license proceeding, in which the proposed construction of an entirely new generation source seemingly would involve a different, and likely broader, set of considerations.

Dr. Makhijani or MCE provides information to support an adequate showing that such technology is capable of providing 1190 MWe baseload power that is commercially viable in the relatively near term.¹⁰

Indeed, instead of demonstrating how Ameren can, in a commercially viable way, obtain 1190 MWe of continuously produced, high-availability electricity via wind generation in the near future, MCE simply places reliance on “the grid” to compensate for what, as the Commission has recognized, *see Seabrook*, CLI-12-5, 75 NRC at 343, is the intermittent, nonbaseload nature of wind power in its near-term state of development. But the grid in and of itself is not, as MCE’s argument seems to suggest, the continuously produced, highly available source of electricity that will counterbalance the intermittent nature of wind generation.¹¹ Rather, the grid is the sum of its parts, with some generation elements being recognized as more reliable than others as the source of the continuous power that is necessary to provide uninterrupted electrical service. Hence the distinction between “baseload” and other generation sources and the root of an electric utility’s constant concern that, with its baseload and other generation sources, it has enough margin to provide electricity on an uninterrupted basis.¹² And while,

¹⁰ Per the Commission’s *Seabrook* decision, *see* CLI-12-5, 75 NRC at 342, 343, the use of the terms “in the relatively near term” and “in the near future” describe the period within which an otherwise technically feasible generation alternative would become commercially viable. These terms clearly denote temporal proximity to the present rather than measuring possible feasibility nearer to the extended term of the subject reactor, at least absent a showing that the technology “while not commercially viable at the time of the application, is under development for large-scale use and is ‘likely to’ be available during the period of extended operation,” *id.* at 342 & n.245, a demonstration that has not been made in this instance.

¹¹ Although MCE relies upon the capacity of the “MISO grid” to replace the output of the Callaway plant, it is apparent that the MISO is not a generation source. *See* Tr. at 140-41. Rather, it is a privately owned, federally regulated transmission network. On December 20, 2001, MISO became the first Federal Energy Regulatory Commission (FERC)-approved regional transmission organization (RTO) in the nation. *See Midwest Independent Transmission System Operator, Inc.*, 97 FERC ¶ 61,326 (2001). FERC granted MISO RTO status to provide open access to MISO’s electricity transmission system to all member utilities in 15 Midwestern states, including Missouri, and one Canadian province. *See Midwest Independent Transmission System Operator, Inc.*, 122 FERC ¶ 61,283, ¶ 57 (2008). Accordingly, MISO provides transmission service under the terms and conditions of a single open access transmission tariff, the Open Access Transmission and Energy Markets Tariff (TEMT), approved in an August 2004 FERC order. *See Midwest Independent Transmission System Operator, Inc.*, 108 FERC ¶ 61,163 (2004). MISO’s member transmission providers, including Ameren, *see* Ameren Answer at 33-34, are the owners of transmission facilities, with MISO exercising functional control over those facilities, calculating available transmission capability, and receiving, approving, and scheduling transmission service. *See Midwest ISO Transmission Owners v. FERC*, 373 F.3d 1361, 1365 (D.C. Cir. 2004).

¹² And relative to the MISO grid margin, MCE acknowledges that the capacity value assigned by MISO to wind generation in 2012 is 15 percent or less. *See* Tr. at 100-01; *see also* Makhijani (Continued)

as Dr. Makhijani's declaration suggests, any of the parts of the grid, baseload or otherwise, can at any given time be unavailable, voluntarily or involuntarily, that is really beside the point. MCE and its supporting affiant Dr. Makhijani have not shown that the grid has any particular impact in determining whether nuclear or wind generation provides the requisite baseload power for the purpose of a NEPA alternatives analysis. Instead, in the context of a license renewal proceeding, such a determination rests on whether the power generation source is, as a matter of technical feasibility and commercially viable implementation, one that in the near term can produce electricity continuously with high availability.¹³

Finally, in terms of providing the requisite support for the commercial viability of wind generation as an alternative to an existing generation asset like the Callaway facility, to the degree MCE's assertions about the availability of wind power as a viable alternative generation source to the Callaway facility depend on the construction by Ameren or others of new wind capacity, *see* Makhijani Declaration at 15, MCE has failed to offer any specific information about the possible location of any proposed wind generation facilities or about the availability of sufficient transmission capacity to deliver the output of any wind generation facilities to Ameren's service area, including what would be involved in providing new power transmission lines to connect any proposed

Declaration at 10. In contrast, although MISO apparently does not designate such a value for the Callaway facility, the MISO-assigned capacity credit for that unit, a figure based on the facility's unforced capacity (or U-Cap) that does not incorporate any planned outages, runs at about 95 percent, with the unit's 2002 through 2011 actual capacity factor, which takes into account both forced and unforced plant outages, being as low as 76 percent (in 2004) and as high as 95 percent (in 2009). *See* Tr. at 143-44.

¹³ The concern about outages at Callaway Unit 1 (and other reactor facilities) highlighted by Dr. Makhijani, *see* Makhijani Declaration at 4-8, appears to go more to a consideration of how much margin Ameren (and other utilities with nuclear power plants) should plan to provide in meeting service area needs than to the general status of nuclear generation as baseload power.

Indeed, the MCE claim that existing excess capacity in the MISO grid is sufficient to establish the viability of wind generation as a replacement for Callaway Unit 1 seems to emphasize this point given that assertion apparently rests on the supposition that natural gas reserve margin available to Ameren via the MISO grid currently can be utilized, in conjunction with wind generation, to replace the Callaway facility. *See* MCE Reply at 14 (citing Makhijani Declaration at 14). And relative to MCE's assertion regarding existing excess capacity, we would add that, even assuming this claim is not an otherwise improper attempt to raise (1) a "need for power" issue in this license renewal proceeding, or (2) a new issue regarding the adequacy of the purchased power alternatives analysis in the Ameren ER, *see* Ameren Answer at 34-35, in the context of the commercial viability showing mandated by the Commission's recent *Seabrook* and *Davis-Besse* decisions, *see supra* p. 38, this concern likewise lacks any discussion regarding the transmission aspects of such an alternative. *See infra* text accompanying note 14.

wind generation facilities into the existing MISO grid, a likely critical component for determining the near-term commercial viability of wind power.¹⁴

Contention 3 thus is inadmissible because it (1) lacks adequate factual or expert support to demonstrate that wind power is capable of providing baseload power to replace Callaway; and (2) fails to raise a genuine dispute with Ameren's discussion of power generation alternatives in its license renewal application. *See* 10 C.F.R. § 2.309(f)(1)(v)-(vi).

III. CONCLUSION

For the reasons set forth above, the Board concludes that although petitioner MCE has established its standing as of right to intervene in this proceeding, the three contentions MCE has proffered cannot be accepted for litigation in this proceeding because each fails to meet one or more of the admissibility requirements of section 2.309(f)(1).

For the foregoing reasons, it is, this 17th day of July 2012, ORDERED that:

1. Although MCE has established its representational standing, its request to admit the three contentions proffered with its April 24, 2012 hearing request as litigable issues in this proceeding is *denied*.¹⁵

¹⁴ To be sure, MCE declares that this contention is intended to present wind power as a stand-alone substitute for the Callaway facility without the need for additional replacement generation or an electrical storage source (or the need to consider the environmental impacts of such backup resources). *See* MCE Reply at 14. It is apparent, however, that the viability of this approach also relies on the supposed ubiquitous nature of the current and future MISO grid. *See* MCE Hearing Request at 11; MCE Reply at 13-14; Tr. at 113-14. Nonetheless, in the face of the Commission's recent *Seabrook* and *Davis-Besse* decisions, this is a supposition we cannot indulge, at least given the MCE information now before us.

¹⁵ Although this ruling is dispositive of the three contentions MCE submitted in support of its April 24, 2012 intervention petition, it does not conclude this proceeding at this juncture because on July 9, 2012, MCE filed with the Board a motion to admit a new environmental contention. In that new issue statement, MCE asserts that the Ameren ER is deficient because it fails to include a discussion of the environmental impacts of SFP leakage, SFP fires, and the lack of a spent fuel repository, as required by the recent decision of the United States Court of Appeals for the District of Columbia Circuit in *New York v. NRC*, No. 11-1045 (D.C. Cir. June 8, 2012). *See* [MCE's] Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Callaway Nuclear Power Plant (July 9, 2012) at 4 [hereinafter Callaway New Contention Motion]. Similar motions to admit a new contention were also filed that day, and are pending, in other ongoing reactor OL, COL, and OLR proceedings. *See, e.g.*, Southern Alliance for Clean Energy's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Spent Reactor Fuel at Watts Bar Unit 2 (July 9, 2012)

(Continued)

2. As it rules upon a hearing request/intervention petition, under the provisions of 10 C.F.R. § 2.311 any appeal to the Commission from this memorandum and order that may be appropriate must be taken within ten (10) days after this issuance is served.

THE ATOMIC SAFETY AND
LICENSING BOARD

G. Paul Bollwerk, III, Chairman
ADMINISTRATIVE JUDGE

William J. Froehlich
ADMINISTRATIVE JUDGE

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 17, 2012

[hereinafter Watts Bar New Contention Motion]; Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Bellefonte (July 9, 2012) [hereinafter Bellefonte New Contention Motion]; Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Davis-Besse Nuclear Power Station (July 9, 2012) [hereinafter Davis-Besse New Contention Motion].

This Board will proceed with having the new contention motion briefed and is fully prepared, in due course, to rule on the admissibility of the new contention (as undoubtedly is the case with other licensing boards before which similar contentions are pending). We note, however, that there is a June 18, 2012 petition before the Commission that (1) was filed by MCE and other petitioners/intervenor's associated with nineteen reactor OL, COL, and OLR proceedings pending with the agency; and (2) appears to raise the same issues as MCE's July 9 new contention, as well as the other new contentions filed that date. *Compare* Petition to Suspend Final Decisions in All Pending Reactor Licensing Proceedings Pending Completion of Remanded Waste Confidence Proceedings (June 18, 2012) at 8-12, *with* Callaway New Contention Motion at 2-7, *and* Watts Bar New Contention Motion at 2-6, *and* Bellefonte New Contention Motion at 2-6, *and* Davis-Besse New Contention Motion at 2-7. As a consequence, this could be an instance in which the goal of efficient judicial administration would be well served by any guidance/direction that the Commission might wish to provide relative to the June 18 petition.

Concurring Opinion by Trikouros, A.J.

I write separately to note that, although I concur fully with the reasons provided in this Licensing Board's decision as to why petitioner Missouri Coalition for the Environment's contentions 1 and 2 are inadmissible as failing to meet one or more of the requirements of 10 C.F.R. § 2.309(f)(1), another basis for rejecting those contentions, albeit one not specifically championed by the applicant or the NRC Staff here, *see* Tr. at 64, 73-74, is set forth in the recent determination of the Licensing Board in the *Diablo Canyon* license renewal proceeding. In its decision deeming inadmissible two contentions that were essentially identical to contentions 1 and 2 before this Board, the *Diablo Canyon* Board concluded that the applicant had no legal duty to update its environmental report to encompass matters that occurred after that report was filed with the agency. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-12-13, 75 NRC 784, 786-87 (2012). The situation here is the same as the one extant there. Consequently, contentions 1 and 2 also could be dismissed on this basis for failing to raise a genuine dispute with the applicant and as not material to the compliance status of the ER. *See* 10 C.F.R. § 2.309(f)(1)(iv), (vi).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

**Ann Marshall Young, Chair
Dr. Paul B. Abramson
Dr. Richard F. Cole**

In the Matter of

**Docket No. 50-293-LR
(ASLBP No. 12-921-08-LR-BD01)**

**ENTERGY NUCLEAR GENERATION
COMPANY and ENTERGY
NUCLEAR OPERATIONS, INC.
(Pilgrim Nuclear Power Station)**

July 20, 2012

In this previously terminated proceeding on the application for renewal of the Pilgrim Nuclear Power Station's operating license, the licensing board denies as untimely a motion to reopen the proceeding and admit a new contention alleging that the licensee lacks certain required environmental permits and approvals from state and federal agencies.

MOTIONS TO REOPEN AFTER TERMINATION OF PROCEEDING

In order for a motion to reopen to be granted and new contention admitted after termination of a proceeding, the motion must meet all of the requirements of 10 C.F.R. § 2.326 for reopening a closed record, and the new contention must have been submitted in a timely fashion and demonstrate admissibility as required at 10 C.F.R. § 2.309.

TIMELINESS, EQUITABLE ESTOPPEL

Petitioners' claim that the NRC Staff and the applicant should be estopped from arguing that petitioners' motion is untimely, based on the NRC's alleged failure to ensure the applicant's compliance with state and federal law, fails because petitioners do not show the necessary elements of an estoppel against the government that: (1) there was a "definite" representation to the party claiming estoppel; (2) the party relied on the government's conduct in such a manner as to change his position for the worse; (3) the party's reliance was reasonable; and (4) the government engaged in affirmative misconduct.

LICENSING BOARDS, AUTHORITY, JURISDICTION

Petitioners allege that the applicant lacks permits and approvals that are within the domain of other state or federal agencies. The board does not have jurisdiction to determine whether other government entities have properly followed their regulations or procedures, or the authority to compel other such agencies to provide the petitioners with relief.

MOTIONS TO REOPEN, TIMELINESS, "EXCEPTIONALLY GRAVE ISSUE"

Section 2.326(a)(1) allows a motion to reopen to be granted, even if untimely, when the motion presents an "exceptionally grave issue," which the Commission has defined as one which raises "a sufficiently grave threat to public safety." Because Petitioners fail to show that any alleged failure to obtain required permits and approvals, or any discharge or other alleged harm, poses any grave threat to the safety of the public, the board concludes that there is no showing of an exceptionally grave issue so as to warrant reopening the adjudicatory proceeding.

MOTIONS TO REOPEN, CONTENTIONS, TIMELINESS

Concluding that the motion to reopen does not meet all the requirements of 10 C.F.R. § 2.326 and that the contention fails to meet the timeliness requirements of 10 C.F.R. § 2.309, the licensing board denies the petition to intervene and motion.

MEMORANDUM AND ORDER
(Denying Petition for Intervention and Request to Reopen
Proceeding and Admit New Contention)

For the third time since a majority of the licensing board terminated the license renewal proceeding for the Pilgrim Nuclear Power Station (Pilgrim),¹ Pilgrim Watch and the Jones River Watershed Association (JWRA, collectively Petitioners) have moved to reopen the proceeding.² Petitioners seek admittance of a new contention challenging the renewal of Pilgrim's operating license for an additional 20-year period.³ Petitioners contend that Pilgrim's owners, Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc. (collectively, Entergy), lack several necessary approvals for the plant from a number of federal and state government agencies under a variety of statutory and regulatory requirements, and that the Nuclear Regulatory Commission (NRC) Staff must supplement its Final Supplemental Environmental Impact Statement (FSEIS) to reflect the environmental impacts of these allegedly missing permits and approvals.

This licensing board denies Petitioners' motion because, as we explain herein, both the motion and the associated new contention are untimely and fail to satisfy the requirements of 10 C.F.R. §§ 2.326(a)(1) and 2.309(c) and (f)(2).

I. BACKGROUND

Pilgrim Watch first petitioned to intervene in opposition to the Pilgrim license renewal application in 2006.⁴ The licensing board granted the petition,⁵ adjudicated two of Pilgrim Watch's contentions following evidentiary hearings⁶ (one held after a Commission remand of a portion of a contention previously dismissed

¹ LBP-12-1, 75 NRC 1, 24 (2012) (terminating proceeding); LBP-12-10, 75 NRC 633 (2012) (denying motion to reopen); LBP-12-11, 75 NRC 731 (2012) (same).

² [JWRA] and Pilgrim Watch Request to Reopen, for a Hearing, and to File New Contentions and JWRA Motion to Intervene on Issues of: (1) Violations of State and Federal Clean Water Laws; (2) Lack of Valid State § 401 Water Quality Certification; (3) Violation of State Coastal Zone Management Policy; and (4) Violation of NEPA (May 14, 2012) [hereinafter Motion]. The two organizations filed additional joint motions to reopen and admit contentions on March 8 and May 2, 2012. *See* LBP-12-10, 75 NRC 633; LBP-12-11, 75 NRC 731.

³ *See* 71 Fed. Reg. 15,222, 15,222 (Mar. 27, 2006).

⁴ Request for Hearing and Petition to Intervene by Pilgrim Watch (May 25, 2006).

⁵ LBP-06-23, 64 NRC 257, 348-49 (2006).

⁶ LBP-08-22, 68 NRC 590, 596 (2008), *aff'd*, CLI-10-14, 71 NRC 449 (2010); LBP-11-18, 74 NRC 29, 31 (2011), *aff'd*, CLI-12-1, 75 NRC 39 (2012).

through summary disposition⁷), and otherwise ruled on numerous others.⁸ In January of this year a majority of the licensing board ruled inadmissible Pilgrim Watch's final outstanding contention and terminated the proceeding, a ruling that was subsequently upheld by the Commission.⁹

Pilgrim Watch and JRWA jointly filed the instant motion and contention on May 14, 2012. The Commission referred Petitioners' submission to the Atomic Safety and Licensing Board Panel on May 16,¹⁰ and on May 17 this licensing board was established.¹¹ We granted a Staff motion for an extension of time to file its answer,¹² and the NRC Staff¹³ and Entergy¹⁴ filed their answers to Petitioners' motion and contention on June 7 and 8, 2012, respectively.¹⁵

II. APPLICABLE LEGAL STANDARDS

As we have previously observed,¹⁶ in order for Petitioners' current motion to be granted and new contention to be admitted, Petitioners must fulfill each of the following sets of requirements found in the Commission's regulations: (1) because the record in this proceeding is currently closed and Petitioners have filed a new contention, the motion must meet all of the requirements of 10 C.F.R. § 2.326 for reopening a closed record including, under section 2.326(d), those set forth at 10 C.F.R. § 2.309(c); (2) under 10 C.F.R. § 2.309(f)(2), the contention, having been filed after the deadline for initial intervention petitions, must have

⁷ CLI-10-11, 71 NRC 287 (2010).

⁸ See, e.g., LBP-11-20, 74 NRC 65, 68 (2011), *aff'd*, CLI-12-10, 75 NRC 479 (2012); LBP-11-23, 74 NRC 287, 291 (2011), *aff'd*, CLI-12-3, 75 NRC 132 (2012). The Commonwealth of Massachusetts also intervened and proffered contentions, but the board in LBP-06-23 found none of them admissible.

⁹ LBP-12-1, 75 NRC at 24 (2012), *aff'd*, CLI-12-15, 75 NRC 704 (2012).

¹⁰ Memorandum from Annette L. Vietti-Cook, NRC Secretary, to E. Roy Hawken, Chief Administrative Judge, Atomic Safety and Licensing Board Panel, at 1 (May 10, 2012).

¹¹ Although composed of the same judges as the previous licensing board, this is a new board established specifically to address these new motions in a currently closed proceeding.

¹² Licensing Board Order (Granting NRC Staff's Unopposed Motion for Extension; Seeking Input from Parties) (May 17, 2012) (unpublished).

¹³ NRC Staff's Answer to [JRWA] and Pilgrim Watch's Motion to Reopen the Record and Request for a Hearing with Regard to the Roseate Tern (May 16, 2012) [hereinafter NRC Staff Answer].

¹⁴ Entergy's Answer Opposing [JRWA]'s and Pilgrim Watch's Motion to Reopen Hearing Request on Contention Related to the Roseate Tern (May 16, 2012) [hereinafter Entergy Answer].

¹⁵ We note also that the Commission, upon the recommendation of the NRC Staff, on May 25, 2012, authorized the Staff to grant Entergy's application for renewal of the Pilgrim license, noting that, "if the renewed license is subsequently set aside on appeal, the previous operating license would be reinstated in accordance with 10 C.F.R. § 54.31(c)." SRM-SECY-12-0062, Renewal of Full-Power Operating License for Pilgrim Nuclear Power Station (May 25, 2012).

¹⁶ See LBP-12-11, 75 NRC at 734-35.

been submitted in a timely fashion, based on new information that is materially different from information previously available, or, alternatively, consideration of the contention under a balancing of the factors listed in section 2.309(c) must weigh in favor of admitting the contention; and (3) the contention must satisfy the general contention admissibility requirements of 10 C.F.R. § 2.309(f)(1)(i)-(vi).¹⁷

III. PETITIONERS' NEW CONTENTION

Petitioners allege a number of deficiencies in their new contention, which they summarize as follows:

Petitioners' evidence shows that Entergy does not have a valid consistency certification under the Coastal Zone Management Act, 16 U.S.C.S. §§ 1451 *et seq.* (CZMA), a valid state § 401 water quality certification under the federal Clean Water Act (CWA), 42 U.S.C.S. § 1341 (a)(1), or a current CWA 316(a) variance or 316(b) determination as required by the NRC regulation at 10 C.F.R. 51.53(c)(3)(ii)(B), and specifically that:

- (1) Entergy is in violation of the state Clean Waters Act, [Mass. Gen. Laws ch. 21], §§ 26-53 (State Act), 314 [Mass. Code Regs.] 4.05(4)(a)(2)(d), because [it] does not have a state permit to operate its cooling water intake structure (CWIS), which uses almost .5 billion gallons per day of sea water from Cape Cod Bay;
- (2) Entergy is violating the State Act and federal CWA because it does not have a state or federal permit to discharge tolytriazole [sic] to Cape Cod Bay, and [Pilgrim] has been discharging tolytriazole [sic] to Cape Cod Bay illegally since 1995, up to and including 2012;
- (3) Entergy does not have a state permit to discharge radioactive effluent to Cape Cod Bay as required by 314 [Mass. Code Regs.] 4.05(5)(d);
- (4) Entergy does not have authority to violate the state ban on killing river herring as set forth in 322 [Mass. Code Regs.] 6.17(3); and
- (5) Federal Endangered Species Act, 16 U.S.C. §§ 1531 *et seq.*, issues have not been resolved as required by 10 C.F.R. 51.53(c)(3)(ii)(E).

Due to the environmental impacts of the failure to comply with state and federal environmental permitting and approval requirements as set forth in above, the PNPS National Environmental Policy Act, (NEPA), 42 U.S.C. §§ 4321 *et seq.* environmental impact statement is incomplete and must be supplemented. Moreover, while the NRC may rely on its generic environmental impact statement regulations for operating relicensing renewal, these regulations truncate any meaningful NEPA analysis for purposes of assessing the environmental impacts for purposes of state

¹⁷ Petitioners have previously been found to have standing. *See* LBP-12-10, 75 NRC at 637-38.

permits, the Endangered Species Act, and CZM certification, and therefore the PNPS EIS is wholly inadequate.¹⁸

In support of their motion and contention, Petitioners attach four affidavits, each of which was also previously submitted in support of an earlier motion to reopen and contention.¹⁹

IV. RULING ON MOTION TO REOPEN AND NEW CONTENTION

Petitioners' new motion and contention, like their prior two submissions, must be denied because they have not been timely presented, nor has it been shown that the motion and contention should nonetheless be further considered based on satisfaction of any other relevant criteria that would in effect excuse the untimeliness.²⁰ Because untimeliness under 10 C.F.R. §§ 2.326(a)(1) and 2.309(c), (f)(2), constitutes sufficient grounds on its own for denying the motion and contention, we need not consider the submission under other subsections of sections 2.326 and 2.309. We address relevant timeliness questions with respect to each of the Petitioners' allegations, as follows:

A. Coastal Zone Management Act Consistency Certification

Petitioners acknowledge that "Entergy obtained a CZM certificate from Massachusetts in 2006," as required by the CZMA, but allege that the certificate was invalid at the time it was issued because it lacked necessary information and data and was based on inaccurate data.²¹ Petitioners' challenge to the sufficiency of the certificate 6 years after it was issued, based on information available months if not years prior to their May filing date, is plainly untimely. Petitioners nevertheless say their claim is supported by "new information" showing that Entergy will continue operations that adversely affect coastal resources during the relicensing period.²² Petitioners provide as examples of such new information "2012 unpermitted discharges of toly[l]triazole, killings of river herring, unpermitted radioactive effluent releases, and new information about roseate terns and

¹⁸ Motion at 2-3.

¹⁹ Affidavit of Anne Bingham (Mar. 6, 2012); Affidavit of Alex Mansfield (Mar. 6, 2012) [hereinafter Mansfield Aff.]; Affidavit of E. Pine duBois (Mar. 6, 2012); Affidavit of Ian Christopher Thomas Nisbet, Ph.D. (Apr. 30, 2012).

²⁰ See 10 C.F.R. §§ 2.309(c), 2.326(a)(1).

²¹ Motion at 10. See also *id.* at 12-16.

²² *Id.* at 19-20.

other endangered species,”²³ some of which have already been addressed in our previous rulings.²⁴

Petitioners also state that “[i]t was not until recently that Petitioners[] discovered the wholesale failure of the regulatory system with regard to the issues raised in this contention,” asserting further that “Entergy and the NRC kept silent about these issues, for which mandatory statutory disclosure and/or due diligence duties exist.”²⁵ Petitioners refer to failures to supplement the CZM consistency report and a lawsuit in which Entergy tried “to prevent implementation of state water quality standards,” but provide no citation to information supporting these statements.²⁶ They go on to argue the following:

Petitioners should not be prejudiced for Entergy’s failure to amend its CZM Report, to provide material new information to the NRC in this relicensing proceeding, or for NRC’s wholesale failure to exercise due diligence with regard to Entergy’s violations of state and federal law. Petitioners relied to their detriment on NRC doing its duty to ensure compliance with state and federal laws, and to act with reasonable diligence, and relied on Entergy to undertake mandatory efforts to provide all material relevant information in the licensing process. In NRC proceedings, estoppel has been applied to ensure fairness in the licensing process. Here, fundamental fairness requires that Entergy and the NRC be estopped from asserting that Petitioners’ contention is untimely.²⁷

Petitioners cite one case in support of their argument. But as the NRC Staff points out, that case, *Armed Forces Radiobiology Research Institute*, involved a situation in which the NRC Staff had actually provided advice regarding timing that misled that petitioner, and the Staff had conceded timeliness in light of such advice.²⁸ Under those circumstances the licensing board in the case found that Staff’s representation warranted permitting estoppel to be asserted.²⁹ The situation with Petitioners herein is quite different.

Petitioners’ protestations essentially amount to an argument that, by virtue of relying on *their own assumption* of action by NRC and Entergy, they have

²³ *Id.* at 20.

²⁴ See LBP-12-10, 75 NRC 633; LBP-12-11, 75 NRC 731. With respect to tolyltriazole, Petitioners provide a January 2012 Discharge Monitoring Report that was not previously provided. Motion at 10 and Attach. 1.

²⁵ Motion at 21.

²⁶ *Id.* Staff notes that the case in question is *Entergy Nuclear Generation Co. v. Department of Environmental Protection*, 459 Mass. 319, 944 N.E.2d 1027 (Mass. 2011). Staff Answer at 16 n.84.

²⁷ *Id.* (citing *Armed Forces Radiobiology Research Institute* (Cobalt-60 Storage Facility), LBP-82-24, 15 NRC 652, 658 (1982), *rev’d on other grounds*, ALAB-682, 16 NRC 150 (1982)).

²⁸ See *Armed Forces*, LBP-82-24, 15 NRC at 655-56; see also Staff Answer at 14-16.

²⁹ See *Armed Forces*, LBP-82-24, 15 NRC at 658.

shown that the legal principle of equitable estoppel should be applied, such that we should find Petitioners' new contention to have been timely filed at this late date. But the law of estoppel does not extend so far as to accommodate these circumstances.

To be sure, as the Supreme Court has observed, in *Heckler v. Community Health Services of Crawford County, Inc.*, “[e]stoppel is an equitable doctrine invoked to avoid injustice in particular cases.”³⁰ A party claiming estoppel, however, “must have relied on its adversary’s conduct ‘in such a manner as to change his position for the worse,’ and that reliance must have been reasonable in that the party claiming the estoppel did not know nor should it have known that its adversary’s conduct was misleading.”³¹ Moreover, “it is well-settled that the Government may not be estopped on the same terms as any other litigant.”³²

The United States District Court for the District of Columbia, citing *Heckler* and other case law, has recently described the elements of a showing of estoppel against the government, noting that there is a “clear presumption in [the D.C.] Circuit against invoking the doctrine . . . against government actors in any but the most extreme circumstances,” and that parties asserting estoppel must show that:

- (1) there was a “definite” representation to the party claiming estoppel,
- (2) the party “relied on its adversary’s conduct in such a manner as to change his position for the worse,”
- (3) the party’s “reliance was reasonable” and
- (4) the government “engaged in affirmative misconduct.”³³

It is clear that Petitioners have not shown estoppel even in its simplest form, much less proven the elements of estoppel against the government. They have shown no “definite” representation made to them upon which they reasonably relied to their detriment, or *any* actual action on the part of Entergy or the

³⁰ *Heckler v. Community Health Services of Crawford County, Inc.*, 467 U.S. 51, 59 (1984).

³¹ *Id.*

³² *Id.* at 60.

³³ *United States v. Honeywell International, Inc.*, 2012 WL 210955, at 2 (D.D.C. 2012) (citing *Heckler*, 467 U.S. at 60; *International Union v. Clark*, 2006 WL 2598046, at 12 (D.D.C. Sept. 11, 2006); *Morris Communications, Inc. v. Federal Communications Commission*, 566 F.3d 184, 191 (D.C. Cir. 2009); *Graham v. Securities and Exchange Commission*, 222 F.3d 994, 1007 (D.C. Cir. 2000)). See also *Dickow v. United States*, 740 F. Supp. 2d 231, 239 (D. Mass. 2010) (“Affirmative misconduct means ‘an affirmative misrepresentation or affirmative concealment of a material fact by the Government, although it does not require that the government intend to mislead a party.’”); *Center for Special Needs Trust Administration, Inc., v. Olson*, 676 F.3d 688, 698 (8th Cir. 2012) (“claimant must prove: 1) a false representation by the government; 2) that the government had the intent to induce the plaintiff to act on the misrepresentation; 3) the plaintiff’s lack of knowledge or inability to obtain the true facts; and 4) the plaintiff’s reliance on the misrepresentation to his detriment.”).

NRC upon which they relied, or any “affirmative misconduct” on the part of the NRC in making any representation at all to Petitioners. Petitioners simply made assumptions, without underlying foundation, and they failed to act when they should have if they wished to challenge the matters they now raise.

This is not to say that Petitioners do not have any concerns that, had they been presented at an appropriate time, might have warranted further inquiry and possible consideration in the EIS. But no facts have been shown to warrant any finding of estoppel that could reasonably be applied with respect to the admission of their contention or granting of their motion. Further, while Petitioners have provided some information purporting to show that Entergy’s past activities have continued into early 2012, this information was several months old when the instant motion was filed. Moreover, they have provided nothing to overcome the simple reality that, if they wished to challenge Entergy’s 2006 application³⁴ or the NRC’s 2007 FSEIS,³⁵ they could have done so at the time these documents were made available, assuming all other relevant admissibility criteria were met. Because Petitioners have not, however, done this, and because they have not shown any facts, circumstances, or law to support a finding of timeliness notwithstanding their own failures to act sooner, we must find that Petitioners have not timely raised any issues related to the Pilgrim CZM certification.

B. Clean Water Act § 401 Water Quality Certification

Section 401 of the federal Clean Water Act (CWA) requires that an applicant for a federal discharge permit provide a certification from the State that the proposed activity will not violate state water pollution control standards.³⁶ The parties do not dispute that in its 2006 license renewal application, Entergy sought to satisfy this requirement (1) by submitting letters the Massachusetts Water Resources Commission sent to Pilgrim’s previous owner in 1970 and 1971, indicating that the agencies were therein providing certain certifications relating to “applicable water quality standards”; and (2) by relying on its 1994 National Pollutant Discharge Elimination System (NPDES) permit.³⁷ Petitioners argue that Entergy has failed to meet the requirements of section 401 in its

³⁴ Entergy Nuclear Operations, Inc., License Renewal Application — Pilgrim Nuclear Power Station (January 25, 2006) (ADAMS Accession No. ML060300028).

³⁵ Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 29 Regarding Pilgrim Nuclear Power Station Final Report — Appendices, NUREG-1437, at E-3 to E-19 (July 2007) (ADAMS Accession No. ML071990027) [hereinafter FSEIS].

³⁶ 33 U.S.C. § 1341(a).

³⁷ See Motion at 7-8; Entergy Answer at 8-9 (citing Applicant’s Environmental Report, Operating License Renewal Stage, Pilgrim Nuclear Power Station, App. E (Jan. 25, 2006) (ADAMS Accession No. ML060830611) at 9-2 & Attach. A [hereinafter ER]); see also FSEIS at E-12, E-19.

reliance on the Massachusetts letters.³⁸ Whether or not Entergy's submission was adequate, however, Petitioners' contention on this point could, and therefore should, have been filed promptly following publication of Entergy's application and environmental report in 2006. In addition, none of Petitioners' assertedly "new information" appears to dispute either the existence of the letters themselves that contain the certifications in question, or the submission of those letters as part of Entergy's license renewal application, and no good reason is provided for failing to challenge them earlier. Under the circumstances, we must find that Petitioners' challenge is untimely.

C. Clean Water Act §§ 316(a) Variance and 316(b) Determination

NRC regulations require license renewal applicants to submit documentation of their compliance with sections 316(a) and (b) of the CWA concerning thermal discharges.³⁹ Petitioners allege that Entergy failed to fulfill this requirement when it submitted, as part of its license renewal application, its purported section 401 certificates and NPDES permit as evidence that its "cooling water intake structures represent the best technology available for minimizing adverse environmental impact"⁴⁰ and that it had received a variance for its thermal discharge.⁴¹ As Staff points out,⁴² however, the Commission has indicated that an NPDES permit need not specifically grant a section 316(a) variance; it can itself constitute such a variance if this is clearly intended.⁴³ In any event, as with the portion of the contention concerning the section 401 certification, Petitioners have put forward no plausible explanation for why they did not raise this issue when Entergy submitted its application in 2006, nor have they supplied any significant support for the proposition that the issue is now raised based on information that is really new. The claim is clearly untimely.

D. State Permit to Operate Cooling Water Intake Structure

Petitioners contend that Entergy lacks another required permit from Mas-

³⁸ Motion at 7-8.

³⁹ See 10 C.F.R. § 51.53(c)(3)(ii)(B); 33 U.S.C. § 1326(a), (b).

⁴⁰ 33 U.S.C. § 1326(b).

⁴¹ Motion at 7-8; see 33 U.S.C. § 1326(a).

⁴² See NRC Staff Answer at 27.

⁴³ *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 385-86 (2007) ("Congress has severely limited our scope of inquiry into section 316(a) determinations. All we may do is examine whether the EPA or the state agency considered its permit to be a section 316(a) determination. If the answer is 'yes,' our inquiry ends.").

sachusetts to operate its cooling water intake structure, or CWIS,⁴⁴ arguing that under *Entergy Nuclear Generation Co. v. Department of Environmental Protection*, “[t]here is no doubt that the Commonwealth has the authority to regulate Entergy’s CWIS.”⁴⁵ Interestingly, Entergy argues that Petitioners’ claim relating to the CWIS was resolved by the court in the same case, pointing out that the court noted in its opinion that Pilgrim holds a permit authorizing discharges from the plant that was jointly issued by the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection, and which was last renewed in 1991 and modified in 1994.⁴⁶ The permit Entergy describes appears to be the NPDES permit for Pilgrim, which Entergy argues authorizes its CWIS.⁴⁷

We note that, in the case submitted as authority by both parties, the Massachusetts Supreme Judicial Court actually held (in a decision issued April 11, 2011) that certain Massachusetts regulations relating to CWISs, which Entergy had challenged, were valid under the State Clean Waters Act, observing in the course of reaching its decision that another “permitting regime for discharges does not foreclose the department from developing compatible methods of regulating water intakes at CWISs.”⁴⁸ In addition, Petitioners have highlighted the court’s statement that, “[i]n areas with a designated use as aquatic habitat (such as Cape Cod Bay where Pilgrim’s CWIS operates) . . . CWISs hinder the attainment of water quality standards.”⁴⁹ Petitioners also make various assertions of harm to wildlife, including that the Pilgrim CWIS kills “vast amounts” of marine life and has the potential to adversely affect the roseate tern.⁵⁰ As NRC Staff suggests, however, Petitioners have provided little if any support to show any specific violations of any Massachusetts regulations,⁵¹ nor have they shown that the NRC would have jurisdiction over any such violations *per se*.

In the end, Petitioners provide no clear argument or factual support for a conclusion that the Commonwealth has taken any action with respect to the Pilgrim CWIS that would have a direct impact on the renewal of the Pilgrim license. Nor have they shown that either any such action or any alleged underlying harm to fish and wildlife would constitute sufficiently new information to reopen

⁴⁴ See Motion at 3, 7-9 (citing 314 Mass. Code Regs. § 4.05(4)(a)(2)(d)).

⁴⁵ *Id.* at 5.

⁴⁶ Entergy Answer at 18 (citing *Entergy Nuclear Generation Co.*, 459 Mass. at 321).

⁴⁷ *Id.* at 18-20.

⁴⁸ *Entergy Nuclear Generation Co.*, 459 Mass. at 330.

⁴⁹ Motion at 6. Petitioners in providing a quotation containing this language did not provide a citation, but we find the language in question in *Entergy Nuclear Generation Co.*, 459 Mass. at 332.

⁵⁰ Motion at 9.

⁵¹ Staff Answer at 29-31.

the Pilgrim license renewal proceeding. Again, while Petitioners' claim may warrant further inquiry, they have not shown it to be timely, whatever its merits.

E. State or Federal Permit to Discharge Tolyltriazole

Petitioners allege that “[s]ince about 1995, [Pilgrim] has been regularly discharging a corrosion inhibitor called toly[l]triazole into Cape Cod Bay without a state or federal water pollution permit.”⁵² Petitioners provide as support for this part of their contention the January 2012 discharge monitoring report referenced above.⁵³ Because Petitioners acknowledge, however, that these discharges began in 1995, as recorded in publicly available discharge monitoring reports, and because they do not reasonably explain why this matter could not have been alleged in a contention filed at the outset of the proceeding, the claim must fail. Under the circumstances, it is obviously untimely.

F. State Permit to Discharge Radioactive Effluent

According to Petitioners, Entergy is discharging radioactive effluent into Cape Cod Bay in violation of Massachusetts law.⁵⁴ They cite a Massachusetts state regulatory provision prohibiting harmful quantities of radioactive substances in surface waters, and allege that Entergy lacks a state permit for its radioactive effluent and has not shown that its discharges meet the standard in the state regulation.⁵⁵ Entergy states that this is actually governed by NRC regulations,⁵⁶ and Petitioners concede that “Entergy’s radioactive effluent discharges to Cape Cod Bay are described in monitoring reports going back to at least 1996 and continuing to the present.”⁵⁷ Thus, as with the other matters raised in this new filing, Petitioners could, and should, have filed any contention with respect to this issue much earlier than 2012. Because the information on which this portion of the contention is based was publicly available at the outset of the proceeding, this claim is manifestly untimely at this time.

G. State Ban on Killing River Herring

A regulation of the Massachusetts Division of Marine Fisheries states that “[i]t

⁵² Motion at 8.

⁵³ See *supra* note 23.

⁵⁴ Motion at 8.

⁵⁵ *Id.*

⁵⁶ Entergy Answer at 21-22.

⁵⁷ Motion at 8.

shall be unlawful for any person to harvest, possess or sell river herring in the Commonwealth or in the waters under the jurisdiction of the Commonwealth.”⁵⁸ Petitioners allege that Entergy routinely violates this regulation by entraining and impinging river herring in the Pilgrim CWIS;⁵⁹ Entergy counters that the regulation applies to recreational and commercial fishermen, not Pilgrim.⁶⁰ We need not resolve the question (even if we had jurisdiction to do so) because, like Petitioners’ other claims, it is untimely. Petitioners note that the state ban on killing river herring has been in place since 2006, and claim that Pilgrim has been killing herring throughout its operation.⁶¹ Assuming this to be true, Petitioners’ claim is not based on new information, could have been raised earlier, and is untimely now.

H. Annual Biological Report

Petitioners allege that Entergy is violating a requirement in the Pilgrim NPDES permit that it prepare an annual marine biological report in accordance with an environmental monitoring plan. The report is subject to approval by Massachusetts and EPA, but not NRC. Petitioners claim that Entergy has not had an approved monitoring plan “for about 10 years”;⁶² Entergy disputes this.⁶³ Again, whatever the case may be, Petitioners are inexcusably late in bringing this claim.

I. Endangered Species Issues

Petitioners renew arguments they made in their earlier motions to reopen concerning compliance with the Endangered Species Act and the Magnuson-Stevens Fishery Conservation and Management Act.⁶⁴ At the time Petitioners filed the current Motion those claims had not been decided, but they have since

⁵⁸ 322 Mass. Code Regs. § 6.17(3).

⁵⁹ Motion at 9.

⁶⁰ Entergy Answer at 23.

⁶¹ Mansfield Aff. at 8-9.

⁶² Motion at 10.

⁶³ Entergy Answer at 21.

⁶⁴ See [JRSA] and Pilgrim Watch Motion to Reopen, Request for Hearing and Permission to File New Contention in the Above-Captioned License Renewal Proceeding on Violations of the Endangered Species Act with Regard to the Roseate Tern (May 2, 2012); [JRSA] Petitions for Leave to Intervene and File New Contentions Under 10 C.F.R. § 2.309(a), (d) or in the Alternative 10 C.F.R. § 2.309(e) and [JRSA] and Pilgrim Watch Motion to Reopen Under 10 C.F.R. 2.326 and Request for a Hearing Under 10 C.F.R. § 2.309(a) and (d) in the Above Captioned License Renewal Proceeding (Mar. 8, 2012).

been rejected,⁶⁵ and Petitioners have not put forward any new information that would cause us to revisit those conclusions.

J. Alleged NEPA Violation

Petitioners essentially claim that the NRC violates NEPA by not considering the environmental impacts of Entergy's failure to possess the allegedly missing permits and approvals, and of related failures and discharges.⁶⁶ We note that compliance with the Clean Water Act "does not negate the requirement for NRC to weigh all environmental effects of [a] proposed action."⁶⁷ However, for the same reasons that their underlying claims are untimely, their NEPA claim is similarly untimely in this adjudicatory proceeding. In any event, nothing Petitioners have provided "reveal[s] a seriously different picture of the environmental impact of the proposed project," as required by relevant case law.⁶⁸

K. Exceptionally Grave Issue Claim

Petitioners argue that, even if their motion is untimely, it nevertheless meets the reopening criteria of 10 C.F.R. § 2.326(a)(1) because it presents an "exceptionally grave issue" such that it may be admitted at the board's discretion. The issues Petitioners contend are exceptionally grave:

include but are not limited to: lack of valid state CZM certificate, lack of valid state § 401 water quality certification, lack of a state permit to operate a CWIS, unpermitted discharges of pollutants, prima facie violations of state water quality standards designed to protect Cape Cod Bay as a "Class SA" use due to the lack of a CWIS permit and unpermitted pollutant discharges and violation of the ban on killing river herring; and failure to comply with the ESA Section 7 including failure to assess the significant potential for impact on the endangered roseate tern and potential effects on other endangered species for which federal review by NOAA is incomplete.⁶⁹

⁶⁵ See LBP-12-10, 75 NRC 633 (2012); LBP-12-11, 75 NRC 731 (2012).

⁶⁶ Motion at 3, 18.

⁶⁷ 10 C.F.R. § 51.71(d) n.3.

⁶⁸ See *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 52 (2001); see also *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 370-71 (1989); NRC Staff Answer at 40-41.

⁶⁹ Motion at 4. Petitioners note that "[u]nder state water quality standards, a Class SA water body is 'an excellent habitat for fish, other aquatic life and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary [sic] contact recreation.' . . . and has excellent aesthetic value." *Id.* at 4 n.1.

In addition, Petitioners allege that support for these allegations is found in the affidavits they have provided, which they contend also show “violations of state and federal water pollution control laws.”⁷⁰ Petitioners provide a chart purporting to illustrate which affidavits, and in some instances which parts of which affidavits, relate to particular issues, but cite the “[e]ntirety” of three affidavits as supporting a finding of an exceptionally grave issue.⁷¹ They do not further describe or even summarize more precisely which parts of the affidavits support their argument in this regard. Indeed, as with the other matters discussed *supra*, Petitioners largely discuss their allegations in generalities, fail to state specific issues concisely and precisely, and fail to support any such issues with focused, clearly described and well-organized allegations of fact and law that are tied to specific allegations. Although we have in our previous rulings noted that some of what is in these affidavits is not to be discounted, we have also, either explicitly or implicitly, found that none of the affidavits have provided sufficient support to show an “exceptionally grave issue,” nor do we find any discussion of specific facts that are specifically asserted to constitute or support a finding of any “exceptionally grave” matters at this time.

Finally, whatever merit Petitioners’ claims in this regard might have, the Commission has defined an exceptionally grave issue as one which raises “a sufficiently grave threat to public safety.”⁷² Petitioners have not claimed or shown that any alleged failure of Entergy to obtain required permits and approvals, or that the discharges and other harm they allege, pose any grave threat to the safety of the public. We must therefore conclude that Petitioners’ motion to reopen fails to meet either the timeliness or “exceptionally grave issue” requirement of section 2.326(a)(1).

V. CONCLUSION

For the reasons expressed above, we conclude that Petitioners’ motion and contention fail to meet the timeliness requirements of 10 C.F.R. § 2.326(a)(1) and § 2.309(f)(2). In addition, they fail to meet the requirements of 10 C.F.R. § 2.309(c), which permits untimely filings in certain circumstances. Petitioners do not establish good cause for their new submission’s untimeliness, and under the

⁷⁰ *Id.* at 22.

⁷¹ *Id.* at 23.

⁷² Criteria for Reopening Records in Formal Licensing Proceedings, 51 Fed. Reg. 19,535, 19,536 (May 30, 1986); *see also Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-00-12, 52 NRC 1, 5 (2000) (“we will reopen the record only when the new evidence raises an ‘exceptionally grave issue’ calling into question the safety of the licensed activity”).

circumstances discussed herein, we find no other considerations weigh sufficiently in Petitioners' favor to further consider their motion and contention.⁷³

Because Petitioners fail to meet the requirements of 10 C.F.R. §§ 2.326(a)(1) and 2.309(c) and (f)(2), their current motion and contention must be denied, and it is unnecessary to further consider their other, nontimeliness-related arguments. We observe, however, that the permits and approvals that Petitioners allege Entergy lacks are within the domain of other state or federal agencies. This board does not have jurisdiction to determine whether other government entities have properly followed their regulations or procedures,⁷⁴ or the authority to compel other such agencies to provide the Petitioners with relief. "Whether non-NRC permits are required is the responsibility of bodies that issue such permits."⁷⁵ If, for example, Petitioners are correct that Entergy's CWIS or discharges violate Massachusetts regulations, or that the CZM certification issued by Massachusetts is flawed, their remedy lies with the Commonwealth, not NRC. Likewise, issues

⁷³ We note Petitioners' citation of a 1994 Commission decision for the proposition that "[t]he fact that no one will represent a petitioner's position if its [] hearing request is denied is itself sufficient for the Commission to excuse the untimeliness of the request." Motion at 34 (citing *Westinghouse Electric Corp.* (Nuclear Fuel Export License for Czech Republic — Temelin Nuclear Power Plants), CLI-94-7, 39 NRC 322, 329 (1994)). However, what the Commission actually stated in that case is the following:

While we recognize that no one will represent the Petitioners' perspective if the hearing requests are denied, this in itself is insufficient for us to excuse their untimeliness. . . . Indeed, excusing untimeliness for every petitioner who meets only this factor would effectively negate any standards for untimely intervention in cases such as this where no one else has requested a hearing, since a late-filing petitioner could always maintain that there will be no hearing to protect its interest if intervention is denied.

Westinghouse, CLI-94-7, 39 NRC at 329 (citation omitted). Petitioners' characterization of the preceding evidences an unfortunate level of carelessness, which regrettably appears to be representative of much of their preparation and presentation with respect to this and their previous two submissions.

⁷⁴ See, e.g., *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 377 (2007) (The Clean Water Act "precludes [the NRC] from . . . second-guessing the conclusions in NPDES permits"). See 33 U.S.C. § 1371(c)(2), which provides that nothing in NEPA shall be deemed to:

(A) authorize any Federal agency authorized to license or permit the conduct of any activity which may result in the discharge of a pollutant into the navigable waters to review any effluent limitation or other requirement established pursuant to this chapter or the adequacy of any certification under section 1341 of this title.

(B) authorize any such agency to impose, as a condition precedent to the issuance of any license or permit, any effluent limitation other than any such limitation established pursuant to this chapter.

Cf. supra note 67 and accompanying text.

⁷⁵ *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119, 120 (1998).

relating to the status of the Pilgrim NPDES permit appear to lie with the EPA, with input from the Commonwealth.⁷⁶

VI. ORDER

For the foregoing reasons:

- a. Petitioners' May 14, 2012, motion to reopen fails to satisfy the requirement for reopening a closed record under 10 C.F.R. § 2.326(a)(1); and
- b. Petitioners' accompanying contention fails to satisfy the requirements of 10 C.F.R. § 2.309(f)(2) and § 2.309(c).

These failures require denial of the motion to reopen and contention filed by Pilgrim Watch and JRWA. The motion to reopen and contention are therefore both DENIED.

Pursuant to 10 C.F.R. § 2.341(a), this decision will constitute a final decision of the Commission forty (40) days from the date of issuance, i.e., on August 29, 2012, unless a petition for review is filed in accordance with 10 C.F.R. § 2.341(b), or the Commission directs otherwise. Any party wishing to file a petition for review on the grounds specified in section 2.341(b)(4) must do so within fifteen (15) days after service of this decision. A party must file a petition for review in order to exhaust its administrative remedies before seeking judicial review. Within ten (10) days after service of a petition for review, any other party to the proceeding may file an answer supporting or opposing Commission review. Any petition for review and any answer shall conform to the requirements of 10 C.F.R. § 2.341(b)(2)-(3).

⁷⁶ With respect to the long period of time — over 16 years — that the 1994 NPDES permit for Pilgrim has administratively remained in effect after it was scheduled to expire in 1996, *see* ER, Attach. A; Entergy Answer, Exhs. 1, 2, this would seem obviously to be a matter of concern, and it is clearly to be hoped that EPA and Massachusetts (insofar as its action is required) will act as expeditiously as possible to resolve this state of affairs. To the extent that the NRC Staff may appropriately choose to attempt to bring about some action in this regard, through interagency communication on matters of common or related concern, this would also seem to be beneficial and consistent with the purposes and goals of NEPA, other environmental statutes at issue, and NRC environmental regulations.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Ann Marshall Young, Chair
ADMINISTRATIVE JUDGE

Dr. Paul B. Abramson
ADMINISTRATIVE JUDGE

Dr. Richard F. Cole
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 20, 2012⁷⁷

⁷⁷ Copies of this Memorandum and Order were filed with the agency's EIE system for service to the parties on this date.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Allison M. Macfarlane, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of

**CALVERT CLIFFS 3 NUCLEAR
PROJECT, LLC and UNISTAR
NUCLEAR OPERATING
SERVICES, LLC**
(Calvert Cliffs Nuclear Power Plant,
Unit 3)

Docket No. 52-016-COL

DETROIT EDISON COMPANY
(Fermi Nuclear Power Plant,
Unit 3)

Docket No. 52-033-COL

DUKE ENERGY CAROLINAS, LLC
(William States Lee III Nuclear
Station, Units 1 and 2)

**Docket Nos. 52-018-COL
52-019-COL**

**ENTERGY NUCLEAR
OPERATIONS, INC.**
(Indian Point, Units 2 and 3)

**Docket Nos. 50-247-LR
50-286-LR**

ENTERGY OPERATIONS, INC.
(Grand Gulf Nuclear Station, Unit 1)

Docket No. 50-416-LR

ENTERGY OPERATIONS, INC.
(Grand Gulf Nuclear Station,
Unit 3)

Docket No. 52-024-COL

EXELON GENERATION COMPANY, LLC (Limerick Generating Station, Units 1 and 2)	Docket Nos. 50-352-LR 50-353-LR
EXELON NUCLEAR TEXAS HOLDINGS, LLC (Victoria County Station Site)	Docket No. 52-042
FIRSTENERGY NUCLEAR OPERATING COMPANY (Davis-Besse Nuclear Power Station, Unit 1)	Docket No. 50-346-LR
FLORIDA POWER & LIGHT COMPANY (Turkey Point Nuclear Generating Plant, Units 6 and 7)	Docket Nos. 52-040-COL 52-041-COL
LUMINANT GENERATION COMPANY LLC (Comanche Peak Nuclear Power Plant, Units 3 and 4)	Dockets 52-034-COL 52-035-COL
NEXTERA ENERGY SEABROOK, LLC (Seabrook Station, Unit 1)	Docket No. 50-443-LR
NUCLEAR INNOVATION NORTH AMERICA LLC (South Texas Project, Units 3 and 4)	Docket Nos. 52-012-COL 52-013-COL
PACIFIC GAS AND ELECTRIC COMPANY (Diablo Canyon Nuclear Power Plant, Units 1 and 2)	Docket Nos. 50-275-LR 50-323-LR
PPL BELL BEND, LLC (Bell Bend Nuclear Power Plant)	Docket No. 52-039-COL

PROGRESS ENERGY CAROLINAS, INC. (Shearon Harris Nuclear Power Plant, Units 2 and 3)	Docket Nos. 52-022-COL 52-023-COL
PROGRESS ENERGY FLORIDA, INC. (Levy County Nuclear Power Plant, Units 1 and 2)	Docket Nos. 52-029-COL 52-030-COL
SOUTH TEXAS PROJECT NUCLEAR OPERATING COMPANY (South Texas Project, Units 1 and 2)	Docket Nos. 50-498-LR 50-499-LR
TENNESSEE VALLEY AUTHORITY (Bellefonte Nuclear Power Plant, Units 3 and 4)	Docket Nos. 52-014-COL 52-015-COL
TENNESSEE VALLEY AUTHORITY (Watts Bar Nuclear Plant, Unit 2)	Docket No. 50-391-OL
UNION ELECTRIC COMPANY (Callaway Plant, Unit 1)	Docket No. 50-483-LR
VIRGINIA ELECTRIC AND POWER COMPANY d/b/a DOMINION VIRGINIA POWER and OLD DOMINION ELECTRIC COOPERATIVE (North Anna Power Station, Unit 3)	Docket No. 52-017-COL August 7, 2012

MEMORANDUM AND ORDER

We have received a series of substantively identical petitions to suspend final licensing decisions, and requesting additional related relief, in the captioned

matters.¹ As discussed below, we grant the requests in part and deny the requests in part.

Recently, the U.S. Court of Appeals for the District of Columbia Circuit found that the NRC had violated the National Environmental Policy Act (NEPA) in issuing its 2010 update to the Waste Confidence Decision and accompanying Temporary Storage Rule.² The court vacated both the Decision and the Rule, and remanded the case for further proceedings consistent with the court's opinion.³

In response to the court's decision, the petitioners request that we: (1) suspend final licensing decisions in reactor licensing cases, pending the completion of our action on the remanded Waste Confidence proceeding; (2) provide an opportunity for public comment on any generic determinations that we may make in either an environmental assessment (EA) or environmental impact statement (EIS); and (3) provide at least 60 days to seek consideration in individual licensing cases of any site-specific concerns relating to the remanded proceedings.⁴

Waste confidence undergirds certain agency licensing decisions, in particular new reactor licensing and reactor license renewal.⁵ Because of the recent court ruling striking down our current waste confidence provisions, we are now considering all available options for resolving the waste confidence issue, which could include generic or site-specific NRC actions, or some combination of both. We have not yet determined a course of action. But, in recognition of our duties

¹ See, e.g., Petition to Suspend Final Decisions in All Pending Reactor Licensing Proceedings Pending Completion of Remanded Waste Confidence Proceedings (June 18, 2012) (Petition). In addition, Friends of the Earth, and Eric Epstein, on behalf of Three Mile Island Alert, Inc., submitted the identical petition to the Commission, without identifying a particular docket. For convenience, page references in today's decision correspond to the Petition filed by Mindy Goldstein of the Turner Environmental Law Clinic, in the *Turkey Point* combined license (COL) matter. In response to the June 19, 2012, Order of the Secretary, we received answers from the NRC Staff, the applicants in all captioned matters, and a letter from the Nuclear Energy Institute (seeking to participate as *amicus curiae*). As we did in the *Callaway* matter, we consider the petitions, and take action, as an exercise of our inherent supervisory authority over agency proceedings. We need not, therefore, address procedural issues that would merit further consideration in adjudications. See *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 158 & n.65 (2011).

² *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012). See generally Final Rule: "Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation," 75 Fed. Reg. 81,032 (Dec. 23, 2010); Waste Confidence Decision Update, 75 Fed. Reg. 81,037 (Dec. 23, 2010).

³ In particular, the court struck down the Waste Confidence Decision's "Finding 2" (reasonable assurance exists that sufficient geologic repository capacity will be available for disposal of high-level waste and spent nuclear fuel "when necessary"), and "Finding 4" (reasonable assurance exists that, if necessary, spent fuel can be stored safely without significant environmental impacts beyond a reactor's licensed life for operation, in a combination of storage in its spent fuel pool and either an onsite or offsite dry cask storage system).

⁴ See Petition at 3-4, 10-12.

⁵ See 10 C.F.R. § 51.23(b).

under the law, we will not issue licenses dependent upon the Waste Confidence Decision or the Temporary Storage Rule until the court's remand is appropriately addressed.⁶ This determination extends just to *final* license issuance; all licensing reviews and proceedings should continue to move forward.⁷

The petitioners seek assurance that they will be able to participate in future NRC proceedings on waste confidence. We hereby provide that assurance. The public will be afforded an opportunity to comment in advance on any generic waste confidence document that the NRC issues on remand — be it a fresh rule, a policy statement, an EA, or an EIS.⁸

To the extent that the NRC takes action with respect to waste confidence on a case-by-case basis, litigants can challenge such site-specific agency actions in our adjudicatory process.⁹ In this vein, we and the boards are now in receipt of a number of new contentions and associated filings concerning waste confidence.¹⁰

⁶ See NRC Staff's Answer to Petition to Suspend Final Decisions in all Pending Reactor Licensing Proceedings Pending Completion of Remanded Waste Confidence Proceedings (June 25, 2012) at 4 (Staff Answer) (pointing to a number of factors that bear upon consideration of the requested relief but also stating that no final decision to grant a combined license, or initial or renewed operating license should be made "until the NRC has appropriately dispositioned the issues remanded by the court").

⁷ The petitioners expressly state that they do not seek suspension of ongoing adjudications. Petition at 4. Consistent with our ruling in *Callaway*, we agree that it is in the public interest for adjudications to proceed, except for contentions associated with waste confidence issues, as discussed *infra*. See *Callaway*, CLI-11-5, 74 NRC at 163-65. Petitioners also expressly state that they do not seek "any change in the schedules for the NRC Staff's review of reactor license applications." Petition at 4. Likewise, we see no need for the Staff to change its review schedules other than as may be necessary to address waste confidence issues.

⁸ See *Pa'ina Hawaii, LLC*, CLI-10-18, 72 NRC 56, 93 (2010). See generally 10 C.F.R. § 51.73 (requiring a comment period for draft EISs and supplemental EISs). See also Staff Answer at 4 & n.4.

⁹ But see *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85 (1974) ("[L]icensing boards should not accept in individual license proceedings contentions which are (or are about to become) the subject of general rulemaking by the Commission.").

¹⁰ See Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Proposed Fermi 3 Nuclear Power Plant (July 9, 2012); Motion to Reopen the Record for William States Lee III Units 1 and 2, together with Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at William States Lee III Units 1 and 2 (dated July 9, 2012, filed July 10, 2012 (additional declarations filed July 11, 2012); Beyond Nuclear Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Grand Gulf Unit 1 (July 9, 2012); Beyond Nuclear Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Grand Gulf Unit 3 (July 9, 2012); Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Davis-Besse Nuclear Power Station (July 9, 2012); Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Turkey

(Continued)

In view of the special circumstances of this case, as an exercise of our inherent supervisory authority over adjudications, we direct that these contentions — and

Point Nuclear Power Plant (July 9, 2012); Citizens Allied for Safe Energy, Inc. Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Turkey Point Nuclear Power Plant (dated July 9, 2012, filed July 10, 2012); Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Comanche Peak Nuclear Power Plant (July 9, 2012); Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Seabrook Station, Unit 1 (July 9, 2012); San Luis Obispo Mothers for Peace Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Spent Reactor Fuel at Diablo Canyon Nuclear Power Plant (July 9, 2012); NC WARN's Motion to Reopen the Record and Admit Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at the Shearon Harris Nuclear Power Plant (July 9, 2012); Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Spent Reactor Fuel at Levy Nuclear Power Plant (July 9, 2012); Petition for Intervention to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at STP Units 1 & 2 (July 9, 2012); Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at South Texas Units 3 & 4 (July 9, 2012); Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Bellefonte (July 9, 2012); Southern Alliance for Clean Energy's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Spent Reactor Fuel at Watts Bar Unit 2 (July 9, 2012); Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Callaway Nuclear Power Plant (July 9, 2012); Motion to Reopen the Record for North Anna Unit 3, together with Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at North Anna Unit 3 (dated July 9, 2012, filed July 10, 2012).

The Petition was not filed in the *Indian Point*, *Victoria County*, or *Limerick* dockets. We have, however, received new contentions in those ongoing adjudications. See Hudson River Sloop Clearwater, Inc.'s Motion for Leave to Add a New Contention Based Upon New Information and Petition to Add New Contention (July 9, 2012); State of New York, Riverkeeper, and Clearwater's Joint Motion for Leave to File a New Contention Concerning the On-Site Storage of Nuclear Waste at Indian Point, together with State of New York, Riverkeeper, Inc., and Hudson River Sloop Clearwater's Joint Contention NYS-39/RK-EC-9/CW-EC-10 Concerning the On-Site Storage of Nuclear Waste at Indian Point (July 8, 2012); Texans for a Sound Energy Policy's Motion to Reinstate Contentions TSEP-ENV-17 and TSEP-ENV-18, or in the Alternative for Leave to File a New Contention (July 9, 2012, amended July 10, 2012); Joint Motion to Dismiss Texans for a Sound Energy Policy's Motion to Reinstate Contentions and for Leave to File a New Contention, and to Establish a Schedule for Future Submissions (July 13, 2012); NRDC's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Limerick, together with NRDC's Waste Confidence Contention (July 9, 2012, errata filed July 9 and 10, 2012). These three cases have been added to the caption of this decision for the purpose of providing guidance on all new contentions that have been filed on this topic. Three licensing boards have issued case management orders relating to the new contentions. See Order (Extending Time to Answer Motion to Admit New Contention) (July 26, 2012) (unpublished) (*Callaway* license renewal); Order (Granting Joint Motion

(Continued)

any related contentions that may be filed in the near term — be held in abeyance pending our further order.¹¹

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK

Secretary of the Commission

Dated at Rockville, Maryland,
this 7th day of August 2012.

to Dismiss and Setting Schedule) (July 24, 2012) (unpublished) (*Victoria County* early site permit); Order (Extending Time to Answer Motion to Admit New Contention) (July 17, 2012) (unpublished) (*Bellefonte* COL).

¹¹ Should we determine at a future time that case-specific challenges are appropriate for consideration, our normal procedural rules will apply. *See Callaway*, CLI-11-5, 74 NRC at 168-71.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Ronald M. Spritzer, Chairman
Dr. Gary S. Arnold
Dr. William W. Sager

In the Matter of

Docket No. 52-016-COL
(ASLBP No. 09-874-02-COL-BD01)
(Combined License Application)

**CALVERT CLIFFS 3 NUCLEAR
PROJECT, LLC, and UNISTAR
NUCLEAR OPERATING
SERVICES, LLC**
**(Calvert Cliffs Nuclear Power
Plant, Unit 3)**

August 30, 2012

This proceeding concerns the application of Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC, under 10 C.F.R. Part 52 for a combined license (COL) to construct and operate a new nuclear unit, using the U.S. Evolutionary Power Reactor certified design, at its site in Lusby, Calvert County, Maryland. The licensing board conducted an evidentiary hearing on the merits of Contention 10C, which challenges the adequacy of the wind and solar power contribution estimates contained in the Final Environmental Impact Statement's (FEIS's) alternative based on a combination of energy sources. The licensing board finds that the FEIS, as supplemented by the evidence and testimony introduced at the evidentiary hearing, satisfies the requirements of the National Environmental Policy Act (NEPA) and 10 C.F.R. Part 51.

RULES OF PRACTICE: BURDEN OF PROOF

In general, an applicant in a licensing proceeding bears the burden of proving by a preponderance of the evidence that it is entitled to the applied-for license. *See* 10 C.F.R. § 2.325. Nonetheless, for contentions based on NEPA, such as the one at issue here, the burden shifts to the Staff, because the NRC, not the applicant, bears the ultimate burden of establishing compliance with NEPA. *See, e.g., Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1049 (1983).

NEPA AND 10 C.F.R. PART 51: ALTERNATIVES TO PROPOSED ACTION

An EIS shall include “a detailed statement by the responsible official on . . . alternatives to the proposed action.” 42 U.S.C. § 4332(2)(C)(iii); *see Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 104 (1998). When considering alternatives, agencies must:

- (a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.
- (b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

40 C.F.R. § 1502.14. NRC regulations state that the alternatives analysis is the “heart of the environmental impact statement.” 10 C.F.R. Part 51, Appendix A, § 5. The Council on Environmental Quality (CEQ) and the federal courts agree. 40 C.F.R. § 1502.14. “The existence of a reasonable but unexamined alternative renders an EIS inadequate.” *Friends of Southeast’s Future v. Morrison*, 153 F.3d 1059, 1065 (9th Cir. 1998).

RULES OF PRACTICE: SUPPLEMENTING ENVIRONMENTAL RECORD

The Commission has explained that “[b]oards frequently hold hearings on contentions challenging the Staff’s final environmental review documents. In such cases, ‘[t]he adjudicatory record and Board decision (and . . . any Commission appellate decisions) become, in effect, part of the FEIS.’” *Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), CLI-11-6, 74 NRC 203, 208-09 (2011) (citing *Claiborne*, CLI-98-3, 47 NRC at 89, and *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 705-07 (1985)). Thus, the Staff’s FEIS, in conjunction with the adjudicatory

record, become the relevant record of decision for the environmental portion of this proceeding. *See, e.g., Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, 68 NRC 509, 526 (2008), *petition for review denied on other grounds, San Luis Obispo Mothers for Peace v. NRC*, 635 F.3d 1109 (9th Cir. 2011). Federal courts of appeal have approved this process in which an EIS is effectively amended through the adjudicatory process. *New England Coalition on Nuclear Pollution v. NRC*, 582 F.2d 87, 93-94 (1st Cir. 1978); *Citizens for Safe Power, Inc. v. NRC*, 524 F.2d 1291, 1294 n.5 (D.C. Cir. 1975); *Ecology Action v. AEC*, 492 F.2d 998, 1001-02 (2d Cir. 1974).

RULES OF PRACTICE: CONTENTION ADMISSIBILITY

“Where an issue arises over the scope of an admitted contention, NRC opinions have long referred back to the bases set forth in support of the contention.” *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002). Information offered in evidence, even if not specifically stated in the original contention and bases may be relevant if it falls within the “envelope,” “reach,” or “focus” of the contention when read with the original bases offered for it. *Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), LBP-04-12, 59 NRC 388, 391 (2004). Thus, as long as the facts relied on by Joint Intervenors fall within the “envelope” of the contention, they are properly before the Board. A petitioner is not required to set forth all its evidence or to prove its contentions at the admissibility stage. *Mississippi Power and Light Co.* (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 426 (1973). The Commission has instructed licensing boards that they may not stretch “the scope of admitted contentions beyond their reasonably inferred bounds,” but this statement also implies that we may consider issues that, although not expressly stated, can reasonably be inferred from the arguments presented.

NEPA AND 10 C.F.R. PART 51: ALTERNATIVES TO PROPOSED ACTION

In considering alternatives under NEPA, an agency should take into account the needs and goals of the parties involved in the application. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 146 (2004). “However, agencies are not permitted ‘to define the objectives [of a proposed action] so narrowly as to preclude a reasonable consideration of alternatives.’” *Wyoming v. U.S. Department of Agriculture*, 661 F.3d 1209, 1244 (10th Cir. 2011) (quoting *Citizens’ Committee to Save Our Canyons v.*

U.S. Forest Service, 297 F.3d 1012, 1030 (10th Cir. 2002)). Although the agency’s alternatives analysis should reflect the applicant’s goals, the underlying goal should not be purposefully narrowed to predetermine the outcome. *City of Grapevine v. Department of Transportation*, 17 F.3d 1502, 1506 (D.C. Cir. 1994). Blindly adopting the applicant’s statement of the purpose of the action is a “losing position” because it does not allow for the full consideration of alternatives required by NEPA. *Simmons v. U.S. Army Corps of Engineers*, 120 F.3d 664, 669 (7th Cir. 1997). NEPA requires an agency to “exercise a degree of skepticism in dealing with the self-serving statements from the prime beneficiary of the project” and to look at the general goal of the project, rather than only those alternatives preferred by the applicant. *Id.* (quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 209 (D.C. Cir. 1991) (Buckley, J., dissenting)).

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PARTIAL INITIAL DECISION

(Ruling on Contention 10C)

In this Partial Initial Decision (PID),¹ the Board rules on the merits of Contention 10C, which challenges the adequacy of the wind and solar power contribution estimates contained in the Final Environmental Impact Statement’s (FEIS’s) alternative based on a combination of energy sources (the combination alternative). Although Contention 10C originally challenged the Draft Environmental Impact Statement (DEIS), the Board subsequently ruled that Contention 10C would be viewed as challenging the subsequently issued FEIS.²

¹There is currently before the Board one other admitted contention, Contention 1, regarding foreign ownership and control, as well as one proposed new contention, Contention 11, regarding the implications of the findings and recommendations raised by the NRC’s July 2011 Fukushima Task Force Report. *See* Licensing Board Order (Denying Summary Disposition of Contention 10C, Denying Amended Contention 10C, and Deferring Ruling on Contention 1) (Aug. 26, 2011) (unpublished) [hereinafter Contention 10C Summary Disposition Order]; New Contention Regarding NEPA Requirement to Address Safety and Environmental Implications of the Fukushima Task Force Report (Aug. 11, 2011) at 4 [hereinafter Contention 11].

²Contention 10C Summary Disposition Order at 22-25.

On January 26 and 27, 2012, the Board held an evidentiary hearing in Prince Frederick, Maryland, on Contention 10C.³ After considering all of the evidence and arguments presented, we find that, in the FEIS, the NRC Staff (Staff) unreasonably limited the wind and solar power contributions to the combination alternative by adopting an unrealistic completion date for the proposed action and excluding all wind and solar power sources not physically located in Maryland. Nevertheless, the Board finds that the wind and solar power contribution estimates for the combination alternative, as supplemented by the evidence and testimony introduced at the evidentiary hearing and our findings of fact and conclusions of law, are adequate, and that, as so supplemented, the FEIS satisfies the requirements of the National Environmental Policy Act (NEPA) and 10 C.F.R. Part 51. Accordingly, we do not grant Joint Intervenors' request that we require a further supplement to the FEIS.

I. BACKGROUND

Applicants submitted an application to the Nuclear Regulatory Commission (NRC) in two parts on July 13, 2007, and March 14, 2008, for a COL to construct and to operate one U.S. Evolutionary Power Reactor, designated Calvert Cliffs Nuclear Power Plant Unit 3 (Calvert Cliffs Unit 3), to be located in Lusby, Calvert County, Maryland.⁴ The Calvert Cliffs site currently houses two nuclear reactors, Calvert Cliffs Units 1 and 2.

The two parts of the application were accepted for docketing by the NRC on January 25, 2008, and June 3, 2008, respectively.⁵ Following the NRC's publication of a notice of hearing and opportunity to petition for leave to intervene in this matter,⁶ Joint Intervenors⁷ filed a petition that challenged several aspects of

³ Tr. at 305, 542.

⁴ See Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC Notice of Hearing and Opportunity to Petition for Leave to Intervene and Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation on a Combined License for the Calvert Cliffs Nuclear Power Plant Unit 3, 73 Fed. Reg. 55,876 (Sept. 26, 2008).

⁵ *Id.*

⁶ *Id.*

⁷ Joint Intervenors consist of Nuclear Information Resource Service, Beyond Nuclear, Public Citizen Energy Program, and Southern Maryland Citizens' Alliance for Renewable Energy Solutions. LBP-09-4, 69 NRC at 177-81.

Applicants' COL application (COLA) on November 19, 2008.⁸ This Board was established on December 2, 2008, to adjudicate the proceeding.⁹

On March 24, 2009, the Board issued a Memorandum and Order, in which it found that the Joint Intervenors had standing, admitted them as parties, admitted their first contention as pleaded, admitted their second and seventh contentions as modified by the Board, and granted their request for a hearing.¹⁰ The Board later granted Applicants' Motions for Summary Disposition of Contentions 2 and 7.¹¹

In April 2010 the Staff issued the DEIS for Calvert Cliffs Unit 3.¹² Chapter 9 of the DEIS described alternatives to the proposed Calvert Cliffs Unit 3 and discussed the environmental impacts of those alternatives.¹³ The Staff concluded, based on its estimate of environmental impacts, that none of the viable energy alternatives was clearly preferable to construction of a new baseload nuclear power generating plant.¹⁴ As a result, the Staff issued a preliminary recommendation to the Commission that the COL for Calvert Cliffs Unit 3 be issued.¹⁵

On June 25, 2010, Joint Intervenors proffered Contention 10, which alleged various inadequacies in the Staff's DEIS for proposed Calvert Cliffs Unit 3.¹⁶ As pled, Contention 10 challenged the DEIS analyses relating to need for power, energy alternatives, and costs.¹⁷ The Board divided Contention 10 into four parts, which it designated Contentions 10A, 10B, 10C, and 10D. On December 28,

⁸ See Petition to Intervene in Docket No. 52-016, Calvert Cliffs 3 Nuclear Power Plant Combined Construction and License Application (Nov. 19, 2008) [hereinafter Petition].

⁹ Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC; Establishment of Atomic Safety and Licensing Board, 73 Fed. Reg. 74,531 (Dec. 8, 2008).

¹⁰ See LBP-09-4, 69 NRC at 231-32.

¹¹ Licensing Board Memorandum and Order (Granting Motion for Summary Disposition of Contention 2) (July 30, 2009) at 2 (unpublished); Licensing Board Memorandum and Order (Ruling on Joint Intervenors' Proposed New Contentions 8 and 9 and Applicants' Motion for Summary Disposition of Contention 7) (Apr. 5, 2010) at 1 (unpublished).

¹² NUREG-1936, Environmental Impact Statement for the Combined License (COL) for Calvert Cliffs Nuclear Power Plant Unit 3, Draft Report for Comment, Vols. 1 & 2 (Apr. 2010) [hereinafter DEIS].

¹³ *Id.* at 9-1.

¹⁴ *Id.* at 9-28.

¹⁵ *Id.* at 10-29.

¹⁶ Submission of Contention 10 by Joint Intervenors (June 25, 2010) [hereinafter Contention 10]. Applicants and the Staff timely filed their respective responses to Joint Intervenors' Submission of Contention 10 on July 20, 2010, and Joint Intervenors timely submitted their reply on July 27, 2010. See Applicants' Response to Proposed Contention 10 (July 20, 2010) at 1; Staff Answer to Joint Intervenors' New Contention 10 (July 20, 2010) at 27; Joint Intervenor's [sic] Reply to Staff's and Applicant's [sic] Responses to Submission of Contention 10 (July 27, 2010) at 16.

¹⁷ Contention 10 at 1.

2010, the Board admitted Contention 10C but declined to admit the remaining parts.¹⁸ As admitted by the Board, Contention 10C states:

The DEIS discussion of a combination of alternatives is inadequate and faulty. By selecting a single alternative that under represents potential contributions of wind and solar power, the combination alternative depends excessively on the natural gas supplement, thus unnecessarily burdening this alternative with excessive environmental impacts.¹⁹

On May 20, 2011, the FEIS for Calvert Cliffs Unit 3 became publically available.²⁰ On June 20, 2011, Joint Intervenors filed their Submission of Amended Contention 10C and Applicants filed their Motion for Summary Disposition of Contention 10C.²¹ The Staff filed a response in support of Applicants' Motion for Summary Disposition of Contention 10C on July 11, 2011.²² On July 15, 2011, the Staff and Applicants filed their respective responses to Joint Intervenors' Submission of Amended Contention 10C.²³ On August 26, 2011, the Board issued an order in which it denied Applicants' Motion for Summary Disposition of Contention 10C because a dispute of material fact remained, and declined to admit Joint Intervenors' Amended Contention 10C because it was unnecessary.²⁴

In accordance with the revised schedule, the parties submitted their direct written testimony on October 21, 2011.²⁵ On October 24, 2011, Joint Intervenors

¹⁸ *Id.* at 1, 23.

¹⁹ LBP-10-24, 72 NRC 720, 765 (2010).

²⁰ Calvert Cliffs 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC; Notice of Availability of the Final Environmental Impact Statement for the Combined License Application for Calvert Cliffs Nuclear Power Plant Unit 3, 76 Fed. Reg. 29,279 (May 20, 2011); Environmental Impact Statement for the Combined License (COL) for Calvert Cliffs Nuclear Power Plant Unit 3, Final Report, NUREG-1936 (May 2011) [hereinafter FEIS].

²¹ Submission of Amended Contention 10C by Joint Intervenors (June 20, 2011) at 1, 11 [hereinafter Submission of Amended Contention 10C]; Applicants' Motion for Summary Disposition of Contention 10C (June 20, 2011) at 1.

²² Staff's Response to Applicants' Motion for Summary Disposition (July 11, 2011).

²³ Staff Answer to Joint Intervenors' Amended Contention 10C (July 15, 2011); Applicants' Response to Amended Contention 10C (July 15, 2011).

²⁴ Contention 10C Summary Disposition Order. In this Order, the Board also deferred its ruling on Contention 1 until the issuance of the Partial Initial Decision on Contention 10C. *Id.* at 25.

²⁵ Applicants and the Staff submitted their respective initial statements of position, witness testimony, and exhibits. See UniStar Initial Statement of Position on Contention 10C (Oct. 21, 2011); Exh. APL000001 (Direct Testimony of UniStar Witnesses Dimitri Lutchenkov, Stefano Rati, and Septimus van der Linden (Oct. 21, 2011)); Staff Initial Statement of Position (Oct. 21, 2011); Exh. NRC000001 (Prefiled Direct Testimony of Laura M. (Quinn) Willingham Sponsoring NUREG-1936 into the Hearing Record (Oct. 21, 2011)); Exh. NRC000004 (Prefiled Direct Testimony of Andrew J. Kugler

(Continued)

filed an unopposed motion requesting to withdraw their previously submitted testimony and exhibits, submit new expert testimony and exhibits, and extend all other relevant deadlines related to the evidentiary hearing by 1 week.²⁶ The Board granted the motion on October 25, 2011,²⁷ and Joint Intervenors filed their new expert testimony and exhibits on October 28, 2011.²⁸

On November 18, 2011, the parties submitted their respective rebuttal written testimony.²⁹ On December 9, 2011, the Staff and Applicants filed proposed questions for the Board to ask at the evidentiary hearing.³⁰ In addition, on December 9, 2011, the Staff also filed a motion in limine to exclude portions of Joint Intervenors' direct testimony, rebuttal testimony, rebuttal statement of position, and exhibits.³¹ Joint Intervenors filed their response opposing the Staff's motion in limine on December 19, 2011.³² The Board granted the Motion in part

and Katherine A. Cort Concerning Environmental Contention 10C (Oct. 21, 2011)). Joint Intervenors did not submit an initial statement of position, but did submit testimony from their representative, Michael Mariotte, along with related exhibits. *See* Testimony of Michael Mariotte, Executive Director of Nuclear Information and Resource Service, on Contention 10 (Oct. 21, 2011).

²⁶ Motion to Allow Joint Intervenors to Withdraw Written Testimony of October 21, 2011 on Contention 10, to Submit Expert Testimony by October 28, 2011, and to Extend Other Relevant Deadlines by One Week (Oct. 24, 2011). Intervenors explained that they were unable to file the written testimony of their anticipated expert witness, Mr. Sklar, by October 21 due to an illness in the witness's family, but that they would be able to do so by October 28. *Id.*

²⁷ Licensing Board Order (Granting Unopposed Motion to Withdraw Written Testimony Filed October 21, Submit Expert Testimony by October 28, and Extend Other Relevant Deadlines by One Week; and Providing Additional Instructions to Intervenors Regarding the Re-Filing of Testimony and Exhibits) (Oct. 25, 2011) (unpublished).

²⁸ *See* Exh. JNTR00001 (Testimony of Scott Sklar, President of the Stella Group, Ltd., on Contention 10 (Nov. 18, 2011)); Pre-Filed Testimony of Scott Sklar, President of the Stella Group, Ltd. on Contention 10 on Behalf of Joint Intervenors (Oct. 28, 2011).

²⁹ *See* Staff Rebuttal Statement of Position (Nov. 18, 2011); UniStar Rebuttal Statement of Position on Contention 10C (Nov. 18, 2011); Joint Intervenor Statement of Position (in Rebuttal) (Nov. 18, 2011); Exh. NRC000043 (Prefiled Rebuttal Testimony of Andrew J. Kugler and Katherine A. Cort Regarding Environmental Contention 10C (Nov. 18, 2011)); Exh. APL000055 (Rebuttal Testimony of UniStar Witnesses Dimitri Lutchakov, Stefano Ratti, and Septimus Van Der Linden (Nov. 18, 2011)); Exh. JNT000030 (Rebuttal Testimony of Scott Sklar, President of the Stella Group, Ltd., on Contention 10 (Nov. 18, 2011)).

³⁰ UniStar's Questions for the Licensing Board on Pre-Filed Direct and Rebuttal Testimony for Contention 10C (Dec. 9, 2011); NRC Staff Proposed Questions (Dec. 9, 2011). These filings were submitted *in camera* and held in confidence by the Board, pursuant to 10 C.F.R. § 2.1207(a)(3)(iii).

³¹ Staff Motion in Limine to Exclude Portions of the Joint Intervenors' Direct and Rebuttal Testimony, Exhibits, and Portions of the Joint Intervenors' Rebuttal Statement of Position (Dec. 9, 2011) [hereinafter Motion in Limine].

³² Joint Intervenors Opposition to Staff Motion in Limine (Dec. 19, 2011) [hereinafter Opposition to Motion in Limine].

and denied it in part, as explained in the Order of January 17, 2012.³³ None of the parties filed motions to permit cross-examination.

On January 26 and 27, 2012, the Board held an evidentiary hearing on Contention 10C in Prince Frederick, Maryland.³⁴ The hearing was conducted in accordance with the provisions of Subpart L to 10 C.F.R. Part 2. The parties proffered into evidence prefiled testimony and exhibits,³⁵ and the Board received live testimony from multiple witnesses.³⁶ After receiving testimony, the Board afforded the parties an opportunity to suggest cross-examination or rehabilitation questions.³⁷

Following the evidentiary hearing, the Board adopted certain corrections to the hearing transcript, admitted an additional exhibit submitted by Joint Intervenors, and closed the environmental evidentiary record.³⁸ On April 20, 2012, the parties filed proposed findings of fact and conclusions of law regarding Contention 10C.³⁹

II. LEGAL STANDARDS

A. Burden and Standard of Proof

In general, an applicant in a licensing proceeding bears the burden of proving by a preponderance of the evidence that it is entitled to the applied-for license.⁴⁰ Nonetheless, for contentions based on NEPA, such as the one at issue here, the burden shifts to the Staff, because the NRC, not the applicant, bears the ultimate burden of establishing compliance with NEPA.⁴¹

³³ Licensing Board Order (Granting in Part and Denying in Part Staff's Motion in Limine) (Jan. 17, 2012) (unpublished) [hereinafter Board in Limine Ruling].

³⁴ Tr. at 310.

³⁵ See Tr. at 317-21.

³⁶ Tr. at 340, 490, 547.

³⁷ See Tr. at 486, 490, 533-41, 684-86.

³⁸ Licensing Board Order (Adopting Proposed Transcript Corrections, Admitting Additional Exhibit, and Closing the Evidentiary Record) (Mar. 6, 2012) (unpublished).

³⁹ Proposed Findings of Fact and Conclusions of Law Regarding Joint Intervenors Contention 10C (Apr. 20, 2012); Applicants' Proposed Findings of Fact and Conclusions of Law on Contention 10C (Apr. 20, 2012) [hereinafter Applicants' Proposed Findings of Fact]; Staff Proposed Partial Initial Decision Findings of Fact and Conclusions of Law on Contention 10C (Apr. 20, 2012) [hereinafter Staff Proposed Findings of Fact]. In addition, on April 27, 2012, the Staff filed an Errata to its Staff Proposed Partial Initial Decision Findings of Fact and Conclusions of Law on Contention 10C to correct errors in its original filing. Errata Staff Proposed Partial Initial Decision Findings of Fact and Conclusions of Law on Contention 10C (Apr. 27, 2012).

⁴⁰ See 10 C.F.R. § 2.325. Thus, for safety issues, an applicant in a licensing proceeding has the burden of establishing that it is entitled to the applied-for license by a preponderance of the evidence.

⁴¹ See, e.g., *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1049 (1983).

As a practical matter, however, the Staff typically relies heavily on the applicant's Environmental Report (ER) in preparing its FEIS.⁴² Consequently, while environmental contentions ultimately challenge the NRC's compliance with NEPA,⁴³ an applicant is free to support positions set forth in the EIS that are under challenge.⁴⁴

B. NEPA and 10 C.F.R. Part 51

Contention 10C arises under NEPA and the NRC's corresponding implementing regulations, 10 C.F.R. Part 51.⁴⁵ "The centerpiece of environmental regulation in the United States, NEPA requires federal agencies to pause before committing resources to a project and consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives."⁴⁶ The goal of NEPA is twofold: (1) to ensure that agency decisionmakers will have detailed information concerning significant environmental impacts of proposed projects when they make their decisions; and (2) to guarantee that such information will be available to the larger audience that may also play a role in the decisionmaking process.⁴⁷

To meet these goals, NEPA mandates that agencies prepare an environmental impact statement (EIS) before approving any major federal action that will significantly affect the quality of the human environment.⁴⁸ The requirement to prepare an EIS is a procedural mechanism designed to assure that agencies properly consider the environmental consequences of their actions. Nevertheless, NEPA does not mandate substantive results.⁴⁹ Rather, NEPA imposes procedural restraints on agencies, which require them to take a "hard look" at the environmental

⁴² See 10 C.F.R. §§ 51.41, 51.45(c).

⁴³ *Catawba*, CLI-83-19, 17 NRC at 1049.

⁴⁴ *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 338-39 (1996) (citing *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-471, 7 NRC 477, 489 n.8 (1978)), *rev'd on other grounds*, CLI-97-15, 46 NRC 294 (1997).

⁴⁵ 42 U.S.C. §§ 4321-4370; 10 C.F.R. Part 51.

⁴⁶ *New Mexico ex rel. Richardson v. Bureau of Land Management*, 565 F.3d 683, 703 (10th Cir. 2009) (citing 42 U.S.C. § 4331(b) (congressional declaration of national environmental policy); *U.S. Department of Transportation v. Public Citizen*, 541 U.S. 752, 756-57 (2004); *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989); *Forest Guardians v. U.S. Forest Service*, 495 F.3d 1162, 1172 (10th Cir. 2007)).

⁴⁷ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

⁴⁸ 42 U.S.C. § 4332(2)(C).

⁴⁹ *Robertson*, 490 U.S. at 350 ("Although [NEPA's action forcing] procedures are almost certain to affect the agency's substantive decision, it is now well settled that NEPA itself does not mandate particular results, but simply prescribes the necessary process."); see also *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 558 (1978). Thus, NEPA does not require agencies to "elevate environmental concerns over other appropriate considerations." *Strycker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223, 227 (1980).

impacts of a proposed action and the reasonable alternatives to that action.⁵⁰ This standard requires the agency to undertake a rigorous and objective analysis of the proposal's environmental consequences and of alternatives. By requiring this detailed analysis before the agency acts on the proposal, NEPA ensures that an agency will not act upon "incomplete information, only to regret its decision after it is too late to correct."⁵¹ Nonetheless, NEPA's "hard look" requirement is tempered by a "rule of reason."⁵² According to the "rule of reason," an agency must only consider reasonably foreseeable impacts in its EIS, and need not address those that are "remote and speculative" or "inconsequentially small."⁵³

Contention 10C is based upon the requirement that the EIS include "a detailed statement by the responsible official on . . . alternatives to the proposed action."⁵⁴ When considering alternatives, agencies must:

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.⁵⁵

NRC regulations state that the alternatives analysis is the "heart of the environmental impact statement."⁵⁶ The Council on Environmental Quality (CEQ)⁵⁷

⁵⁰ *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998); see also *Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.*, 462 U.S. 87, 97-98 (1983) (holding that NEPA requires agencies to take a "hard look" at environmental consequences prior to taking major actions).

⁵¹ *Claiborne*, CLI-98-3, 47 NRC at 88 (quoting *Marsh*, 490 U.S. at 371).

⁵² *Louisiana Energy Services, L.P.* (National Enrichment Facility), LBP-06-8, 63 NRC 241, 258-59 (2006) (citing *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973)); see also *Pub. Citizen*, 541 U.S. at 767-69 (stating that the rule of reason is inherent in NEPA and its implementing regulations).

⁵³ See, e.g., *Shoreham*, ALAB-156, 6 AEC at 836. According to the Council on Environmental Quality (CEQ), the "rule of reason" is "a judicial device to ensure that common sense and reason are not lost in the rubric of regulation." Final Rule: "National Environmental Policy Act Regulations; Incomplete or Unavailable Information," 51 Fed. Reg. 15,618, 15,621 (Apr. 25, 1986).

⁵⁴ 42 U.S.C. § 4332(2)(C)(iii); see *Claiborne*, CLI-98-3, 47 NRC at 104.

⁵⁵ 40 C.F.R. § 1502.14.

⁵⁶ 10 C.F.R. Part 51, Appendix A, § 5.

⁵⁷ CEQ, which was created by NEPA in the Executive Office of the President, has promulgated regulations governing federal agency compliance with NEPA. See 40 C.F.R. §§ 1500.1-1508.28. The regulations receive substantial deference from the federal courts. See *Pub. Citizen*, 541 U.S. at 757; *Robertson*, 490 U.S. at 355-56. The Commission has also stated that "[a]lthough the CEQ's guidance does not bind us, we give such guidance substantial deference." *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), CLI-07-27, 66 NRC 215, 222 n.21 (2007).

and the federal courts agree.⁵⁸ “The existence of a reasonable but unexamined alternative renders an EIS inadequate.”⁵⁹ The adequacy of the FEIS’s evaluation of alternatives is therefore a material issue in the licensing proceeding, and Contention 10C challenges that evaluation.

C. Supplementing the Environmental Record

The Commission has explained that “[b]oards frequently hold hearings on contentions challenging the Staff’s final environmental review documents. In such cases, ‘[t]he adjudicatory record and Board decision (and . . . any Commission appellate decisions) become, in effect, part of the FEIS.’”⁶⁰ Thus, the Staff’s FEIS, in conjunction with the adjudicatory record, becomes the relevant record of decision for the environmental portion of this proceeding.⁶¹ Federal courts of appeal have approved this process in which an EIS is effectively amended through the adjudicatory process.⁶² The Board’s review of Contention 10C therefore encompasses all pertinent information properly before it, including the FEIS and the witness testimony and exhibits that were received into evidence at the evidentiary hearing. We will base our decision on whether the FEIS complies with NEPA on those sources of information, and that decision, along with the rest of the record for this proceeding, will in effect become part of the FEIS.

III. STAFF’S MOTION IN LIMINE

In our January 17, 2012 Order, issued in response to the Staff’s Motion in Limine, we stated that we would defer our ruling on the disputed portions of the prefiled testimony of Mr. Sklar, Joint Intervenors’ witness, until we had available the full evidentiary record.⁶³ We now resolve those issues.

⁵⁸ 40 C.F.R. § 1502.14; see, e.g., *Wyoming v. U.S. Department of Agriculture*, 661 F.3d 1209, 1243 (10th Cir. 2011); *Alaska v. Andrus*, 580 F.2d 465, 474 (D.C. Cir. 1978), vacated in part as moot sub nom. *Western Oil & Gas Association v. Alaska*, 439 U.S. 922 (1978).

⁵⁹ *Friends of Southeast’s Future v. Morrison*, 153 F.3d 1059, 1065 (9th Cir. 1998).

⁶⁰ *Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), CLI-11-6, 74 NRC 203, 208-09 (2011) (citing *Claiborne*, CLI-98-3, 47 NRC at 89, and *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 705-07 (1985)).

⁶¹ See, e.g., *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, 68 NRC 509, 526 (2008), *petition for review denied on other grounds*, *San Luis Obispo Mothers for Peace v. NRC*, 635 F.3d 1109 (9th Cir. 2011).

⁶² *New England Coalition on Nuclear Pollution v. NRC*, 582 F.2d 87, 93-94 (1st Cir. 1978); *Citizens for Safe Power, Inc. v. NRC*, 524 F.2d 1291, 1294 n.5 (D.C. Cir. 1975); *Ecology Action v. AEC*, 492 F.2d 998, 1001-02 (2d Cir. 1974).

⁶³ Board In Limine Ruling at 3.

In its Motion in Limine, the Staff moved to strike certain testimony concerning energy production outside of Maryland.⁶⁴ According to the Staff, the purpose and need of the proposed action is to “provide for additional large baseload electrical generating capacity within the State of Maryland.”⁶⁵ The Staff maintains that Joint Intervenors did not challenge the requirement that any new electrical generating capacity must be physically located within Maryland, and that this precludes them from offering testimony concerning the potential for out-of-state wind and solar power to contribute to the combination alternative.⁶⁶

We reject this objection. To begin with, the FEIS does not in fact consistently require that all sources of new electrical power be located in Maryland. Section 1.3.1 of the FEIS, entitled “NRC’s Proposed Action,” states that “[t]he purpose and need for the proposed NRC action is to provide for additional large baseload electrical generating capacity within the State of Maryland.”⁶⁷ Although this statement implies that all the generating capacity must be physically located in Maryland, the Staff witnesses, citing the page of the FEIS on which this statement appears, inform us that “the purpose and need defined by the Review Team is to provide baseload power generation *for the State of Maryland*.”⁶⁸ That purpose could be accomplished by a combination alternative that includes power generated both within and outside the State, provided the power is available for distribution in Maryland. Similarly, in section 1.3.2, the FEIS states that “[t]he overall purpose of the project is to construct a nuclear power plant facility to provide for additional baseload electrical generating capacity to meet the growing demand in the State of Maryland.”⁶⁹ Never once in section 1.3.2 does the FEIS state that the purpose and need of the proposed action requires new baseload generating capacity located entirely within the State of Maryland. Rather, in section 1.3.2, the FEIS simply states that the purpose of the proposed project is to meet the growing electrical demands of the State of Maryland — a purpose which can be met by out-of-state power sources. The Staff’s willingness to allow out-of-state

⁶⁴ Motion in Limine at 4-6.

⁶⁵ *Id.* at 4 (citing FEIS at 1-9).

⁶⁶ *Id.* at 4-6.

⁶⁷ FEIS at 1-9.

⁶⁸ Exh. NRC000015, at 14 (citing FEIS at 1-9) (emphasis added).

⁶⁹ FEIS at 1-11. In addition to obtaining a COL for Calvert Cliffs Unit 3, Applicants must apply for and receive a Department of the Army Individual Permit pursuant to section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Appropriation Act of 1899. *Id.* at 1-1. The Corps verifies whether the information presented in the EIS is adequate to fulfill Corps regulations and the Clean Water Act § 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material. *Id.* at 1-2. “The Corps has the authority to issue permits for proposed work or structures in, over, and under navigable waters and for the discharge of dredged or fill material into waters of the United States. The Corps would regulate activities that would temporarily or permanently affect wetlands and waterbodies involved in this project.” *Id.*

sources to meet the purpose and need of the proposed project is reiterated again in section 9.2, “Energy Alternatives,” when the Staff states that “[t]he purpose and need for the proposed project . . . of this EIS is to generate baseload power for use by the applicant and for possibly future sale on the wholesale market.”⁷⁰

Moreover, regardless of how the Staff defined the purpose and need, the Joint Intervenors’ challenge to the Staff’s blanket exclusion of sources outside Maryland falls within the “basis” or “envelope” of Contention 10C. “Where an issue arises over the scope of an admitted contention, NRC opinions have long referred back to the bases set forth in support of the contention.”⁷¹ Information offered in evidence — even if not specifically stated in the original contention and bases — may be relevant if it falls within the “envelope,” “reach,” or “focus” of the contention when read with the original bases offered for it.⁷² Thus, as long as the facts relied on by Joint Intervenors fall within the “envelope” of the contention, they are properly before the Board. A petitioner is not required to set forth all its evidence or to prove its contentions at the admissibility stage.⁷³ The Commission has instructed licensing boards that they may not stretch “the scope of admitted contentions beyond their reasonably inferred bounds,” but this statement also implies that we may consider issues that, although not expressly stated, can reasonably be inferred from the arguments presented.⁷⁴

In proposed Contention 10, from which the Board derived Contention 10C, Joint Intervenors argued that the combination alternative “grossly underestimated” wind power potential because it omitted proposed new offshore wind power to be generated outside Maryland as well as within the state.⁷⁵ Joint Intervenors also criticized the DEIS for failing to “acknowledge the reality that there is enormous offshore wind power potential off Maryland’s coast and the PJM region generally,”⁷⁶ for ignoring “actual offshore wind projects that have been both proposed and approved that will feed directly into Maryland and the PJM service area,” and for failing to analyze “solar power potential of any kind . . . anywhere

⁷⁰ *Id.* at 9-3.

⁷¹ *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002).

⁷² *Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), LBP-04-12, 59 NRC 388, 391 (2004).

⁷³ *Mississippi Power and Light Co.* (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 426 (1973).

⁷⁴ *See Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 309 (2010).

⁷⁵ Contention 10, at 9.

⁷⁶ Maryland is in a regional electric grid operated by PJM Interconnection, LLC (PJM). PJM is the largest power grid in North America and coordinates the movement of wholesale electricity in all or parts of thirteen states and the District of Columbia. While PJM operates the transmission systems in its territory, it does not own them. FEIS at 8-2.

else in the PJM service area besides Maryland.”⁷⁷ Thus, Joint Intervenors did challenge the Staff’s refusal to include wind and solar power sources located outside Maryland in the combination alternative. This necessarily puts at issue the validity of the NRC’s blanket exclusion of all such sources, whether based on its asserted definition of the purpose and need of the action or any other reason. The argument that the Staff unreasonably limited wind and solar power sources to those located in Maryland accordingly falls within the scope of Contention 10C because it is obvious from the argument expressly presented.

The Staff makes similar arguments to support its claim that issues related to the time frame for completion of Calvert Cliffs Unit 3 and uncertainty concerning the completion date are outside the scope of Contention 10C.⁷⁸ The Staff argues that questioning the completion date amounts to an attack upon its definition of the purpose and need of the proposed action.⁷⁹ But the Staff has not identified any statement of the purpose and need that requires Calvert Cliffs Unit 3 to be completed by a specific date. Moreover, the evidence presented at the hearing concerning the estimated date for completing construction falls within the “envelope” of Contention 10C. The admitted contention maintains that the FEIS’s discussion of a combination of alternatives “is inadequate and faulty” because it “under represents potential contributions of wind and solar power.” As explained below, the potential wind and solar power contribution to the combination alternative is heavily dependent upon the estimated completion date for Calvert Cliffs Unit 3.⁸⁰ Thus, the completion date and uncertainty concerning that date are directly relevant to the issue raised by Contention 10C. And, in their proposed Contention 10, Joint Intervenors identified proposed offshore wind power projects “likely to be in operation before construction of Calvert Cliffs-3 could be completed.”⁸¹ Thus, to resolve the issue raised by Contention 10C, the Board must necessarily have a realistic estimate of the completion date. The completion date is therefore within the scope of the contention.

We agree with the Staff, however, that Contention 10C applies only to the potential contributions of wind and solar power to the combination alternative.⁸² Accordingly, we find that evidence regarding alternatives other than wind and

⁷⁷ Contention 10, at 8. These statements appear in the part of Contention 10 that the Board identified as “Contention 10B,” which the Board declined to admit. The Board pointed out, however, that “Contention 10C is derived from Joint Intervenors’ challenge in Contention 10B to the Staff’s analysis of the potential contributions of wind and solar power.” LBP-10-24, 72 NRC at 759. Thus, the statements are relevant to determining the scope of Contention 10C.

⁷⁸ Motion in Limine at 9.

⁷⁹ Staff Proposed Findings of Fact at 27.

⁸⁰ *Infra* pp. 104-09.

⁸¹ Contention 10, at 9.

⁸² Motion in Limine at 6; *see* LBP-10-24, 72 NRC at 761.

solar is outside the scope of the admitted contention, and therefore immaterial to the issues before us. We also agree that arguments to the effect that Calvert Cliffs Unit 3 is not a source of baseload power, because of the lack of backup power or for any other reason, are outside the scope of the admitted contention.⁸³ Finally, we agree with the Staff that:

[t]he Joint Intervenor's discussion of the [Maryland Renewable Portfolio Standard] requirements and renewable energy development incentives, and what impact these requirements and incentives might have on projected solar and wind development in Maryland, is within the scope of this proceeding. But their arguments alleging non-compliance with Maryland law are outside the scope of this proceeding and outside NRC adjudicatory jurisdiction.⁸⁴

We have considered evidence related to the Maryland Renewable Portfolio Standard (RPS) solely for the purpose of evaluating the potential role of wind and solar power in the combination alternative.

IV. EVIDENTIARY SUMMARY AND FINDINGS OF FACT

A. Witnesses and Exhibits

The Staff presented the prefiled direct testimony of Laura M. (Quinn) Willingham⁸⁵ to sponsor the introduction of the Staff's FEIS into the record of this proceeding. The Staff also presented the prefiled direct testimony of Andrew J. Kugler, Senior Project Manager in the NRC's Office of New Reactors Division of Site and Environmental Review, Environmental Projects Branch 2, and Katherine A. Cort, Staff Scientist and Economist at Pacific Northwest National Laboratory (PNNL), operated for the U.S. Department of Energy (DOE) by Battelle Memorial Institute, to present the Staff's position with regard to Contention 10C and to discuss the process used to develop and to evaluate the combination of energy alternatives.⁸⁶ The professional qualifications of the Staff's witnesses were submitted together with their prefiled testimony.⁸⁷ Both Mr. Kugler and Ms. Cort

⁸³ Motion in Limine at 7.

⁸⁴ Motion in Limine at 8; *see also supra* section IV.G (discussing the Maryland Renewable Portfolio Standard).

⁸⁵ Exh. NRC000001.

⁸⁶ *See* Exh. NRC000004.

⁸⁷ Exh. NRC000002 (Statement of Professional Qualifications for L.M. (Quinn) Willingham (Oct. 21, 2011)); Exh. NRC000005 (Statement of Professional Qualifications for Andrew J. Kugler (Oct. 21, 2011)); Exh. NRC000006 (Statement of Professional Qualifications for Katherine A. Cort (Oct. 21, 2011)).

testified at the hearing.⁸⁸ The parties stipulated to the admission of the FEIS into evidence,⁸⁹ and accordingly it was not necessary for Ms. Willingham to testify.

Applicants presented three witnesses: (1) Dimitri Lutchenkov, Director, Environmental Affairs and Special Projects for UniStar Nuclear Energy, LLC; (2) Stefano Ratti, founder and owner of Chaberton Consulting; and (3) Septimus van der Linden, founder, co-owner, and President of BRULIN Associates LLC.⁹⁰ The professional qualifications of the Applicant's witnesses were submitted together with their prefiled testimony.⁹¹ All of Applicants' witnesses testified at the hearing.⁹²

Joint Intervenors offered the prefiled testimony of Scott Sklar, principal of the Stella Group.⁹³ Mr. Sklar's qualifications were submitted together with his prefiled testimony.⁹⁴ Mr. Sklar testified at the hearing.⁹⁵

The prefiled testimony other than that of Ms. Willingham, and the testimony presented at the January 26 through 27 hearing, included expert opinion on the potential contributions of wind and solar power to the combination alternative. The qualifications of the witnesses to provide such opinion testimony were not challenged.⁹⁶

B. The Proposed Action

The proposed action relevant to this proceeding is the NRC's issuance of a COL for a new power reactor unit (Unit 3) at the Calvert Cliffs Nuclear Power Plant (CCNPP) in Calvert County, Maryland.⁹⁷ The FEIS considers and weighs the environmental impacts of constructing and operating a new nuclear unit at the Calvert Cliffs site and at alternative sites and mitigation measures available for reducing or avoiding adverse impacts.

⁸⁸ Tr. at 312.

⁸⁹ See Tr. at 319-20.

⁹⁰ See Exh. APL000001, at 1-3, 4-5.

⁹¹ Exh. APL000002 (Affidavit of Dimitri Lutchenkov (Oct. 21, 2011)); Exh. APL000003 (Affidavit of Stefano Ratti (Oct. 21, 2011)); Exh. APL000004 (Affidavit of Septimus van der Linden (Oct. 21, 2011)).

⁹² Tr. at 340, 490.

⁹³ Exh. JNTR00001.

⁹⁴ Exh. JNT000002 (Statement of Professional Qualifications for Scott Sklar (Oct. 28, 2011)).

⁹⁵ Tr. at 547.

⁹⁶ Tr. at 342, 565-66.

⁹⁷ FEIS at 1-9. The second proposed action evaluated in the FEIS is the U.S. Army Corps of Engineers' action on an individual permit application to perform certain activities on the site. The Corps participated with the NRC in preparing this FEIS as a cooperating agency. *Id.* at 1-7 to 1-8.

C. The FEIS's Evaluation of Alternatives to the Proposed Action

Because the proposed project is intended to supply 1600 MW(e) of baseload power, the Staff determined that a reasonable alternative to the proposed project would also need to be capable of supplying that amount of baseload power.⁹⁸ In Section 9.2 of the FEIS, the Staff evaluated potential energy alternatives to the proposed action to determine if they would meet that purpose and need.⁹⁹ Mr. Kugler explained that, to be accepted as a reasonable alternative, an alternative source of baseload power had to be technically feasible and commercially exploitable. The alternative source also had to be physically located in the region of interest, which the Staff defined as the State of Maryland. A reasonable alternative also had to be able to meet the purpose and need of the proposed project within the time frame of the proposed project.¹⁰⁰

The Staff concluded that coal-fired and natural gas-fired plants were feasible alternatives to the proposed project.¹⁰¹ The Staff evaluated a number of other individual alternatives to the operation of an additional nuclear unit at the proposed site.¹⁰² The Staff opined that none of the other energy alternatives evaluated, including oil, wind, solar, hydropower, geothermal, wood waste, municipal solid waste, other biomass, and fuel cells, would be capable, individually, of meeting the purpose and need of the proposed action.¹⁰³

In section 9.2.4 of the FEIS, the Staff acknowledged that, although individual alternatives to Calvert Cliffs Unit 3 might not be sufficient to generate Applicants' target value of 1600 MW(e) of new baseload power, a combination of alternative power sources might be a cost-effective way of meeting that objective.¹⁰⁴ The FEIS states that, given Applicants' objective, "a fossil energy source, most likely coal or natural gas, would need to be a significant contributor to any reasonable alternative energy combination."¹⁰⁵ The Staff also noted that there are many possible combinations of fossil energy sources and alternative power sources that might be cost-effective ways of satisfying the project's purpose. It decided to focus on one combination, which included specified contributions from wind power, solar power, hydropower, biomass sources, conservation and demand-side management programs, and natural gas combined-cycle generating units (the

⁹⁸ *Id.* at 9-3.

⁹⁹ *Id.* at 9-3 to 9-32.

¹⁰⁰ Exh. NRC000004, at 10-12.

¹⁰¹ FEIS § 9.2.2.

¹⁰² Exh. NRC000004, at 13-16; FEIS § 9.2.3.

¹⁰³ Exh. NRC000004, at 15-16, FEIS § 9.2.3.

¹⁰⁴ FEIS at 9-27.

¹⁰⁵ *Id.* at 9-28.

“combination alternative”).¹⁰⁶ In the FEIS, the Staff compared the environmental consequences of the combination alternative and two other “viable energy alternatives” to the proposed action.¹⁰⁷ The Staff estimated that the combination alternative would result in 4.2 million tons of carbon dioxide emissions per year, as well as the emission of other air pollutants, from the operation of the natural gas plant.¹⁰⁸ The Staff concluded “from an environmental perspective, none of the viable energy alternatives are clearly preferable to construction of a new baseload power generating plant located within Applicants’ ROI.”¹⁰⁹

In Contention 10C, Joint Intervenors maintain that, because the Staff underestimated Maryland’s wind power potential and failed to quantify its acknowledged solar power potential, the Staff underestimated the contribution wind and solar power could make to the combination alternative. Joint Intervenors argue that greater contributions from wind and solar power would reduce the air emissions from the combination alternative. The Staff’s alleged errors therefore undermine its analysis of the estimated air emissions from the combination alternative. Joint Intervenors contend that the Staff’s alternatives analysis is accordingly inaccurate and incomplete and cannot support the granting of a license for Calvert Cliffs Unit 3 until it is revised to provide a realistic comparison of viable alternatives.

D. Maryland’s Renewable Energy Portfolio Standard (RPS)

One factor influencing the future availability of wind and solar power in Maryland is the State’s RPS. It was enacted under the 2004 Maryland Renewable Energy Portfolio Standard and Credit Trading Act.¹¹⁰ Since then, Maryland’s RPS has been amended three times — in 2007, 2008, and 2010.¹¹¹

Under the RPS, every year an increasing amount of Maryland’s energy sales must come from renewable energy, with 20% of Maryland’s energy sales coming from Tier 1 renewable energy sources by 2022.¹¹² To meet this requirement, the

¹⁰⁶ *Id.*

¹⁰⁷ *Id.* at 9-30 (tbl. 9-4).

¹⁰⁸ *Id.* at 9-29.

¹⁰⁹ *Id.* at 9-31.

¹¹⁰ Exh. JNT000008 (“Maryland’s Energy Future,” Energy Transition Report 2007, Prepared for Governor Martin O’Malley (2007)), at 6.

¹¹¹ Exh. JNT000011, at 2.

¹¹² Exh. JNT000011, at 3; Exh. NRC000028, at 46. Maryland’s RPS specifies two different tiers of renewables from which its energy sales must come: Tier 1 renewables — including wind and solar power — and Tier 2 renewables such as hydroelectric plants and waste-to-energy facilities. *Id.* at 2-3. However, the Maryland RPS requirements for Tier 2 renewables are scheduled to sunset in 2018. *Id.* at 3. In addition, a modification to the 2004 Maryland RPS distinguished between Tier 1 renewables,

(Continued)

Maryland RPS permits suppliers to purchase renewable energy certificates, or RECs, from renewable energy sources as an alternative to generating power from renewable energy sources themselves.¹¹³ A single REC is equal to 1 MWh of electrical energy generated by whatever resource is being used to meet the RPS standard.¹¹⁴ The RPS, however, does not require Maryland utilities to actually purchase power generated by the renewable energy sources from which they purchase RECs.¹¹⁵

In general, Maryland energy suppliers can purchase RECs from renewable power sources located outside of Maryland in order to meet the RPS requirements.¹¹⁶ By 2022, 18% of Maryland's energy sales must come from Tier 1 renewable sources, such as wind power or geothermal sources, all of which may be located either inside or outside Maryland.¹¹⁷ The RPS contains a specific carve-out for solar power, however, which requires that, by 2022, at least 2% of Maryland's energy sales must come from solar power, all of which must be produced in the State of Maryland.¹¹⁸

It is reasonably foreseeable that Maryland utilities will comply with the RPS.¹¹⁹

E. Wind Power Potential

Wind power could be a component of a baseload energy source in combination with compressed air energy storage (CAES) facility, a natural gas plant, or both.¹²⁰ In the FEIS combination alternative analysis, the Staff estimated a contribution of 100 MW(e) from wind power.¹²¹ According to the FEIS, 100 MW(e) equates

so that a certain percentage of Maryland's energy sales must come exclusively from Tier 1 solar renewables, while a separate percentage must come exclusively from Tier 1 nonsolar renewables. *Id.* at 4, 7.

¹¹³ Tr. at 403-05; Exh. JNT000011, at 3. If a power supplier in Maryland is unable or unwilling to purchase the required amount of renewable energy resources, they must pay an alternative compliance payment, or an ACP, for each MW of renewable energy that they are short of the RPS requirement. Exh. JNT000011, at 3.

¹¹⁴ Tr. at 443.

¹¹⁵ Tr. at 454.

¹¹⁶ Tr. at 403-05.

¹¹⁷ Exh. JNT000011, at 1-4.

¹¹⁸ Exh. JNT000011, at 3. The Maryland RPS requires that by 2022, 2% of Maryland's energy sales must come from in-state solar power, and 18% must come from other Tier 1 renewable sources, such as wind, geothermal, and ocean energy. *Id.* at 1-3. Since the Maryland RPS requirements for energy sales from Tier 2 renewables sunset in 2018, by 2022 no energy sales are required to come from Tier 2 renewables. *Id.*

¹¹⁹ Tr. at 441.

¹²⁰ Exh. NRC000004, at 24-25; FEIS at 9-21. CAES facilities are discussed *infra* pp. 102-04.

¹²¹ FEIS at 9-28.

to at least 250 to 300 MW of installed capacity, which would be coupled with a 100-MW CAES plant to provide the 100-MW(e) of baseload power.¹²² In arriving at these estimates, Mr. Kugler and Ms. Cort testified that they were working under the assumption that the combination alternative would be operational by 2015, and thus they relied on shorter-term projections contained in the Department of Energy's 2011 Annual Energy Outlook and the National Renewable Energy Laboratory's (NREL's) 2010 offshore wind report, and information from the Maryland Public Service Commission (MPSC).¹²³

Mr. Kugler explained that, in order to determine potential wind and solar power estimates for Maryland, the Staff analyzed potential wind and solar power sources on a regional level because such estimates are rarely performed on a state-by-state basis.¹²⁴ To do this, he explained, the Staff examined potential wind and solar power estimates for the region in which Maryland is located — the Reliability First Corporation, East Region ("RFC/East Region").¹²⁵ The RFC/East Region is comprised of four different states — Maryland, Delaware, Pennsylvania, and New Jersey.¹²⁶ Using the wind and solar power estimates for the RFC/East Region, the Staff determined Maryland's relative contribution by dividing the overall regional wind and solar power estimates by three, based upon the Staff's calculation that Maryland is responsible for roughly one-third of the regional power output.¹²⁷ According to Mr. Kugler, this is a high estimate, given that other sources indicate that Maryland is likely only responsible for roughly one-quarter of the RFC/East Region's regional output.¹²⁸ Nonetheless, Mr. Kugler testified that the Staff estimated Maryland to contribute one-third of the power to the RFC/East Region in order to ensure that its FEIS analysis of combination alternative estimate would provide a fair estimate.¹²⁹

Mr. Kugler and Ms. Cort further testified that the DOE Annual Energy Outlook projected a growth of 420 MW of onshore wind capacity and 200 MW of offshore

¹²² *Id.*

¹²³ Exh. NRC000004, at 25.

¹²⁴ Tr. at 400.

¹²⁵ *Id.* The RFC is one of the eight approved regional entities in North America under the North American Electric Reliability Corporation (NERC). "NERC's mission is to verify the reliability of the bulk power system in North America. NERC develops and enforces reliability standards, monitors the bulk power system, assesses and reports on future transmission and generation adequacy, and offers education and certification programs to industry personnel" FEIS at 8-2. RFC's primary duties include creating reliability standards, monitoring compliance with those reliability standards, and providing seasonal and long-term assessments of bulk electric system reliability within the RFC geographic area. *Id.*

¹²⁶ Tr. at 400-01.

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ Tr. at 401.

wind capacity between 2010 and 2035 in the RFC/East Region.¹³⁰ Because it considered Maryland to be responsible for a third of the RFC/East Region's regional output, the Staff estimated that Maryland would experience a growth of roughly 210 MW in installed onshore and offshore wind between 2010 and 2035.¹³¹ Assuming a 34% capacity factor for wind, the Staff calculated that Maryland's 210-MW increase in wind power would equate to about 71 MW(e) of average output. Based on these calculations, along with the limited wind development currently in Maryland, Mr. Kugler and Ms. Cort testified that it "would be unreasonable to expect large-scale development of this resource within the time frame of the proposed project" and thus that its estimate of a 100-MW(e) wind power contribution to the combination alternative was reasonable.¹³²

Applicants, however, consider the Staff's 100-MW(e) contribution estimate from wind power to be "optimistic" and "speculative."¹³³ Mr. Ratti testified on behalf of Applicants that he anticipated installed wind capacity over the next 10 years would likely only produce an additional 21 MW(e) of wind power.¹³⁴ Mr. Ratti based this estimate on the Long Term Energy Report for Maryland (Maryland LTER), which shows 190 MW of additional capacity coming on line.¹³⁵ Mr. Ratti further testified that 120 MW of that capacity has already come online through the Criterion and Roth Rock projects, thus leaving an additional 70 MW of installed wind capacity over the next 10 years, which is equivalent to 21 MW(e) on average.¹³⁶ According to Mr. Ratti, the estimates provided by the Maryland LTER are reliable because they are modeled on the current regulatory environment and the RPS, and "an expansion of RPS requirements beyond the current RPS is highly speculative."¹³⁷

Testifying on behalf of the Joint Intervenors, Mr. Sklar disagreed with the Staff and UniStar estimates, claiming that they were too low. Mr. Sklar stated the DOE study that the Staff relied on in estimating the potential wind contribution was not a market-oriented analysis, and, as such, it merely extrapolated growth

¹³⁰ Exh. NRC000004, at 29; Exh. NRC000022 (U.S. Department of Energy, Energy Information Administration, Annual Energy Outlook 2011, DOE/EIA-0383 (2011)).

¹³¹ Exh. NRC000004, at 29.

¹³² *Id.*

¹³³ Exh. APL000001, at 29.

¹³⁴ *Id.*

¹³⁵ *Id.* at 28-29.

¹³⁶ *Id.* at 29.

¹³⁷ *Id.* at 28. Maryland's RPS was enacted in 2004 under the 2004 Maryland Renewable Energy Portfolio Standard and Credit Trading Act. *See supra* pp. 90-91. Mr. Ratti stated that "[i]n the unlikely, but plausible, case that all of the new renewable energy necessary to satisfy the RPS were to come from wind power, wind power would have to provide up to approximately 1.5 million MWh per year. That would approximately represent an additional 570 MW of wind power, or 170 MW(e) on average." Exh. APL000001, at 29.

rates and cost reductions, thus providing a much more conservative estimate.¹³⁸ Instead, Mr. Sklar estimated that by 2020, Maryland would have 1255 MW of installed wind capacity — roughly 1135 MW more installed wind capacity than the state currently has.¹³⁹ Mr Sklar added that, based on a study by the Institute for Local Self-Reliance, roughly 40% of Maryland’s energy needs could be met with renewables, including wind, solar, and biomass.¹⁴⁰

In considering offshore wind potential specifically, Mr. Kugler and Ms. Cort testified that the Staff relied primarily on NREL’s 2010 report concerning large-scale offshore wind in the United States to assess Maryland’s offshore wind potential.¹⁴¹ NREL’s report states that the Mid-Atlantic region, which extends from New Jersey to North Carolina, has up to 570 GW of potential offshore wind capacity, of which 54 GW is attributable to Maryland, 15 GW is attributable to Delaware, and 94 GW is attributable to Virginia.¹⁴² Mr. Kugler testified that onshore wind has a capacity factor of around 34%, while offshore wind has a capacity factor closer to 40% because offshore winds tend to be steadier.¹⁴³

The NREL Report identifies offshore wind development projects in states such as Delaware, New Jersey, and Massachusetts, stating that “[a]lthough many more proposals have been made, the projects listed in the table are more advanced, meeting one or more of the following criteria: they have been approved by their state, received an interim lease from BOEM [Bureau of Ocean Energy Management] (2010), or granted a BOEM lease.”¹⁴⁴ For Maryland, Delaware, and Virginia, the NREL Report identified only the NRG Bluewater Wind project off the coast of Delaware in the list of more advanced projects.¹⁴⁵ It had a planned capacity of 450 MW(e) but ultimately failed to secure adequate financing.¹⁴⁶ Although a number of proposals have been made, no offshore wind turbines have

¹³⁸ Tr. at 590.

¹³⁹ Tr. at 606-08.

¹⁴⁰ Tr. at 401; *see* Exh. JNT000007 (John Farrell & David Morris, “Energy Self-Reliant State,” 2nd ed., (May 2010)).

¹⁴¹ Exh. NRC000004, at 27.

¹⁴² Exh. NRC000024, at 60-63 (tbl. 4-3). Another exhibit proffered by the Applicants estimates Maryland’s offshore wind potential to be roughly 60 GW. Exh. APL000010 (“University of Delaware Center for Carbon-Free Power Integration, College of Earth, Ocean, and Environment, Maryland’s Offshore Wind Power Potential” (Feb. 1, 201)), at 19 (tbl. 3).

¹⁴³ Tr. at 356.

¹⁴⁴ Exh. NRC000024 (“Walter Musial & Bonnie Ram, National Renewable Energy Laboratory, Large-Scale Offshore Wind Power in the United States: Assessment of Opportunities and Barriers” (2010)), at 30-31 (tbl. 3-3).

¹⁴⁵ *Id.*

¹⁴⁶ Exh. NRC000004, at 26; Tr. at 348. That project would have been located 11 miles east off the coast of Dewey Beach, Delaware. Exh. NRC000004, at 26.

actually been installed in the United States.¹⁴⁷ The Staff stated that the NREL report's findings were consistent with other sources the Staff reviewed, including the Wind Technologies Market Report, and a 2008 report from the MPSC. Based on these reports, the Staff concluded that, while the potential for offshore wind was high, it "would not significantly contribute to the combination of energy alternatives in the timeframe of the proposed project."¹⁴⁸

Currently there are two onshore utility-scale moderate-sized (50 MW and 70 MW) wind energy projects in Maryland.¹⁴⁹ The first operating wind project in Maryland, the 70-MW Criterion onshore wind project, went online in December 2010.¹⁵⁰ The second operating wind project in Maryland, the 50-MW onshore Roth Rock project, went online in July 2011.¹⁵¹ Because neither the NREL report nor the MPSC "Ten-Year Plan (2009-2018) of Electric Companies in Maryland" identified any other active wind projects in Maryland, the Staff concluded that "significant development of wind generation in Maryland is not likely in the timeframe of the proposed project."¹⁵²

While neither the NREL report nor the MPSC identified any other active wind projects in Maryland, Mr. Ratti testified that "[t]wo onshore projects have gone through a significant number of developmental steps in Maryland" — primarily, the Dan's Mountain 69.6-MW project in western Maryland.¹⁵³ In addition, Mr. Ratti testified that multiple other wind farms exist in neighboring states. Specifically, Mr. Ratti noted that:

- a. Pennsylvania has 751 MW of wind capacity currently online and an additional 177 MW under construction;
- b. West Virginia has 431 MW of wind capacity currently online and an additional 147 MW under construction;
- c. Virginia has no operating projects, but one 38 MW project is currently under construction.¹⁵⁴

Despite the success of these projects, wind power still faces many hurdles. Mr.

¹⁴⁷ Tr. at 345-46; Exh. APL000010, at 1.

¹⁴⁸ Exh. NRC000004, at 28. The Staff thus argues that its decision not to include the NRG Bluewater Wind project off the coast of Maryland is justified because it has not made significant progress in the leasing and permitting process. *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² *Id.* at 26-27.

¹⁵³ Exh. APL000001, at 26. The other project Mr. Ratti mentions, the Savage Mountain 40-MW project, was cancelled in 2010. *Id.*

¹⁵⁴ *Id.* at 25.

Kugler testified that incorporating wind and solar power into the grid presents some serious challenges to the grid operators because the variability of wind and solar is something over which they have no control.¹⁵⁵ In addition, Mr. Kugler noted that often wind power will run into transmission capacity problems, whereby the wind turbines will be running at full capacity and producing more energy than the transmission lines are capable of handling.¹⁵⁶ In these situations, the turbines' output must be reduced to below what they are then capable of generating, simply because of the limited transmission line capability.¹⁵⁷

To accommodate for the variability of wind, Mr. Kugler testified that a grid operator could employ the use of a CAES facility, or a natural gas plant.¹⁵⁸ The more renewables that are incorporated into the grid, however, Mr. Kugler cautioned, the bigger the CAES facility or natural gas plant that would be required in order to compensate for the variability of the wind.¹⁵⁹ Doing this would be expensive, according to Mr. Kugler, because building two power plants would be necessary — one wind power plant and another plant of the same size that could compensate for the variable output of the wind power plant.¹⁶⁰

Mr. Kugler testified that “there is certainly offshore wind potential for Maryland,” but did not believe that offshore wind was poised to take off in Maryland.¹⁶¹ Mr. Kugler went on to explain that currently multiple barriers exist to building offshore wind power facilities.¹⁶² As an example of the difficulties that offshore wind power faces generally, Mr. Kugler cited the Cape Wind project, which has been dealing with licensing issues for over 10 years.¹⁶³ In addition, offshore wind turbines also present special maintenance challenges.¹⁶⁴ The Wind Technologies Report cited by the Staff reiterates some of the difficulties confronting offshore wind, stating that:

though political support exists for offshore wind energy in some quarters, planning, siting, and permitting can be challenging, as demonstrated in the long history of the Cape Wind project. Competing uses of offshore waters and public concerns can complicate the process and, despite recent progress in clarifying the permitting

¹⁵⁵ Tr. at 360-61.

¹⁵⁶ Tr. at 358.

¹⁵⁷ *Id.*

¹⁵⁸ Tr. at 361-65. Mr. Kugler cautioned, however, that using such systems would work best for small wind or solar projects, since the impact of their variability on the grid would be limited to a small amount. Tr. at 361-62.

¹⁵⁹ Tr. at 365.

¹⁶⁰ *Id.*

¹⁶¹ Tr. at 345.

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Id.*

procedures in federal waters, uncertainties in federal and state permitting processes remain.¹⁶⁵

According to Mr. Kugler, “the cost of offshore wind is typically viewed as being twice what it would be for onshore wind and in the United States onshore wind is marginally competitive in some places and fairly well competitive in other places.”¹⁶⁶ The Wind Technologies Market Report, upon which the Staff relied, echoes this, stating that “the projected near-term costs of offshore wind energy remain high.”¹⁶⁷ A 2008 MPSC report, which the Staff also cited, concluded that offshore wind power in Maryland is unlikely without subsidies or other incentives.¹⁶⁸

The Board finds that the amount of available wind power capacity will for the foreseeable future be determined primarily by regulatory requirements.¹⁶⁹ For Maryland, the determining regulatory requirement will be the state’s RPS.¹⁷⁰ Although the RPS only sets minimum requirements, the economic uncertainties are too great to justify a conclusion that those requirements are likely to be significantly exceeded in the foreseeable future.¹⁷¹

F. Solar Power Potential

The term solar power refers to the conversion of the energy from the sun into electricity.¹⁷² Currently, there are two main solar technologies available for utility-scale plants: thermal technologies, also referred to as concentrated solar power, and photovoltaics.¹⁷³ Thermal technologies rely on mirrors to concentrate the solar power, which in turn heats a fluid that then drives a turbine or an engine.¹⁷⁴ Photovoltaics use cells with semiconductors to convert solar power directly into electricity.¹⁷⁵ The primary photovoltaic technologies are crystalline silicon and various types of thin-film, such as cadmium-telluride or gallium

¹⁶⁵ Exh. NRC000029 (U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy, 2010 Wind Technologies Market Report (2010)), at 10.

¹⁶⁶ Tr. at 347.

¹⁶⁷ Exh. NRC000029, at 10.

¹⁶⁸ See Exh. NRC000023 (Maryland Public Service Commission, Final Report Under Senate Bill 400: Options for Re-Regulation and New Generation (Dec. 16, 2008)).

¹⁶⁹ See Exh. APL000001, at 28-29.

¹⁷⁰ *Id.*

¹⁷¹ See *id.*; Exh. APL000062.

¹⁷² FEIS at 9-23; Exh. APL000001, at 30.

¹⁷³ FEIS at 9-23; Exh. APL000001, at 30.

¹⁷⁴ FEIS at 9-23; Exh. APL000001, at 30.

¹⁷⁵ Exh. APL000001, at 30.

arsenide.¹⁷⁶ In addition to utility-scale solar power plants, solar power is also available at the end-user level, where the energy generated is used directly at the generating site.¹⁷⁷

Solar power, like wind power, can provide a baseload energy source when combined with a CAES facility or a natural gas plant.¹⁷⁸ In the FEIS combination alternative analysis, the Staff estimated a total contribution of 75 MW(e) from solar power.¹⁷⁹ In reaching this estimate, the Staff worked under the assumption that a combination alternative would need to be operational by 2015, and thus relied primarily on shorter-term projections from the DOE's Annual Energy Outlook and the MPSC's Ten-Year Plan to determine the likely contribution of solar power to the combination alternative.¹⁸⁰

Although the studies that the Staff relied on implied that solar power potential in Maryland is relatively low, the Staff included a solar power contribution estimate in the FEIS combination alternative analysis because "generation from solar is possible and currently available in Maryland."¹⁸¹ Mr. Kugler and Ms. Cort testified that "[t]he 75 MW(e) level of contribution was based on DOE/EIA's overall prediction of growth in solar as an end-use generation source and the Review Team's technical judgment of this prediction as authoritative and reasonable."¹⁸² According to Mr. Kugler and Ms. Cort, the DOE Annual Energy Outlook predicts no increase in utility-scale solar capacity between 2010 and 2035 in the RFC/East region, and the addition of 810 MW of end-use solar capacity (all photovoltaic) in that region between 2010 and 2035.¹⁸³ Based on their assumption that Maryland accounts for roughly one-third of the RFC/East region, the Staff estimated an addition of 270 MW of end-use solar capacity in Maryland by 2035.¹⁸⁴ Using a 25% average capacity factor for photovoltaics, the Staff calculated that the 270 MW increase in solar capacity equates to roughly 68 MW(e) in baseload capacity.¹⁸⁵

¹⁷⁶ *Id.* at 30-31. In some photovoltaic applications, it is also possible to concentrate the sun's rays before they reach the solar panels. These types of applications are referred to as concentrated photovoltaics.

¹⁷⁷ Exh. NRC000004, at 34.

¹⁷⁸ See FEIS at 9-20 to 9-24, 9-28; Exh. NRC000004, at 37.

¹⁷⁹ FEIS at 9-28.

¹⁸⁰ Exh. NRC000004, at 33.

¹⁸¹ *Id.* at 35.

¹⁸² *Id.*

¹⁸³ *Id.*; Exh. NRC0000022.

¹⁸⁴ Exh. NRC000004, at 35.

¹⁸⁵ *Id.* Mr. Kugler and Ms. Cort testified that the Staff assumed a 25% average capacity for photovoltaics based on a DOE study stating that photovoltaic capacity factors range from 18% to 25% in the U.S. *Id.*; Exh. NRC000021 (U.S. Department of Energy, Energy Information Administration, Levelized Cost of New Generation Resources in the Annual Energy Outlook 2011 (2010)).

Accordingly, the Staff concluded the 75 MW(e) solar power contribution estimate in the combination alternative was reasonable.¹⁸⁶

On behalf of Applicants, Mr. Ratti testified that the raw potential for solar power in Maryland is high.¹⁸⁷ However, he stated that such potential is limited because solar power requires roughly 6 to 7 acres per installed MW and “because the economics of solar are such that building solar power plants makes economic sense only inasmuch as it is mandated through state standards and/or federal incentives are made available.”¹⁸⁸ Mr. Ratti believes that the Maryland LTER is correct, and he thus expects 75 MW(e) of new solar baseload equivalent capacity in Maryland by 2020.¹⁸⁹ The Maryland LTER estimates that future increases in installed solar capacity will be closely linked to the RPS solar carve-out requirement (2% of Maryland’s electrical energy must come from solar power by 2022).¹⁹⁰ Specifically, the Report assumes that new solar power will be installed to meet the growing requirements for solar under the RPS through 2018 and that, up to that point, there will be solar renewable energy certificates (RECs) available at prices below the solar alternative compliance payment (ACP).¹⁹¹ After 2018, the Maryland LTER estimates that additional requirements for solar power under the RPS will not be met with new physical installations, and that utilities will elect instead to pay the solar ACP because the cost will likely be lower than that of purchasing solar RECs.¹⁹² Mr. Ratti admits, however, that it is plausible, though unlikely, that all of the RPS solar carve-out would be met through new solar physical installations in Maryland, in which case 160 MW(e) of new solar power would be available in Maryland over the next 10 years.¹⁹³

¹⁸⁶ Exh. NRC000004, at 36. Mr. Kugler and Ms. Cort also testified that this estimate need not be larger merely because a DOE report identifies Maryland’s solar power potential as “Good.” According to the Staff, the DOE report indicating that Maryland has “Good” solar power potential rated a region’s solar power potential on a scale of “Moderate,” “Good,” “Very Good,” or “Excellent,” and only Alaska and the northwest corner of Washington are rated less favorably than Maryland. *Id.* at 34; Exh. NRC000036 (U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy, 2008 Solar Technologies Market Report (2010)).

¹⁸⁷ Exh. APL000001, at 33.

¹⁸⁸ *Id.*

¹⁸⁹ *Id.* at 39.

¹⁹⁰ *Id.* at 37.

¹⁹¹ *Id.* The Maryland RPS requires suppliers to purchase renewable energy certificates, or RECs, from renewable energy sources. Tr. at 403-05; Exh. JNT000011 (“‘Long-Term Electricity Report for Maryland Renewable Energy Portfolio Standards,’ White Paper to Support LTER Assumptions” (Nov. 30, 2010)), at 3. If a power supplier in Maryland is unable or unwilling to purchase the required amount of RECs, they must pay an alternative compliance payment, or an ACP, for each megawatt-hour of renewable energy that they are short. Exh. JNT000011, at 3.

¹⁹² Exh. APL000001, at 37.

¹⁹³ *Id.* at 39.

Joint Intervenors contend, however, that the 75 MW(e) solar power contribution estimate contained in the FEIS combination alternative severely underestimates the potential for solar power in Maryland. In support of that proposition, Mr. Sklar noted a study by SolarTown which concludes that over 450 million square feet of roof space would be suitable for solar panels in Maryland, amounting to over 5000 MW of new solar power capacity to the state.¹⁹⁴ In addition, Mr. Sklar testified that it is likely that more large electricity end-users will begin installing solar photovoltaic systems in Maryland, much like Perdue, General Motors, and the Washington Redskins are doing or have already done.¹⁹⁵ Mr. Sklar thus testified that he conservatively expects that there will be at least 2250 MW of solar power installed in Maryland by 2025.¹⁹⁶

Currently in Maryland, however, the only utility-scale operating solar power project is the 2.2-MW University of Maryland Eastern Shore plant.¹⁹⁷ In addition, there is also a large 1.8-MW commercial installation at McCormick's Hunt Valley Distribution Center.¹⁹⁸

The Staff acknowledges, though, that multiple other solar projects are currently in development in Maryland and the surrounding area. These projects include Constellation Energy's proposed 16.1-MW solar facility at Mount St. Mary's University in Emmitsburg, Maryland, a separate 1.3-MW solar array proposed by Constellation Energy to generate power for Mount St. Mary's, and Maryland Solar's proposed 20-MW solar facility in Hagerstown, Maryland.¹⁹⁹ In addition to these projects, Mr. Ratti testified that Southern Maryland Electric Cooperative also has a proposed 5.5-MW project that would be located in Hughesville, Maryland.²⁰⁰ Mr. Ratti also noted that the states surrounding Maryland currently have solar projects in construction or development, including:

- Pennsylvania: 6 MW in operation, 1 MW in construction, 52 MW in development;

¹⁹⁴ Exh. JNTR00001, at 14; Exh. JNTR00013.

¹⁹⁵ Exh. JNTR00001, at 14; Exh. NRC000037 ("*Solar Installation at Perdue to Be One of East Coast's Largest*," RenewableEnergyWorld.com (Jan. 18, 2011)); Exh. NRC000038 ("*Tina Casey, Baltimore GM Factory Grows with Solar Power*," TriplePundit.com (May 23, 2011)); Exh. JNT000020 ("*Jeremy Borden, Washington Redskins Go 'Green' with Solar Panels at FedEx*," (Sept. 15, 2011)).

¹⁹⁶ See Tr. at 581-84.

¹⁹⁷ Exh. APL000001, at 38.

¹⁹⁸ *Id.*

¹⁹⁹ Exh. NRC000004, at 36; Exh. NRC000039 ("*Tim Wheeler, MD's Largest Solar Project Under Construction*," Baltimore Green Blog (Sept. 29, 2011)). Constellation Energy announced in September 2011 that it had already begun work on its plant in Emmitsburg, Maryland. Exh. NRC000039.

²⁰⁰ Exh. APL000001, at 38.

- Delaware: 10 MW in operation (Dover Sun Park).²⁰¹

Joint Intervenors point out that Sun Edison and Standard Solar alone have recently completed solar power projects in Maryland totaling 16.4 MW (43.1 MW if recently completed projects in Delaware, New Jersey, Pennsylvania, and Washington, D.C. are also included).²⁰² In addition, Joint Intervenors identified two proposed solar projects that were recently announced in Maryland: a 3.7-MW project that will provide power to two Perdue Farms facilities and a 1.2-MW project that will power a plant in Baltimore.²⁰³

While solar power faces numerous challenges, including its intermittent nature, corresponding grid issues, and the large amount of land required, the biggest challenge currently facing solar power is its cost.²⁰⁴ Mr. Sklar claims, however, that “[t]he cost of solar power, particularly photovoltaics, has been dropping sharply over the past few years.”²⁰⁵ In support of this statement Mr. Sklar cites a 2010 report entitled “Solar and Nuclear Costs — The Historic Crossover.”²⁰⁶ In that report, the authors compare the costs of solar photovoltaics to the cost of nuclear power and conclude that, in North Carolina, solar power became cheaper than nuclear power in 2010 and the cost gap will continue to widen.²⁰⁷ As Mr. Ratti testified, however, this study is misleading.²⁰⁸ On one hand, it reduces the cost of solar from roughly 35 cents a kilowatt hour to 15.9 cents a kilowatt hour by including federal and state incentives, and assumes that these incentives will persist.²⁰⁹ For nuclear power, however, the report relies on very high cost estimates — from 20 to 25 cents per kilowatt hour. That is roughly 8 to 13 cents per kilowatt hour higher than the DOE projections.²¹⁰ The assumptions underlying this study are thus, at the very least, questionable.

²⁰¹ *Id.* at 39; Exh. APL000043 “Utility-Scale Solar Projects in the United States Operating, Under Construction, or Under Development,” Solar Energy Industries Association (Oct. 14, 2011)).

²⁰² Exh. JNTR00001, at 14; Exh. JNT000014 (“SunEdison Solar Project Listing: Mid Atlantic Region,” SunEdison (Oct. 27, 2011)); Exh. JNT000015 (“PV Projects Developed by Standard Solar,” Standard Solar (Oct. 27, 2011)).

²⁰³ Submission of Amended Contention 10C at 10; Exh. NRC000037; Exh. NRC000038. Mr. Kugler and Ms. Cort question whether the estimated capacity for these projects, as stated in the articles cited by Joint Intervenors, is in fact correct. *See* Exh. NRC000004, at 36.

²⁰⁴ *See, e.g.*, Exh. APL000004, at 31-32; Tr. at 465-66; Exh. NRC000004, at 35.

²⁰⁵ Exh. JNTR00001, at 13.

²⁰⁶ Exh. JNT000012.

²⁰⁷ Exh. JNTR00001, at 13; Exh. JNT000012 (“John O. Blackburn & Sam Cunningham, Solar and Nuclear Costs: The Historic Crossover: Solar Energy Is Now the Better Buy” (July 2010)), at 3.

²⁰⁸ Tr. at 696-98.

²⁰⁹ Exh. JNT000012, at 17-18.

²¹⁰ Tr. at 698; Exh. APL000014 (Department of Energy, Energy Information Administration, “Annual Energy Outlook 2011,” DOE/EIA-0383, Table 1 (Dec. 2010)).

Other reputable studies acknowledge the high cost of solar power and the impact that cost is playing in the prevalence of solar power. For instance, the MPSC considered the potential for solar power in Maryland in a 2008 report and concluded that the overall economics of solar power remain negative, but could improve if technology progresses faster than contemplated by the report and financial incentives continue.²¹¹ Mr. Ratti testified that the typical cost of a utility-scale photovoltaic plant was down from \$8000 per kW in 2004 to \$3400 per kW in 2010.²¹² For smaller installations, however, the costs are higher — roughly \$6000 per kW for a 5-kW rooftop installation in Maryland in the fall of 2011.²¹³ Without any state or federal incentives, solar power would thus have a levelized cost of more than \$200 per MWh for utility-scale power plants and \$400 to \$500 per MWh for rooftop installations.²¹⁴

Thus, the potential for solar power is largely limited to the demand generated by governmental mandates, along with state and federal incentives, many of which are expiring soon and may not be renewed due to current economic conditions.²¹⁵ As with wind power, the Board finds that the amount of available solar power capacity will for the foreseeable future be determined primarily by the RPS.²¹⁶ The cost issues and other economic uncertainties are too great to justify a conclusion that those requirements are likely to be significantly exceeded in the foreseeable future.²¹⁷

G. Compressed Air Energy Storage (CAES)

When coupled with intermittent power sources such as wind and solar power, a CAES facility can simulate a power generation profile comparable to baseload generation.²¹⁸ A CAES facility has the ability to take power provided from a generation source, such as a wind turbine, and use that power to fuel motor-driven air compressors that compress air into an underground storage medium, such as an underground salt cavern or aquifer.²¹⁹ During high electricity demand periods, the stored energy that was collected during low-peak periods is recovered by releasing

²¹¹ Exh. NRC00023, at 10.

²¹² Exh. APL000004, at 32; Exh. APL000040 (“The Prospect for \$1/Watt Electricity from Solar,” Department of Energy, Solar Energies Technology Program (Aug. 10, 2010)).

²¹³ Exh. APL000004, at 32-33.

²¹⁴ *Id.* at 33.

²¹⁵ *Id.* at 34-35.

²¹⁶ *See* Exh. APL000001, at 28-29.

²¹⁷ *See id.*

²¹⁸ Exh. NRC000004, at 37; *see* Exh. APL000001, at 41.

²¹⁹ FEIS at 9-21; Exh. NRC000004, at 37; *see* Exh. APL000001, at 42-3.

the compressed air through a combustion turbine to generate electricity.²²⁰ CAES facilities require a specific geology in order to support an underground storage medium.²²¹

In developing the combination alternative, the Staff assumed that 250 to 300 MW of installed wind capacity would be combined with a CAES facility to provide 100 MW(e) of baseload power.²²² The FEIS further assumes that the installed solar capacity would be combined with a CAES facility to provide 75 MW(e) of baseload power.²²³ Thus, the practical effect of including CAES in the combination alternative is to increase the baseload power contribution from all the renewable energy sources by 175 MW(e), yielding a total of 400 MW(e) from all those sources.²²⁴ Because the goal of the project is to provide 1600 MW(e) of baseload power, the 400-MW(e) baseload power contribution from the renewable energy sources reduces the required size of the natural gas plant in the combination alternative from 1600 MW(e) to 1200 MW(e).²²⁵ Reducing the size of the natural gas plant decreases the air emissions associated with the combination alternative, assuming the gas plant would operate at full capacity.²²⁶

Currently, the only CAES system existing in the United States is the 110-MW(e) facility located at the McIntosh Power Plant in Alabama that has been operating since 1991.²²⁷ The only other operating CAES facility is a 290-MW(e) plant near Breman, Germany, that has been in use since 1978.²²⁸ There is also a proposal to construct a 268-MW(e) CAES facility coupled to a wind farm near Des Moines, Iowa.²²⁹ Other proposals at various stages of development involving CAES have been announced in California, New York, and Texas.²³⁰ There are

²²⁰ FEIS at 9-21; Exh. NRC000004, at 37; *see* Exh. APL000001, at 40. The two existing commercial CAES systems rely on combustion turbines to generate electricity. In these systems, the efficiency of the turbines is increased because compression of the inlet air is provided by the CAES facility rather than the turbine. Exh. NRC000004, at 37. The Staff is aware of a conceptual design for a CAES system that does not rely on combustion turbines, but this design has not been built, tested, or proven. Exh. NRC000004, at 37; Exh. NRC000041 (“*ConocoPhillips Joins \$54.5M Series B for General Compression*,” Houston CityBizList (June 7, 2011)).

²²¹ FEIS at 9-21; *see* Exh. NRC000004, at 37.

²²² FEIS at 9-28.

²²³ *Id.*

²²⁴ *See id.*

²²⁵ *See* Tr. at 367-68.

²²⁶ *See* Tr. at 367-70.

²²⁷ FEIS at 9-21; Exh. NRC000004, at 37; Exh. NRC000040 (“*Samir Succar & Robert H. Williams, Compressed Air Energy Storage: Theory, Resources, and Applications for Wind Power*,” Princeton University Energy Systems Analysis Group (2008)).

²²⁸ FEIS at 9-21; Exh. NRC000004, at 37; Exh. APL000001, at 44. Both operating facilities in existence use mined caverns to store the compressed air. FEIS at 9-21; Exh. NRC000004, at 37.

²²⁹ FEIS at 9-21; Exh. NRC000004, at 38; Exh. APL000001 at 45.

²³⁰ FEIS at 9-21; Exh. NRC000004, at 38; Exh. APL000001 at 45.

currently no known proposed CAES projects in Maryland.²³¹ Nevertheless, the Staff incorporated a CAES facility in its combination alternative analysis in order to reduce the required size of the natural gas plant and thereby reduce the environmental impact of the combination alternative.²³² But the Staff also concluded that a 1600-MW(e) CAES facility in Maryland is unlikely,²³³ making it necessary to retain the natural gas plant in the combination alternative to ensure that the combination of sources would provide 1600 MW(e) of baseload power.

H. Constraints That Limited the Potential Wind and Solar Power Contributions to the Combination Alternative

1. The Time Frame of the Proposed Action

Because wind and solar power technologies are still evolving, their potential energy contributions are rapidly changing.²³⁴ As a result, potential wind and solar contribution estimates in the Calvert Cliffs Unit 3 FEIS combination alternative analysis are heavily dependent upon the relevant time frame — that is, the estimated completion date for Calvert Cliffs Unit 3.²³⁵ The more distant the completion date, the more time would be available for the development of wind and solar power that could be included in the combination alternative. Thus, in order to properly estimate the wind and solar power contributions in the Calvert Cliffs Unit 3 FEIS combination alternative analysis, it is necessary to first determine the relevant time frame.²³⁶

In preparing the FEIS, the Staff relied on the year 2015 as the estimated date by which construction of Calvert Cliffs Unit 3 would be complete.²³⁷ When Mr. Kugler and Ms. Cort began preparing their testimony for the evidentiary hearing on Contention 10C, however, that date had been revised to 2017, in accordance

²³¹ FEIS at 9-21; Exh. NRC000004, at 38; Exh. APL000001, at 45.

²³² See Tr. at 466, 471-72.

²³³ FEIS at 9-21; Exh. NRC000004, at 38-9.

²³⁴ See, e.g., Exh. APL000010, at 1 (“Although only a small fraction of total U.S. electricity is generated from renewable energy sources, in recent years wind power has comprised the second largest fraction of newly installed power, behind natural gas.”); Tr. at 419-20 (“[W]e know that solar is being built. And we expect that to continue. And, although there may be no announcements of projects that add up to the amount of power we’re talking about, we expect that trend to continue.”); Tr. at 574, 577-78, 581-85, 605-08, 633-34.

²³⁵ See Tr. at 428 (“It’s a forward-looking analysis.”).

²³⁶ See Tr. at 727-28.

²³⁷ Tr. at 373-74, 387-88. Mr. Kugler testified that the projected date for completion of construction is essentially also the projected date for the start of commercial operations. This is because, according to Mr. Kugler, Applicants will be testing the systems as they build them, and thus a separate testing phase at the end of construction is unnecessary. Tr. at 408-09.

with Applicants' updated revision to the application.²³⁸ Mr. Kugler and Ms. Cort thus adjusted their testimony to properly reflect any potential change in analysis brought about by this revised date.²³⁹

Joint Intervenors, however, contend that the dates upon which the Staff based the FEIS and its testimony — that is, 2015 and 2017, respectively — are fundamentally impractical.²⁴⁰ Joint Intervenors noted that in addition to lacking a license for Calvert Cliffs Unit 3, the reactor design — the U.S. Evolutionary Power Reactor — is also not yet certified.²⁴¹ Moreover, they pointed out that the prototype for this reactor, which is currently being constructed in Finland, was originally to be built in 4 years, but is now estimated to take 9 years to complete.²⁴² Based on these facts, Joint Intervenors argued that 2022 is a more reasonable time frame to rely on when considering a combination alternative to Calvert Cliffs Unit 3.²⁴³ However, Joint Intervenors also stated that a range from 2020 to 2025 might actually be more reasonable, because

historically speaking new design nuclear reactors . . . typically operate at much lower capacity factors for the first two to three years of their existence because they've got to work out the bugs. So, instead of looking at 90 percent capacity factors, when a new reactor comes on line, particularly a new design reactor, we're usually looking closer [to] 50 to 60 percent capacity factors. And that might push out . . . when you would need to have a comparable amount of power in place.²⁴⁴

According to the Staff, in preparing the combination alternative analysis, it refrained from evaluating whether Calvert Cliffs Unit 3 was commercially viable, and consequently, when Calvert Cliffs Unit 3 would likely become operational.²⁴⁵ Rather, because Calvert Cliffs Unit 3 was the proposed action, the Staff simply assumed that Calvert Cliffs Unit 3 was commercially viable.²⁴⁶ The Staff never made an independent determination as to when it believed commercial operations were likely to begin at Calvert Cliffs Unit 3, nor did it take into consideration the

²³⁸ Tr. at 373-74, 388.

²³⁹ *Id.* According to Mr. Kugler, analyzing combination alternative for a time frame beyond 2017 would not conform to its guidance, and it would be difficult to determine what alternative time frame should be used. Tr. at 388.

²⁴⁰ Tr. at 713.

²⁴¹ Tr. at 325.

²⁴² *Id.*

²⁴³ Tr. at 324-25, 711-12.

²⁴⁴ Tr. at 712-13.

²⁴⁵ *See* Tr. at 387-88 ("MR. KUGLER: I'll be honest. I don't really get into whether [Calvert Cliffs Unit 3 is] commercially viable in my evaluation.").

²⁴⁶ Tr. at 387-88, 411.

fact that the Staff had separately determined that a license cannot be issued to Calvert Cliffs Unit 3 due to the current foreign ownership situation.²⁴⁷

Nonetheless, the ability to secure financing poses a significant obstacle for nuclear power projects, including Calvert Cliffs Unit 3, and current low prices of natural gas make it an attractive option for power companies, thus posing a threat to new nuclear projects.²⁴⁸ In addition, Mr. Kugler and Ms. Cort acknowledged that construction of a plant is not always completed expeditiously once the license is issued, as is the case with Watts Bar 2, which was licensed in the 1970s but is still under construction.²⁴⁹

Applicants' witness, Mr. Lutchenkov, estimated that it would take roughly 7 to 8 years to construct Calvert Cliffs Unit 3 and begin commercial operations.²⁵⁰ Mr. Lutchenkov stated that safety-related construction, that is, construction which is only permitted once the NRC issues a COL, would take approximately 60 to 68 months to complete.²⁵¹ Prior to the safety-related construction, however, a preconstruction phase lasting roughly 18 to 24 months would have to occur, during which the site is cleared and prepared for the initial development.²⁵² Mr. Lutchenkov testified that while NRC permission is not required to begin the preconstruction phase for Calvert Cliffs Unit 3, Applicants are required to obtain certain state and federal permits before the preconstruction phase may begin.²⁵³ Applicants have obtained some of these required permits, including the Maryland Certificate of Public Convenience and Necessity (CPCN), but were still in the process of obtaining others at the time of the evidentiary hearing.²⁵⁴ Regardless, Mr. Lutchenkov reiterated that Applicants would refrain from beginning even preconstruction until certain key factors are in place.²⁵⁵ Mr. Lutchenkov testified that those key factors included a U.S. partner, a Department of Energy (DOE) loan guarantee, and a favorable economic and regulatory structure within the State of Maryland. Those issues remain unresolved.²⁵⁶

²⁴⁷ Tr. at 409-11.

²⁴⁸ Tr. at 348, 415. Mr. Kugler did, however, note that while current low natural gas prices make natural gas an attractive option for power companies, most power companies will continue to want a range of energy sources, including nuclear, so that they are not completely reliant on one energy source. Tr. at 415.

²⁴⁹ Tr. at 411-12.

²⁵⁰ Tr. at 519-23.

²⁵¹ Tr. at 520.

²⁵² *Id.*

²⁵³ Tr. at 521.

²⁵⁴ *Id.*

²⁵⁵ Tr. at 522. This is a position that Applicants have stated on numerous separate occasions as well. Tr. at 521.

²⁵⁶ Tr. at 521-22. Mr. Lutchenkov further explained that a favorable economic and regulatory

(Continued)

The Board concludes, taking into account both the time necessary to complete licensing and the time needed to complete construction, that Calvert Cliffs Unit 3 could realistically be completed between 2020 and 2025 if the foreign ownership problem can be resolved in the near future. Economic issues could further delay completion or prevent it entirely, but there is no point in conducting an alternatives analysis on the assumption that the proposed action will never be built. Joint Intervenor argued for 2022 as the estimated completion date.²⁵⁷ As that year falls near the middle of our 2020-2025 estimate, we will use 2022 as the time frame of the proposed action.

It would be possible to complete construction of an otherwise unannounced solar or onshore wind power facility, including all necessary permitting, prior to the completion of Calvert Cliffs Unit 3.²⁵⁸ Mr. Ratti estimated that an onshore wind project could be online and generating electricity within 3 to 5 years from conception.²⁵⁹ The Board accepts this as a reasonable estimate. The Board therefore finds that extending the time frame of the proposed action to 2022 would permit additional solar power and onshore wind power to be developed in Maryland and nearby states within the time frame of the proposed action.

Mr. Ratti testified that he would expect “overall development times in the 10-15 year range” for offshore wind farms.²⁶⁰ His estimate was influenced by the approximately 10-year period required for the Cape Wind Project, located off the Coast of Massachusetts, to complete the federal approval process.²⁶¹ However, he also added that the federal government’s “Smart from the Start” initiative, which began in 2010, is aimed at accelerating renewable wind energy development on the Atlantic, in part by expediting the approval process.²⁶²

Mr. Sklar testified that he expects the approval time for an offshore wind farm in Maryland and neighboring states to be approximately 5 years.²⁶³ He stated that the Cape Wind Project encountered intense local opposition from residents of Nantucket. Offshore wind farms in Maryland will not encounter that level of opposition, he predicted.²⁶⁴

The Board finds, taking into account the prospect that “Smart from the Start” initiative will shorten the time required to complete the federal approval process,

structure within the state would be one which would allow for “a profitable entity and a profitable generation of power.” *Id.*

²⁵⁷ Tr. at 324.

²⁵⁸ Tr. at 492.

²⁵⁹ Exh. APL000001, at 19.

²⁶⁰ *Id.*

²⁶¹ *Id.* at 18.

²⁶² *Id.* at 18-20.

²⁶³ Tr. at 609-10.

²⁶⁴ Tr. at 609.

that the 2022 time frame would likely permit the development of offshore wind farms that may be proposed for development in the next several years.

As we have previously concluded, the Maryland RPS will be the primary factor determining the development of additional wind and solar power that is likely to be available in Maryland by 2022. A study prepared by the University of Delaware's Center for Carbon-Free Power Integration, College of Earth, Ocean, and Environment (the Delaware study), estimates the installed onshore and offshore wind capacity that will be needed for Maryland utilities to satisfy the RPS obligation in 2022, based on four different assumptions about the percentage of the total obligation that will be met with wind power.²⁶⁵ The four assumptions were that onshore and offshore wind would provide 25%, 50%, 75%, and 100% of the 2022 REC obligation for Tier 1 nonsolar renewable sources.²⁶⁶ In order to translate RECs into installed capacity, the Delaware Study assumed a 35% capacity factor for onshore wind and a 40% capacity factor for offshore wind.²⁶⁷ The results are summarized below:²⁶⁸

Percentage of 2022 REC Obligation Met with Wind Power	Onshore Installed Capacity Needed (MW)	Offshore Installed Capacity Needed (MW)
25%; or 3,416,244 RECs	1114	975
50%; or 6,832,488 RECs	2228	1950
75%; or 10,248,731 RECs	3343	2925
100%; or 13,664,975 RECs	4457	3900

The Staff did not base the combination alternative upon the estimates in the

²⁶⁵ Exh. APL000010, at 21-23; *see also* Tr. at 441-46.

²⁶⁶ Exh. APL000010, at 23 (tbl. 6).

²⁶⁷ *Id.*

²⁶⁸ *Id.* The Delaware Study estimates for onshore wind assume that 1000-4500 MW of capacity could be installed on land in Maryland. The Delaware study acknowledged, however, that “[a]n analysis of the extent of Maryland land-based wind resources is beyond the scope of this report,” and “land-based wind turbine calculations are provided for comparison purposes only.” *Id.* at 23. Thus, the Delaware Study estimates do not necessarily project new installed onshore wind capacity in Maryland. Rather, they estimate the new installed wind capacity, either onshore or offshore, that will be needed to satisfy the RPS in 2022, assuming the specified percentages of the 2022 REC obligation will in fact be met with wind power.

Delaware Study. Instead, the Staff relied on the LTER and the DOE Report discussed previously to estimate future wind power generation in the state of Maryland.²⁶⁹ The LTER predicts that wind power will make up about 20% of the renewables used to satisfy the nonsolar Tier 1 RPS requirement, which is slightly below the lowest estimate in the Delaware study (25%).²⁷⁰ Substituting the LTER figure for the 25% used in the Delaware study, about 800 MW of installed offshore wind capacity will be needed to satisfy the RPS in 2022.²⁷¹

The LTER, however, estimates that under 200 MW of installed wind power capacity located in Maryland will be used to satisfy the RPS in 2022.²⁷² The difference reflects the LTER's prediction that a very large percentage (more than 75%) of the RPS for nonsolar Tier 1 resources will be met by generation located outside Maryland.²⁷³ As previously explained, the Staff excluded wind power generated outside Maryland from the combination alternative. We turn to that issue next.

2. The Exclusion of Generating Capacity Located Outside Maryland

A second factor that limited the potential wind and solar power contributions to the combination alternative was the Staff's requirement that such sources must be located within Maryland. There was only one exception: the Staff agreed that potential wind power sources directly offshore of Maryland could be included in the combination alternative, even if they fall outside the State's territorial limit (3 miles offshore).²⁷⁴ The Staff, however, excluded all other wind power sources that were not located within Maryland's borders.²⁷⁵

"NRC's site selection process guidance calls for identification of a [region of interest], the geographic area considered by an applicant in searching for candidate areas and potential sites for possible siting of a new nuclear power plant."²⁷⁶ In the FEIS, the Staff determined that the region of interest (ROI) for the proposed Calvert Cliffs Unit 3 was the state of Maryland.²⁷⁷ Applicants originally proposed the state of Maryland as the ROI for the Calvert Cliffs Unit 3 project in Revision 6 of its Environmental Report (ER), and in the FEIS the Staff accepted the Applicant's proposal, stating that "UniStar's designated ROI is consistent with

²⁶⁹ See *supra* pp. 93-94.

²⁷⁰ Tr. at 450-51.

²⁷¹ Tr. at 451.

²⁷² Tr. at 452.

²⁷³ Tr. at 453-54.

²⁷⁴ Tr. at 405-06.

²⁷⁵ Tr. at 406, 457-58.

²⁷⁶ FEIS at 9-33.

²⁷⁷ FEIS at 9-34; Tr. at 400.

expectations for an ROI” and that “UniStar’s” basis for defining its ROI did not arbitrarily exclude desirable candidate locations.”²⁷⁸ Based on the ROI, as defined in the FEIS, the Staff looked only at potential wind and solar power sources within the state of Maryland in determining potential wind and solar power contribution estimates to the Calvert Cliffs Unit 3 combination alternative.²⁷⁹

In support of its decision, the Staff emphasized that, much like many of the other states in its region, “Maryland already imports a very large portion of its power from other states.”²⁸⁰ Mr. Kugler testified that “the transmission system is already pretty loaded down in terms of importing power during periods of peak demand.”²⁸¹ According to Mr. Kugler, Maryland’s dependence on out-of-state power was a key factor in the MPSC’s decision to approve the Certificate of Public Convenience and Necessity for Calvert Cliffs Unit 3. He stated that “one of the factors [the MPSC] considered was [that] they want[ed] to get power sources built in Maryland to support the grid in Maryland. They don’t want Maryland to become even more dependent on outside sources because they’re competing with other states around them and their grid is already pretty strained.”²⁸²

The MPSC’s decision to grant a Certificate of Public Convenience and Necessity for Calvert Cliffs Unit 3 was based on the recommendation contained in the Proposed Order of the Hearing Examiner.²⁸³ In his recommendation,²⁸⁴ pursuant to Section 7-207(e) of the Public Utilities Company Article, the Hearing Examiner considered, among other things, the effect of the generating station

²⁷⁸ FEIS at 9-34.

²⁷⁹ Tr. at 400; Exh. NRC000004, at 5 (“The approach used to develop a combination of energy alternatives included the maximum contribution from renewable sources that could be reasonably expected within the region of interest and within the timeframe of the proposed project.”); Exh. NRC000043 (“Prefiled Rebuttal Testimony of Andrew J. Kugler and Katherine A. Cort Regarding Contention 10C” and “Affidavit of Andrew J. Kugler Concerning Prefiled Rebuttal Testimony of Andrew J. Kugler and Katherine A. Cort Regarding Environmental Contention 10C” and “Affidavit of Katherine A. Cort Concerning Prefiled Rebuttal Testimony of Andrew J. Kugler and Katherine A. Cort Regarding Contention 10C” (Nov. 18, 2011)), at 9-10.

²⁸⁰ Tr. at 402.

²⁸¹ *Id.*

²⁸² Tr. at 403.

²⁸³ Exh. NRC000014 (Maryland Public Service Commission, In the Matter of the Application of UniStar Nuclear Energy, LLC and UniStar Nuclear Operating Services, LLC for a Certificate of Public Convenience and Necessity to Construct a Nuclear Power Plant at Calvert Cliffs in Calvert County, Maryland, Case Number 9127, Order Number 82741 (June 26, 2009)), at 5.

²⁸⁴ Exh. NRC000015 (Maryland Public Service Commission, In the Matter of the Application of UniStar Nuclear Energy, LLC and UniStar Nuclear Operating Services, LLC for a Certificate of Public Convenience and Necessity to Construct a Nuclear Power Plant at Calvert Cliffs in Calvert County, Maryland, Case Number 9127, Proposed Order of Hearing Examiner (Apr. 28, 2009)), at 97.

on “the stability and reliability of the electric system.”²⁸⁵ In addressing this issue, he cited an MPSC Staff witness who stated that Calvert Cliffs Unit 3 will reduce the state of Maryland’s dependence on imported electricity and will reduce congestion on transmission lines within the state of Maryland during peak periods by providing a continuous in-state baseload power source.²⁸⁶ Based on this testimony, the Hearing Examiner concluded that Calvert Cliffs Unit 3 would have a beneficial effect on the stability and reliability of the electric system in the state of Maryland, and recommended that the MPSC grant the Certificate of Convenience and Necessity for Calvert Cliffs Unit 3.²⁸⁷ The MPSC affirmed the Proposed Order of the Hearing Examiner.²⁸⁸

Mr. Kugler testified that the Staff excluded technologically feasible, commercially viable energy sources solely because they were not located within the state of Maryland.²⁸⁹ He acknowledged, however, that wind power generated offshore of Delaware could supply power to Maryland.²⁹⁰ He explained that the most congested transmission lines in Maryland are typically to the North and the West, and thus wind power generated in Delaware could likely be transmitted into Maryland, given that the power would be entering the state through the East, where the transmission lines are less congested.²⁹¹ However, Mr. Kugler stated that such a power source would have been excluded from the FEIS combination alternative analysis based solely on its out-of-state location, despite the fact that it would enter Maryland’s grid on uncongested transmission lines.²⁹²

I. The Staff’s Evaluation of the Environmental Impacts of the Combination Alternative

The FEIS includes a table entitled “Summary of Environmental Impacts of a Combination of Power Sources.”²⁹³ For each impact category, such as land use, air quality, and water use and quality, the table includes an impact categorization

²⁸⁵ Md. Code Ann., Pub. Util. Cos. § 7-207(e) (West 2012); Exh. NRC000015, at 42-43; *see also* Exh. NRC000015, at 97 (stating that Calvert Cliffs Unit 3 is “strongly supported by the local government and community” and that it “will constitute a new large source of power that would be of benefit to the citizens and State of Maryland.”).

²⁸⁶ Exh. NRC000015, at 52-53.

²⁸⁷ *Id.* at 52-53, 99-100.

²⁸⁸ Exh. NRC000014, at 5.

²⁸⁹ Tr. at 406-07 (“CHAIRMAN SPRITZER: All right. What about if [a wind source is] offshore in Delaware? Would that have been excluded? MR. KUGLER: We would not have included that because it was not within Maryland, because, again, we were looking at that as our region of interest.”).

²⁹⁰ Tr. at 407.

²⁹¹ *Id.*

²⁹² *Id.*

²⁹³ FEIS at 9-29 (tbl. 9-3).

(small, moderate, or large); a comment providing a description of the impact; and, for air quality, quantitative estimates of emissions.²⁹⁴ Thus, the table provides information permitting a reader of the FEIS to contrast the environmental impacts of the combination alternative with those of the proposed action. The Staff also discussed in somewhat greater detail the differences among the viable energy alternatives regarding carbon dioxide emissions. The Staff estimated that the combination alternative would produce 153,000,000 metric tons of carbon dioxide emissions during a 40-year period. This was less than the Staff's estimates of the carbon dioxide emissions from the alternatives consisting solely of coal-fired and natural-gas-fired generation, but greater than the Staff's 32,000,000 metric ton estimate for the nuclear plant (taking into account transportation emissions for the nuclear plant workforce and fuel cycle emissions).²⁹⁵ The Staff concluded that "from an environmental perspective, none of the viable energy alternatives [including the combination alternative] are clearly preferable to construction of a new baseload nuclear power generating plant located within Unistar's ROI."²⁹⁶

In the FEIS combination alternative analysis, the Staff also considered the result if the wind contribution was quadrupled to 400 MW(e) of baseload power (the equivalent of 1000 to 1200 MW of installed capacity with a 400-MW(e) CAES facility).²⁹⁷ The Staff did not consider this a realistic scenario, but included it in the FEIS in response to comments received on the DEIS.²⁹⁸ Under that scenario, the combination alternative would require a 900-MW(e) natural gas plant rather than a 1200-MW(e) plant.²⁹⁹ This change would reduce by about 25% the air emissions associated with the natural gas plant component of the combination alternative.³⁰⁰ At the same time, land use impacts would increase if onshore wind is used, and a wider ocean area would be required if offshore wind is used. The Staff concluded that all of the environmental impact categorizations would be the same as the original combination alternative, except that if onshore wind is used to meet the increased wind estimate then the impacts to land use and ecology might become large, and if offshore wind is used increased impacts to aquatic ecology are likely.³⁰¹ The Staff further concluded that, under this modified scenario, the environmental impacts of the combination alternative would be

²⁹⁴ *Id.*

²⁹⁵ *Id.* at 9-31.

²⁹⁶ *Id.*

²⁹⁷ *Id.* at 9-28.

²⁹⁸ Tr. at 368-69.

²⁹⁹ FEIS at 9-28.

³⁰⁰ Tr. at 370.

³⁰¹ FEIS at 9-30.

greater than those of the proposed action, and thus the modified scenario would not be environmentally preferable.³⁰²

At the evidentiary hearing, the Staff elaborated on this point. Mr. Kugler explained that in general, as wind and solar power contributions are increased, impacts to air quality and waste management will decrease, but impacts to land use will increase significantly.³⁰³ Solar and wind power have very low capacity factors, he stated, and thus large installations requiring significant amounts of land are needed to provide these kinds of power outputs.³⁰⁴ Mr. Kugler testified that, no matter how much the solar and wind contributions were increased, there would never be a point at which the Staff would consider the combination alternative to be environmentally preferable to Calvert Cliffs Unit 3.³⁰⁵

V. CONCLUSIONS OF LAW

A. Legal Standards Governing the Board's Review of the Combination Alternative

The Staff is required to issue an FEIS that thoroughly and objectively evaluates reasonable alternatives to the proposed action.³⁰⁶ To this end, the FEIS need not discuss remote and speculative alternatives, but must consider only alternatives that bring about the ends of the proposed project.³⁰⁷ But if an alternative is feasible, commercially and capable of bringing about the ends of the proposed project, then the Staff may not dismiss it merely because it is inconsistent with the preferences of interested parties, or for other reasons inconsistent with NEPA's rule of reason.³⁰⁸

The project's goals determine the alternatives that are considered reasonable.³⁰⁹ In considering alternatives under NEPA, an agency should take into account the

³⁰² *Id.*

³⁰³ Tr. at 473.

³⁰⁴ Tr. at 472. Mr. Kugler further stated that the land use impacts that occur as a result of solar installations can be reduced by locating the installations on rooftops, but that the larger installations that are being built in Maryland and elsewhere typically are located on the ground. *Id.*

³⁰⁵ Tr. at 470-73.

³⁰⁶ See National Environmental Policy Act of 1969, § 102(2)(C)(i)((iii), 42 U.S.C. § 4332(2)(C)(i)-(iii) (2012); *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 397 (2012) (citing *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 834, 837 (D.C. Cir. 1972)); see also 10 C.F.R. § 51.53(c)(2).

³⁰⁷ *Vermont Yankee*, 435 U.S. at 551; *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1) CLI-12-5, 75 NRC 301, 339 (2012).

³⁰⁸ See *Wetlands Water District v. Department of the Interior*, 376 F.3d 853, 868 (9th Cir. 2004).

³⁰⁹ *City of New York v. U.S. Department of Transportation*, 715 F.2d 732, 742 (2d Cir. 1983).

needs and goals of the parties involved in the application.³¹⁰ “However, agencies are not permitted ‘to define the objectives [of a proposed action] so narrowly as to preclude a reasonable consideration of alternatives.’”³¹¹ Although the agency’s alternatives analysis should reflect the applicant’s goals, the underlying goal should not be purposefully narrowed to predetermine the outcome.³¹² Blindly adopting the applicant’s statement of the purpose of the action is a “losing position” because it does not allow for the full consideration of alternatives required by NEPA.³¹³ NEPA requires an agency to “‘exercise a degree of skepticism in dealing with the self-serving statements from the prime beneficiary of the project’” and to look at the general goal of the project, rather than only those alternatives preferred by the applicant.³¹⁴

B. The Staff’s Limitations on the Time Frame and Geographic Scope of the Combination Alternative Were Unreasonably Restrictive

The combination alternative included in the FEIS would supply 1600 MW(e) of baseload power for distribution in Maryland. It is therefore capable of satisfying that purpose of the project. The record also establishes that solar power, onshore wind, and offshore wind are technologically feasible means of generating electrical energy.³¹⁵ Both solar power and onshore wind power facilities are already generating electricity in Maryland and elsewhere.³¹⁶ While there is no offshore wind currently operating along the Atlantic Coast, offshore wind farms are operating in Europe, and no witness disputed the technological feasibility of offshore wind.³¹⁷ It is also clear that Maryland has ample potential for the development of offshore wind.³¹⁸

Thus, the major issue concerning the combination alternative is the extent to which solar and wind power will be commercially viable within the time frame of the proposed action. In analyzing this issue, the Staff looked to not just the theoretical potential for the development of wind and solar power, but

³¹⁰ *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 146 (2004).

³¹¹ *Wyoming v. USDA*, 661 F.3d at 1244 (quoting *Citizens’ Committee to Save Our Canyons v. U.S. Forest Service*, 297 F.3d 1012, 1030 (10th Cir. 2002)).

³¹² *City of Grapevine v. Department of Transportation*, 17 F.3d 1502, 1506 (D.C. Cir. 1994).

³¹³ *Simmons v. U.S. Army Corps of Engineers*, 120 F.3d 664, 669 (7th Cir. 1997).

³¹⁴ *Id.* (quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 209 (D.C. Cir. 1991) (Buckley, J., dissenting)).

³¹⁵ See FEIS at 9-20 to 9-24.

³¹⁶ Exh. APL000001, at 38-39; Exh. NRC000004, at 26.

³¹⁷ See Tr. at 345-47; Exh. APL000010, at 1.

³¹⁸ Exh. NRC000024, at 60-63 (tbl. 4-3); Exh. APL000010, at 19 (tbl. 3).

to their likely availability within the time frame of the proposed action. In general, we believe that was a reasonable approach. But, as we explain below, the Staff adopted an unrealistic time frame for the proposed action, and it also inappropriately eliminated all potential wind and solar power contributions from outside Maryland. These restrictions unduly limited the potential wind and solar power contributions to the combination alternative, thereby making it overly dependent upon the natural gas plant.

1. The Staff Unreasonably Limited Wind and Solar Power Contributions to Only Those That Would Be Available by 2015 or 2017

As stated in *Carolina Environmental Study Group v. United States*, NEPA requires that alternatives be considered “as they exist and are likely to exist,” not merely as they exist at the present time.³¹⁹ Although “remote and speculative” alternatives need not be addressed in an FEIS, NEPA requires the Staff to consider reasonable alternatives that are likely to be available within the time frame of the proposed action.³²⁰

The Staff failed to comply with this requirement because its estimated dates for the completion of the proposed action — 2015 and 2017 — are unrealistic. No license has been issued for Calvert Cliffs Unit 3, the reactor design is still uncertified, and the Staff has yet to complete its SER with open items for this proposed facility. It might take roughly 8 years, if not more, once the required COL is obtained to complete construction of Calvert Cliff Unit 3. Moreover, Applicants have reiterated that they have no intention of beginning preconstruction, even if they were to obtain a COL, until multiple key factors are in place. Given these factors, it is likely that Calvert Cliffs Unit 3 will not be built until sometime between 2020 and 2025, and it may never be built. The completion date proposed by Intervenor, 2022, is far more realistic than the dates used by the Staff.

Because wind and solar power technologies are constantly evolving, their respective potential power contributions to the combination alternative are highly dependent upon the relevant time frame. Also, the RPS requirements increase up to 2022. Maryland utilities must comply with those requirements. And there will be more time for new wind and solar projects to complete the necessary approval processes, negotiate power purchase agreements, and complete construction if the time frame is extended to 2022. Thus, the potential wind and solar power contributions to the combination alternative will likely be greater in 2022 than in 2015 or 2017.

³¹⁹ 510 F.2d 796, 801 (D.C. Cir. 1975); see also *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), LBP-11-2, 73 NRC 28, 51 (2011).

³²⁰ See *Vermont Yankee v. NRDC*, 435 U.S. at 551 (quoting *NRDC v. Morton*, 458 F.2d at 837-38).

Thus, by relying on the impractical dates of 2015 and 2017, the Staff's analysis of wind and solar power contributions to the combination alternative is flawed.

2. The Staff Unreasonably Limited the Combination Alternative to Only Generating Capacity Located in Maryland

The Staff chose not to consider potential contributions to the combination alternative from out-of-state sources of renewable energy, including wind power.³²¹ The record reflects that, while power is routinely wheeled between states, transmitting electricity over long distances can result in transmission line losses.³²² In addition, during peak periods Maryland experiences transmission line congestion, primarily in areas to the North and West of the State.³²³ It would be consistent with NEPA to apply a geographic restriction appropriately tailored to those legitimate concerns. But the Staff instead applied a blanket exclusion of all out-of-state wind power. The Staff has not shown that such a total exclusion of all out-of-state generating capacity was necessary to achieve the purpose of supplying 1600 MW(e) of baseload power in Maryland. The Board concludes that the combination alternative should have included wind power likely to be available from nearby states where transmission line congestion problems are not a significant concern.³²⁴

The Staff's review of alternative energy sources is guided by the Environmental Standard Review Plan ("ESRP"), Chapter 9, sections 9.2.1 through 9.2.3, as modified by an April 26, 2010 memorandum, not merely the preferences of the Applicant or the State of Maryland.³²⁵ ESRP 9.2.2 states that:

[t]he reviewer should review the alternative energy sources and combinations of sources available to the applicant, and categorize them as either competitive or noncompetitive with the proposed project. A competitive alternative is one that is feasible and compares favorably with the proposed project in terms of environmental and health impacts. If the proposed project is intended to supply baseload power, a competitive alternative would also need to be capable of supplying baseload

³²¹ See Tr. at 406-07.

³²² Tr. at 480-81, 660-61.

³²³ Tr. at 407.

³²⁴ As we discussed previously, the FEIS does not in fact consistently require that all sources of new electrical power be located in Maryland. See *supra* pp. 84-85. Our discussion here focuses on the reasons why such a blanket exclusion is unreasonable, even had it been stated consistently in the FEIS.

³²⁵ Exh. NRC000004, at 11.

power. A competitive alternative could be composed of combinations of individual alternatives.³²⁶

In addition, ESRP 9.2.2 lists specific criteria that an alternative must meet, the first of which is that “[t]he energy conversion technology should be developed, proven, and *available in the relevant region*.”³²⁷ Mr. Kugler acknowledged these requirements when he testified that as part of a combination alternative review, “the Review Team assesses the environmental impacts of technically feasible and commercially viable energy alternatives *available in the region of interest* that would be able to meet the purpose and need of the project”³²⁸ Thus, as the ESRP makes clear, and the Staff acknowledges, in order to be included in the FEIS combination alternative analysis, a power source need only be “available in the region of interest,” that is, in Maryland; it need not necessarily be located in Maryland if transmission lines will permit importing the power into Maryland. Thus, a technologically feasible and commercially viable out-of-state power source should have been included in the combination alternative to the extent transmission lines will permit importing the power into Maryland.

The Staff’s justification for its blanket exclusion of all out-of-state wind power is based upon the Proposed Order of the Hearing Examiner, subsequently affirmed by the MPSC.³²⁹ The Proposed Order did indicate a preference that a new 1600-MW(e) baseload power plant be located in Maryland. But the Staff’s reliance on this preference when analyzing the distributed wind power contribution to the combination alternative is misplaced. The Hearing Examiner’s preference for an in-state source reflects the concern that reliance on a large out-of-state source of baseload power may exacerbate existing transmission line congestion problems.³³⁰ But the Staff witnesses testified that transmission line congestion in Maryland is primarily to the North and West, and that it is possible to avoid transmission line congestion concerns by importing power from the South and East.³³¹ The Staff acknowledged the possibility that offshore wind in Delaware could provide power to Maryland utilities, but that possible power source was excluded from the Staff’s analysis of the combination alternative because it was located outside Maryland.³³²

³²⁶ Exh. NRC000008 (“Environmental Standard Review Plan — Standard Review Plans for Environmental Reviews for Nuclear Power Plants,” U.S. Nuclear Regulatory Commission, NUREG-1555, Rev. 1 (2007)), at 9.2.2-3 to 9.2.2-4.

³²⁷ *Id.* at 9.2.2-4 (emphasis added); *see also* Exh. NRC000004, at 11.

³²⁸ Exh. NRC000004, at 11.

³²⁹ *Id.* at 14.

³³⁰ Exh. NRC000015, at 52; Tr. at 402-03.

³³¹ *See* Tr. at 406-07.

³³² *Id.*

Thus, in analyzing wind and solar power contribution estimates to the combination alternative, the Staff should have included estimates of wind and solar power sources that could be imported into Maryland through areas where the transmission lines are less congested, i.e., through the South and East. Nearby states such as Delaware have significant wind power potential,³³³ and Maryland utilities could use wind power purchased from those states to satisfy their RPS requirements. But the Staff limited its analysis of potential wind power contributions to the combination alternative to sources within Maryland, regardless of whether such sources were located in an area where a significant congestion problem has been identified.

The Hearing Examiner's Proposed Order also referred to Maryland's interest in limiting its dependence on imported electricity.³³⁴ Mr. Kugler cited this concern as supporting the NRC's refusal to consider out-of-state generating capacity.³³⁵ But the Staff's reliance on this aspect of the Proposed Order ignores the fact that the Maryland RPS *permits* Maryland utilities to purchase wind power, as well as other sources of renewable electrical energy, from outside the state. Although the RPS does require that 2% of Maryland's power supply come from in-state solar power by 2022, it simultaneously allows for the remaining 18% of Maryland's power required to come from renewables by 2022 — including wind power — to be produced out of state.³³⁶ Thus, Maryland expressly permits utilities to use wind power sources located outside Maryland to satisfy their RPS requirements.

The issue before the Hearing Examiner was whether it would be in the State's interest that a new large baseload power plant be located within the state. Under the combination alternative, the large baseload power source, the 1200-MW(e) natural gas combined-cycle generating units, would be located in Maryland, at the Calvert Cliffs site.³³⁷ The Hearing Examiner did not address the question whether, if the state chose to pursue an approach equivalent to the combination alternative, it would insist that all wind power sources contributing to such an alternative be located in Maryland. Had he considered that issue, it seems far more likely that he would have followed an approach consistent with the state's policy as expressed in the RPS legislation, under which RPS requirements may be satisfied through wind power sources located outside the state.

Consequently, the FEIS analysis of the combination alternative is inadequate because the Staff chose not to consider technologically feasible, commercially viable power sources merely because they were not located in Maryland.³³⁸

³³³ See JNTR00001, at 6-9; JNT000003, at 3-4 (tbl. 1).

³³⁴ Exh. NRC000015, at 52.

³³⁵ Tr. at 402-03.

³³⁶ See Exh. JNT000011, at 3.

³³⁷ FEIS at 9-28.

³³⁸ See Tr. at 407.

C. The Deficiencies in the Staff's Analysis Are Not Harmless Error

Applicant argues that “[a]ny dispute over the specific, relative mix of wind or solar used in the combination alternative is not one that would affect the outcome of the NEPA analysis and therefore is not a material issue in this proceeding.”³³⁹ Applicant bases this argument on the Staff’s testimony that increases in the contributions of wind and solar power would not alter its conclusion that the combination alternative is not environmentally preferable to the proposed action. Applicant assumes that, because the Staff’s conclusion on this issue would not change, any errors in the Staff’s analysis of the combination alternative would not constitute a material violation of NEPA and therefore need not be corrected.³⁴⁰ In substance, this argument relies on the administrative law doctrine of harmless error.³⁴¹ We reject its application here — as we have twice before in this proceeding — because the Staff may not avoid NEPA’s requirement to provide the public and the decisionmaker with a realistic evaluation of viable alternatives merely by asserting that compliance would not alter its own conclusions.³⁴²

We first rejected an equivalent argument in our ruling admitting Contention 10C. The Staff argued that we should not admit Contention 10C because Intervenor’s failed to show that the combination alternative with an increased wind and solar contribution would be environmentally preferable to the proposed action.³⁴³ Intervenor’s responded that, once they identified flaws in the DEIS’s analysis of alternatives, it was the Staff’s responsibility to “produce a new analysis that takes the realities we have presented into account.”³⁴⁴ We agreed with Intervenor’s because “[f]ederal courts have held that inaccurate, incomplete, or misleading information in an EIS concerning the comparison of alternatives is itself sufficient

³³⁹ Applicants’ Proposed Findings of Fact at 67.

³⁴⁰ *Id.* at 65-67.

³⁴¹ See *California Wilderness Coalition v. U.S. Department of Energy*, 631 F.3d 1072, 1105-06 (9th Cir. 2011) (finding agency error not harmless).

³⁴² The Staff’s witness, Mr. Kugler, appeared to disagree with the argument that a reasonable assessment of the contributions of wind and solar power was unnecessary to comply with NEPA. In response to the question whether “all of the exercise in determining what’s reasonable [was] really essential to this environmental determination,” he responded:

Well, I think it’s important that we develop a combination of energy alternatives that we think could be done to compare it to what’s been proposed. Because until we do the comparison, we don’t know for sure how it’s going to come out.

Tr. at 473.

³⁴³ Staff Answer to Joint Intervenor’s New Contention 10 (July 20, 2010), at 19-20.

³⁴⁴ Joint Intervenor’s Reply to Staff’s and Applicant’s Responses to Submission of Contention 10 (July 27, 2010), at 13.

to render the EIS unlawful and to compel its revision.”³⁴⁵ We therefore ruled that

Intervenors need not prove, in order to establish a NEPA violation, that revising the DEIS to comply with NEPA will change the NRC Staff’s recommendation or the agency’s decision whether to issue the license. It is sufficient that the information which Intervenors maintain should have been included in the DEIS would be relevant to the ability of the agency decisionmakers and the public to assess the environmental consequences of the project, including the environmental consequences of reasonable alternatives. If Intervenors establish that much, they will have shown that the agency failed to comply with NEPA’s procedural requirements.³⁴⁶

We revisited this issue when the Applicants moved for summary judgment on Contention 10C. Applicants maintained then, as they do now,³⁴⁷ that even if the FEIS’s evaluation of the combination alternative understates the potential contribution of wind and solar power, the issue is immaterial because the Staff performed a “sensitivity analysis” showing that increasing the wind power contribution to the combination alternative would not alter the Staff’s conclusion concerning the environmentally preferable alternative.³⁴⁸ We noted that the doctrine of harmless error has only limited application in NEPA cases, and none where the agency has failed to take the required hard look at environmental consequences and alternatives.³⁴⁹ For example, in *Wilderness Watch v. Mainella*,³⁵⁰ the Eleventh Circuit rejected an argument much like that here, where the agency maintained that it should not be required to remedy a NEPA violation because doing so would not change its conclusions. As the Court of Appeals explained, “[p]ermitting an agency to avoid a NEPA violation through a subsequent, conclusory statement that it would not have reached a different result even with the proper analysis would significantly undermine the statutory scheme.”³⁵¹

That concern applies with equal force in this case. The issue whether the United States should pursue conventional energy sources, renewable sources, or some combination of the two is a matter of intense public interest. One of NEPA’s primary goals is fostering informed public participation in the decisionmaking

³⁴⁵ LBP-10-24, 72 NRC at 762 (citing *Animal Defense Council v. Hodel*, 840 F.2d 1432, 1439 (9th Cir. 1988); *Natural Resources Defense Council, Inc. v. U.S. Forest Service*, 421 F.3d 797, 810-12 (9th Cir. 2005)).

³⁴⁶ *Id.* at 763-64.

³⁴⁷ Applicants’ Proposed Findings of Fact at 68.

³⁴⁸ Applicants’ Motion for Summary Disposition of Contention 10C (June 20, 2011) at 12-13,15.

³⁴⁹ Contention 10C Summary Disposition Order at 17.

³⁵⁰ 375 F.3d 1085, 1096 (11th Cir. 2004).

³⁵¹ *Id.*

process.³⁵² Providing the public with accurate and complete information concerning the environmental consequences of the proposed action and alternatives is essential to fulfilling that goal. NEPA requires federal agencies to “[r]igorously explore and objectively evaluate all reasonable alternatives.”³⁵³ Even if the rigorous exploration of alternatives NEPA requires would not change the Staff’s views, members of the public may use such information to support their own conclusions, which may well be quite different from those of the Staff. This would further NEPA’s goal of informed public participation, while the Applicant’s harmless error theory would frustrate it.

Although the Staff has provided a reasonable basis for its conclusion that the combination alternative is not environmentally preferable to the proposed action, others have a reasonable basis to argue that the decisionmaker should reach the opposite conclusion. The Staff’s position is that, as wind and solar power contributions are increased, the impact of the combination alternative on air quality and waste management will decrease, but the combination alternative will still not be environmentally preferable to the proposed action primarily because impacts to land use will increase significantly.³⁵⁴ But Mr. Sklar disagreed with the claim that the land use impacts of solar and wind power are significant, pointing out that both solar and wind power installations, unlike nuclear and other traditional sources of electrical energy, are readily compatible with other land uses. Solar panels, for example, can be placed on rooftops, and wind turbines can be placed on land used for agriculture.³⁵⁵ Thus, the alleged impact on other land uses, in Mr. Sklar’s view, is overstated. In addition, Mr. Sklar testified that renewable sources of energy would use less water than a nuclear power plant, and that “the risk analysis of what happens when something does not work will probably be a little more gentle with . . . a blend of renewable and conventional technologies” than with a nuclear power plant.³⁵⁶ The FEIS also states that the combination alternative’s impacts to water use and quality would be “somewhat less than the impacts for a new nuclear power plant located at the Calvert Cliffs site.”³⁵⁷

Given the potential for alternative viewpoints concerning a matter of significant public interest, NEPA’s requirement that the agency thoroughly and objectively analyze reasonable alternatives may not be avoided by after-the-fact statements

³⁵² See *Robertson*, 490 U.S. at 349-50; see also *Claiborne*, CLI-98-3, 47 NRC at 87 (citing *Robertson*, 490 U.S. at 349-50; *Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 443 (4th Cir. 1996)).

³⁵³ 40 C.F.R. § 1502.14(a).

³⁵⁴ Tr. at 473.

³⁵⁵ Tr. at 680-83.

³⁵⁶ Tr. at 683-84.

³⁵⁷ FEIS at 9-29 (tbl. 9-3).

that compliance would not change the Staff's conclusion concerning the environmentally preferable alternative. "Without substantive, comparative environmental impact information regarding other possible courses of action, the ability of an EIS to inform agency deliberation and facilitate public involvement would be greatly degraded."³⁵⁸ Thus, as the Tenth Circuit observed, "[a] public comment period is beneficial only to the extent the public has meaningful information on which to comment Thus, we cannot agree that the failure to thoroughly analyze the environmental impacts of Alternative A-modified in a public NEPA document was harmless."³⁵⁹

Accordingly, the NRC must provide a rigorous and objectively reasonable evaluation of the combination alternative in order to comply with NEPA. Applicants' harmless error theory fails (again).

D. Although the Staff Imposed Unreasonable Restrictions on the Combination Alternative, the Staff Need Not Revise the FEIS

Although the Staff unreasonably restricted the analysis of the combination alternative, this does not necessarily require that the FEIS be revised. Below, we review the extensive record to determine whether we can arrive at reasonable estimates of the wind and solar power contributions to the combination alternative in 2022 and determine how this would affect the environmental impacts of the revised combination alternative, thereby making revision of the FEIS unnecessary.

We have already determined that the amount of available wind and solar power will for the foreseeable future be determined primarily by regulatory requirements and that, for Maryland, the determining requirement will be the RPS. The Delaware Study indicates, assuming Maryland utilities use wind power to satisfy 25% of their REC requirements for nonsolar Tier 1 resources, that either 1114 MW of onshore installed capacity or 975 MW of offshore installed capacity will be needed in 2022. The Maryland LTER estimated that Maryland utilities will use wind power to satisfy only 20% of their REC requirements for nonsolar Tier 1 resources. Using that percentage, the corresponding estimates for wind power capacity would be reduced to approximately 900 MW of onshore installed capacity or 800 MW of offshore installed capacity in 2022. (We refer to both sets of estimates below as the "Delaware Study estimates"). Either set of figures is substantially above the 250 to 300 MW of installed wind capacity that the Staff included in the combination alternative. Although Mr. Sklar believes Maryland utilities will use wind power to satisfy more than 25% of their REC requirements

³⁵⁸ *New Mexico ex rel. Richardson v. Bureau of Land Management*, 565 F.3d 683, 708 (10th Cir. 2009).

³⁵⁹ *Id.*

for nonsolar Tier 1 resources,³⁶⁰ we conclude that a percentage in the 20-25% range should be used because it is more consistent with the LTER estimate.

Of course, saying that such capacity will be needed in 2022 is not the same as saying that it will be built. Maryland utilities have the option of making alternative compliance payments instead of purchasing RECs. But Maryland expects that, for Tier 1 resources other than solar, utilities will purchase the required RECs each year rather than make the alternative compliance payments permitted under the program.³⁶¹ RECs represent megawatt hours of electricity actually produced, which means that, if Maryland utilities are purchasing a given number of RECs, the electricity represented by the RECs must actually be generated. Furthermore, the LTER predicts that sufficient nonsolar Tier 1 generating capacity will be available in the PJM region to enable utilities to meet the requirements of the RPS and similar requirements imposed by other states in the region.³⁶² Thus, for Tier 1 resources other than solar, Maryland utilities will likely meet their obligations by the purchase of RECs rather than making alternative compliance payments.

The question, however, is where the new generating capacity will be located, and whether it will be possible to transmit the new power to Maryland. As noted above, Maryland utilities can purchase the required RECs for Tier 1 nonsolar renewable sources such as wind power from out-of-state sources. In addition, utilities are not required to purchase power generated by the renewable energy sources from which they purchase RECs.³⁶³ Accordingly, a Maryland utility can satisfy its REC requirement by purchasing the necessary credits from out-of-state wind power sources, even though it would be impractical for the utility to purchase power from those sources due to their distance from Maryland or the lack of uncongested transmission facilities. Therefore, because RECs may be purchased from renewable energy generators that are not likely to actually supply power to Maryland utilities, there are significant uncertainties associated with using the Delaware study's estimates to determine the wind power capacity that could realistically contribute to a commercially viable combination alternative for Maryland.

The most we can say, given that we expect regulatory requirements to strongly influence the construction of new wind power capacity, is that the Delaware Study estimates provide an upper bound for the installed wind power capacity that could be included in the combination alternative in 2022. For those estimates to be

³⁶⁰ Tr. at 602-09.

³⁶¹ Tr. at 445-46.

³⁶² Exh. APL000005 (Exeter Associates, Inc., Long-Term Electricity Report for Maryland, Prepared for the Maryland Department of Natural Resources (Sept. 23, 2011)), at 3-12 to 3-22 ("Development of Tier 1 non-solar renewable resources is assumed to keep pace with demand so that the region's RPS requirements are fully met throughout the study period.").

³⁶³ Tr. at 454.

relevant to the combination alternative, all of the wind power generating capacity necessary to satisfy the RPS in 2022 would have to be capable of being imported into Maryland, even if it is generated out of state. But we have no way of knowing whether that will be true. Some of the generating capacity might be located too far from Maryland to be a realistic supply alternative, although Maryland utilities could still purchase RECs from such out-of-state sources.

The corresponding lower bound would assume only a marginal contribution to the combination alternative from sources located outside Maryland. The LTER's reference case assumes that Maryland will add slightly less than 200 MW of wind generation capacity between now and 2022.³⁶⁴ If we assume that Maryland utilities will purchase RECs from out-of-state sources but import only a limited amount of power due to transmission problems or other technical issues, a conservative estimate would be that 250-300 MW of installed wind capacity would be available for the combination alternative in 2022, equivalent to the figure used in the FEIS.

Realistically, the best estimate will likely be somewhere between the conservative lower bound and the optimistic upper bound. We would therefore expect, using the 2022 time frame, a modest increase in the potential wind power contribution to the combination alternative beyond that assumed in the FEIS, on the order of an additional 200-300 MW of installed capacity. We think increases above that figure, while possible, are too uncertain to justify inclusion in the analysis.

For solar power, the RPS mandates that RECs used to satisfy the RPS solar carve-out must be obtained from in-state sources. Consequently, we do not have to deal with the uncertainties created by the use of out-of-state sources to satisfy the RPS. Under the RPS solar carve-out requirement, 2% of Maryland's electrical energy must come from in-state solar power by 2022. This is equivalent to approximately 800 MW of installed capacity by 2022.³⁶⁵ But the LTER anticipates that by 2022 only about half of the RPS requirement will be met through the purchase of RECs; utilities will meet the balance of their requirements through alternative compliance payments.³⁶⁶ Thus, we arrive at an estimate of 400 MW of installed solar capacity in Maryland by 2022.³⁶⁷ This is moderately higher than the estimate of approximately 300 MW of installed capacity in the FEIS.

We therefore conclude, on the basis of the extensive record developed in this proceeding, that we are able to provide imperfect but reasonable estimates of the potential contribution of wind and solar power to the combination alternative within the realistic time frame of the proposed action. We further note that, while the revised estimates are somewhat higher than those in the FEIS, the

³⁶⁴ Exh. APL000005, at 9-3 (fig. 9.1); Tr. at 455.

³⁶⁵ Tr. at 461.

³⁶⁶ Tr. at 461-62; Exh. APL000005, at 3-21.

³⁶⁷ Tr. at 462-63.

Staff has explained how increasing the solar and wind power contributions would affect the analysis of the environmental consequences of the combination alternative, including both the impacts that would be reduced and those that would be increased. Moreover, the Staff has made clear that it would not change its conclusion that the combination alternative is not environmentally preferable, making it unnecessary for the Staff to revisit that issue. Thus, the FEIS, as supplemented by the evidence at the hearing and our findings of fact and conclusions of law, is sufficient to satisfy NEPA's twin goals of (1) ensuring that agency decisionmakers will have detailed information concerning significant environmental impacts of proposed projects when they make their decisions, and (2) guaranteeing that such information will be available to the larger audience that may also play a role in the decisionmaking process.³⁶⁸

Accordingly, we deny Joint Intervenor's request that we require a revision of the FEIS.

VI. CONCLUSION

The Board finds that, while the FEIS analysis of the combination alternative was deficient for the two reasons we have identified, the FEIS, as supplemented, satisfies the requirements of NEPA and 10 C.F.R. Part 51.

In accordance with 10 C.F.R. § 2.1210, this Partial Initial Decision will constitute a final decision of the Commission forty (40) days after its issuance (i.e., on October 9, 2012), unless: (1) a party files a petition for Commission review within fifteen (15) days after service of this Initial Decision; or (2) the Commission directs otherwise.³⁶⁹ Within ten (10) days after service of a petition for Commission review, parties to the proceeding may file an answer supporting or opposing Commission review.³⁷⁰ A party who seeks judicial review of this decision must first seek Commission review, unless otherwise authorized by law.³⁷¹

³⁶⁸ *Robertson*, 490 U.S. at 349.

³⁶⁹ 10 C.F.R. §§ 2.341(b), 2.1210(a), 2.1212.

³⁷⁰ Any petition for Commission review and any answer shall conform to the requirements of 10 C.F.R. § 2.341(b)(2)-(3).

³⁷¹ 10 C.F.R. § 2.1212.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Ronald M. Spritzer, Chairman
ADMINISTRATIVE JUDGE

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

Dr. William W. Sager
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 30, 2012

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Ronald M. Spritzer, Chairman
Dr. Gary S. Arnold
Dr. William W. Sager

In the Matter of

Docket No. 52-016-COL
(ASLBP No. 09-874-02-COL-BD01)
(Combined License Application)

**CALVERT CLIFFS 3 NUCLEAR
PROJECT, LLC, and UNISTAR
NUCLEAR OPERATING
SERVICES, LLC**
**(Calvert Cliffs Nuclear Power
Plant, Unit 3)**

August 30, 2012

This proceeding concerns the application of Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC, under 10 C.F.R. Part 52 for a combined license (COL) to construct and operate a new nuclear unit, using the U.S. Evolutionary Power Reactor certified design, at its site in Lusby, Calvert County, Maryland. Joint Intervenors filed a motion to admit proposed Contention 11, which alleges that the Final Environmental Impact Statement violates the National Environmental Policy Act (NEPA) because it fails to address the environmental and safety implications of the findings and recommendations of the Nuclear Regulatory Commission's Fukushima Task Force. The Licensing Board concludes that the new contention was timely filed, but that under controlling Commission precedent it is not admissible.

RULES OR PRACTICE: TIMELINESS OF NEW CONTENTIONS

Under section 2.309(f)(2), new contentions filed after the initial filing may only be admitted “upon a showing that . . . (i) [t]he information upon which the . . . new contention is based was not previously available; (ii) [t]he information upon which the . . . new contention is based is materially different than information previously available; and (iii) [t]he . . . new contention has been submitted in a timely fashion based on the availability of the subsequent information.” 10 C.F.R. § 2.309(f)(2).

NEPA AND 10 C.F.R. PART 51: ENVIRONMENTAL EFFECTS

The impact of the proposed action on public safety is an issue that must be considered under NEPA, as well as the Atomic Energy Act. *City of Las Vegas v. Federal Aviation Administration*, 570 F.3d 1109, 1115 (9th Cir. 2009) (citing *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 772, 775 (1983)).

RULES OF PRACTICE: CONTENTION ADMISSIBILITY

The Commission has held that “reference to [generic agency] recommendations alone, without facts or expert opinion that explain their significance for the unique characteristics of the sites or reactors that are the subject of [a] petition[], does not provide sufficient support for [a] common contention.” See *Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 390 (2012).

RULES OF PRACTICE: CONTENTION ADMISSIBILITY

When a petitioner “d[oes] not relate [its] contention to any unique characteristics of the particular site at issue,” a licensing board may properly find that the contention was not adequately supported by alleged facts or expert opinions and did not raise issues material to the NRC’s reviews of the pending license application. *Comanche Peak*, CLI-12-7, 75 NRC at 388, 389, 390.

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ORDER

(Ruling on Joint Intervenors’ Proposed New Contention 11)

The issue now before the Board is whether to admit a new contention, Contention 11, challenging the adequacy of the Final Environmental Impact Statement (“FEIS”) for the Calvert Cliffs Unit 3 combined license (COL). Contention 11 maintains that the FEIS violates the National Environmental Policy Act (NEPA)¹ because it fails to address the environmental and safety implications of the findings and recommendations raised by the Nuclear Regulatory Commission’s Fukushima Task Force in its report, “Recommendations for Enhancing Reactor Safety in the 21st Century: The Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident . . .” (“Task Force Report”) that was issued on July 12, 2011.²

Joint Intervenors argue that admission of the new contention is necessary to guarantee that the NRC Staff satisfies its duty under NEPA to consider the new

¹ 42 U.S.C. § 4321 *et seq.*

² Motion to Admit New Contention Regarding the Safety and Environmental Implications of the Nuclear Regulatory Commission Task Force Report on the Fukushima Dai-ichi Accident (Aug. 11, 2011) at 1 [hereinafter Motion to Admit New Contention].

and significant information set forth in the Task Force Report before issuing a license in this COL case.³ The Board concludes that the new contention was timely filed, but that under controlling Commission precedent it may not admit the proposed new contention.

I. BACKGROUND

This proceeding concerns the application for a COL to construct and operate a U.S. Evolutionary Power Reactor (“U.S. EPR”), designated Unit 3, at the Calvert Cliffs site in Lusby, Calvert County, Maryland.⁴ Applicants are Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC (collectively, “UniStar” or “Applicant”).⁵ Both of these entities are domestic subsidiaries of UniStar.⁶ As of November 3, 2010, the sole owner of UniStar is Electricite de France, S.A. (“EDF”), a French limited company.⁷

There are currently two contentions pending before the Board. The first contention, Contention 1, alleges that “contrary to the Atomic Energy Act and NRC Regulations, Calvert Cliffs-3 would be owned, dominated and controlled by foreign interests.”⁸ The second contention, Contention 10C, concerns the adequacy of one aspect of the alternatives analysis in the Environmental Impact Statement (EIS) for Unit 3.⁹ The Board deferred its decision on whether to grant summary disposition on Contention 1 until it issues its Initial Decision on

³ *See id.*

⁴ *See* Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC Notice of Hearing and Opportunity to Petition for Leave to Intervene and Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation on a Combined License for the Calvert Cliffs Nuclear Power Plant, Unit 3, 73 Fed. Reg. 55,876 (Sept. 26, 2008).

⁵ *Id.*

⁶ Letter from David A. Repka, Counsel for Calvert Cliffs 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC, to Calvert Cliffs Board (Nov. 3, 2010) at 1 [hereinafter UniStar Letter].

⁷ *Id.*

⁸ Petition to Intervene in Docket No. 52-016, Calvert Cliffs-3 Nuclear Power Plant Combined Construction and License Application (Nov. 19, 2008) at 5.

⁹ Contention 10C, as restated by the Board, alleges:

The DEIS discussion of a combination of alternatives is inadequate and faulty. By selecting a single alternative that underrepresents potential contributions of wind and solar power, the combination alternative depends excessively on the natural gas supplement, thus unnecessarily burdening this alternative with excessive environmental impacts.

LBP-10-24, 72 NRC 720, 765 (2010).

Contention 10C.¹⁰ In January 2012, the Board held an evidentiary hearing on Contention 10C in accordance with the schedule set forth in the Board’s Revised Initial Scheduling Order.¹¹

The proposed new Contention 11 is based on what Joint Intervenors characterize as “the new and significant environmental implications of the findings and recommendations raised by the NRC’s Fukushima Task Force Report.”¹² The Near-Term Task Force (Task Force) was “established in response to Commission direction to conduct a systematic and methodical review of [NRC] processes and regulations to determine whether the agency should make additional improvements to its regulatory system and to make recommendations to the Commission for its policy direction, in light of the accident at the Fukushima Dai-ichi Nuclear Power Plant.”¹³

“In examining the Fukushima Dai-ichi accident for insights for reactors in the United States, the Task Force addressed protecting against accidents resulting from natural phenomena, mitigating the consequences of such accidents, and ensuring emergency preparedness.”¹⁴ The Task Force Report stated:

The accident in Japan was caused by a natural event (i.e., tsunami) which was far more severe than the design basis for the Fukushima Dai-ichi Nuclear Power Plant. As part of its undertaking, the Task Force studied the manner in which the NRC has historically required protection from natural phenomena and how the NRC has addressed events that exceed the current design for plants in the United States.¹⁵

The Task Force characterized the current NRC regulatory approach as including “requirements for design-basis events with protection and mitigation features controlled through specific regulations for the general design criteria,” “requirements for some ‘beyond-design-basis’ events through specific regulations (e.g., station blackout, large fires, and explosions),” and “voluntary industry initiatives to address severe accident features, strategies, and guidelines for operating reactors.”¹⁶ The result, in the Task Force’s words, is a “patchwork of regulatory

¹⁰ See Licensing Board Memorandum and Order (Denying Summary Judgment of Contention 10C, Denying Amended Contention 10C, and Deferring Ruling on Contention 1) (Aug. 26, 2011) at 32 (unpublished) [hereinafter Order Denying Summary Judgment of Contention 10C].

¹¹ Licensing Board Order (Revising Initial Schedule) (June 24, 2011) at 4 (unpublished).

¹² New Contention Regarding NEPA Requirement to Address Safety and Environmental Implications of the Fukushima Task Force Report (Aug. 11, 2011) at 4 [hereinafter Contention 11].

¹³ Dr. Charles Miller et al., Recommendations for Enhancing Reactor Safety in the 21st Century, The Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident (July 12, 2011), at vii [hereinafter Task Force Report].

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

requirements and other safety initiatives, all important, but not all given equivalent consideration and treatment by licensees or during NRC technical review and inspection.”¹⁷

The Task Force Report concluded that “a sequence of events like the Fukushima accident is unlikely to occur in the United States Therefore, continued operation and continued licensing activities do not pose an imminent risk to public health and safety.”¹⁸ But the Task Force also concluded that the application of the Commission’s longstanding defense-in-depth philosophy “can be strengthened by including explicit requirements for beyond-design basis events.”¹⁹ The Task Force concluded that the Fukushima Dai-ichi accident, like the September 11, 2001 attacks, “provides new insights regarding low-likelihood, high-consequence events that warrant enhancements to defense-in-depth on the basis of redefining the level of protection that is regarded as adequate.”²⁰

The Task Force therefore made twelve recommendations that, “taken together are intended to clarify and strengthen the regulatory framework for protection against natural disasters, mitigation, and emergency preparedness, and to improve the effectiveness of the NRC’s programs.”²¹ The Task Force concluded that “these are a reasonable set of actions to enhance U.S. reactor safety in the 21st century.”²² Each of the Task Force’s recommendations for enhancing reactor safety is accompanied by an analysis of relevant lessons learned from the Fukushima accident, the gaps in the NRC’s existing regulatory program that the lessons learned revealed, and the Task Force’s explanation of how the recommendation will close the regulatory gap.

On or about April 18, 2011, Joint Intervenors and other organizations filed an Emergency Petition to the Commission in this and other proceedings.²³ The Emergency Petition requested that the Commission suspend all decisions regarding the issuance of combined licenses (COLs), as well as various other types of licenses, “pending completion by the NRC’s Task Force . . . of its investigation of the near-term and long-term lessons of the Fukushima accident and the issuance of any proposed regulatory decisions and/or environmental analyses of those

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.* at viii.

²⁰ *Id.*

²¹ *Id.*

²² *Id.* at x.

²³ Emergency Petition to Suspend All Pending Reactor Licensing Decisions and Related Rulemaking Decisions Pending Investigation of Lessons Learned from Fukushima Daiichi Nuclear Power Station Accident (corrected version, filed Apr. 19, 2011) [hereinafter Emergency Petition].

issues.”²⁴ The Emergency Petition contained a number of additional requests related to the Fukushima accident.

In its September 9, 2011 Memorandum and Order, the Commission denied the request to suspend licensing and rulemaking activities pending completion of the NRC Task Force’s evaluation of the implications of the Fukushima accident and issuance of any proposed regulatory decisions and/or environmental analyses.²⁵ The Commission accepted the Task Force’s conclusion that “continued operation and licensing activities do not pose an imminent risk to public health and safety.”²⁶ The Commission therefore found “no imminent risk to public health and safety or to the common defense and security that necessitates” the requested suspensions.²⁷

The petitioners, who sought suspension of licensing and rulemaking activities, also requested “that the NRC conduct a separate generic NEPA analysis regarding whether the Fukushima events constitute ‘new and significant information’ under NEPA that must be analyzed as part of the environmental review for new reactor and license renewal decisions.”²⁸ The Commission determined that this request was premature because while “the [NRC] continues to evaluate the accident and its implications for U.S. facilities[,] . . . the full picture of what happened at Fukushima is still far from clear. . . . Therefore, any generic NEPA duty — if one were appropriate at all — does not accrue now.”²⁹

That being said, the Commission did remind the petitioners that “[t]o the extent that the Fukushima events provide the basis for contentions appropriate for litigation in individual proceedings, our procedural rules contain ample provisions through which litigants may seek admission of new or amended contentions”³⁰

II. ANALYSIS

A. Summary of Contention 11

Proposed new Contention 11 alleges:

The EIS for Calvert Cliffs-3 fails to satisfy the requirements of NEPA because it does not address the new and significant environmental implications of the findings and recommendations raised by the NRC’s Fukushima Task Force Report. As

²⁴ *Id.* at 1-2.

²⁵ *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 175 (2011).

²⁶ *Id.* at 148.

²⁷ *Id.* at 163.

²⁸ *Id.* at 166-67.

²⁹ *Id.* at 167.

³⁰ *Id.* at 170.

required by 10 C.F.R. § 51.92(a)(2) and 40 C.F.R. § 1502.9(c), these implications must be addressed in a supplemental Draft EIS.³¹

According to Joint Intervenors, “[t]he conclusions and recommendations presented in the Task Force Report fully satisfy the two-pronged test under NEPA regulations and case law for ‘new and significant information’ whose environmental implications must be considered before the NRC may make a decision that approves operation of Calvert Cliffs-3.”³² Joint Intervenors state that the conclusions and recommendations presented in the Task Force Report are “new” because they “stem directly from the Fukushima accident, which occurred only five months ago and for which the special study commissioned by the Commission has only just been issued.”³³

Joint Intervenors provide four arguments to support their contention that the Task Force Report contains information that is not only new but “significant,” and which the NRC must therefore consider in order to fulfill its obligations under NEPA.³⁴ We summarize each of these arguments below.

1. Joint Intervenors argue that, because the FEIS fails to consider Task Force recommendations to improve the mitigation capability of new U.S. reactors, it violates NEPA’s requirement to provide a “‘reasonably complete discussion of possible mitigation measures.’”³⁵ Joint Intervenors point out that “[t]he discussion of steps that can be taken to mitigate adverse environmental consequences plays an important role in the environmental analysis under NEPA.”³⁶ Joint Intervenors cite recommendations in the Task Force Report that they contend are steps that could be taken to mitigate potential adverse consequences from a severe accident at Calvert Cliffs Unit 3.

The Task Force Report makes several significant findings when it comes to increasing and improving mitigation measures at new reactors and recommends a number of specific steps licensees could take in this regard. These recommendations include strengthening [station black out] mitigation capability at all operating and new reactors for design basis and beyond-design-basis external events, (Section 4.2.1), requiring reliable hardened vent designs in [boiling water reactor (BWR)] facilities with Mark I and Mark II containments (Section 4.2.2), enhancing spent fuel pool makeup capability and instrumentation for the spent fuel pool (Section 4.2.4) and strengthening and integrating onsite emergency response capabilities such as EOPs, SAMGs, and EDMGs. Section 4.2.5. . . .

³¹ Contention 11 at 4-5.

³² *Id.* at 10 (citing 10 C.F.R. § 51.92(a)(2); 40 C.F.R. § 1502.9).

³³ *Id.*

³⁴ *Id.* at 10-15.

³⁵ *Id.* at 15 (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989)).

³⁶ *Id.* (quoting *Robertson*, 490 U.S. at 351).

Accordingly, the [EIS] must be supplemented to consider the use of these additional mitigation measures to reduce the project's environmental impacts. See 40 C.F.R. §§ 1502.14 (f), 1502.16[h].³⁷

2. Joint Intervenors also argue that the EIS must take a hard look at the consequences of the Task Force's recommendation to fundamentally change the way in which the NRC evaluates Severe Accident Mitigation Alternatives (SAMAs). Joint Intervenors maintain that "by recommending the incorporation of accidents formerly classified as 'severe' or 'beyond design basis' into the design basis, the Task Force Report effectively recommends a complete overhaul of the NRC's system for mitigating severe accidents through consideration of SAMAs."³⁸ According to Joint Intervenors, that would be a significant change from current NRC policy, under which, in their view, SAMAs are required only when they are shown to be cost-beneficial, or if they are adopted voluntarily.³⁹ Instead, "the Task Force recommends that severe accident mitigation measures should be adopted into the design basis, i.e., the set of regulations adopted *without regard to their cost* as fundamentally required for all NRC standards that set requirements for adequate protection of health and safety."⁴⁰ Thus, Joint Intervenors contend that "the values assigned to the cost-benefit analysis for Calvert Cliffs-3 SAMAs, as described in Section 5.11.3 of the EIS, must be re-evaluated in light of the Task Force's conclusion that the value of SAMAs is so high that they should be elected as a matter of course."⁴¹ Joint Intervenors further argue that, if SAMAs were imposed as mandatory measures without regard to cost as the Task Force recommends, the EIS could be changed significantly in that SAMAs now rejected as too costly may be required, thus substantially improving the safety of the plant's operation if it is licensed.⁴²

3. Joint Intervenors further allege that the information in the Task Force Report is "'significant' because it raises an extraordinary level of concern regarding the manner in which the proposed operation of Calvert Cliffs-3 'impacts public health and safety.'"⁴³ Joint Intervenors view the Task Force Report as questioning the sufficiency of the NRC's existing regulatory regime to provide adequate protection of public health and safety. Joint Intervenors

³⁷ *Id.* at 15. Although the quoted text refers to the ER, we will construe it to refer to the EIS, the subject of proposed Contention 11.

³⁸ *Id.* at 11 (citing 10 C.F.R. § 51.45(c)).

³⁹ *Id.*

⁴⁰ *Id.* at 12 (citing *Union of Concerned Scientists v. NRC*, 824 F.2d 108, 120 (D.C. Cir. 1987)) (emphasis in original).

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.* at 11.

state that the NRC must therefore “revisit any conclusions in the Calvert Cliffs-3 EIS based on the assumption that compliance with NRC safety regulations is sufficient to ensure that environmental impacts of accidents are acceptable.”⁴⁴ Joint Intervenors cite as a specific example of this deficiency the EIS’s conclusion that the radiological impacts of a design basis accident would be “SMALL.”⁴⁵ Joint Intervenors maintain that, given the Task Force’s conclusions, this assumption is open to dispute, and that the Agency must accordingly reevaluate its conclusion in light of the Task Force Report.⁴⁶

4. Finally, Joint Intervenors contend that, if additional mitigative measures were to be imposed on Calvert Cliffs 3, this could substantially increase the cost of the new facility. The increased costs could alter the cost-benefit balance, making alternatives such as the no-action alternative more attractive. According to Joint Intervenors, “the NRC cannot meet the fundamental purposes of NEPA if it does not include [in the EIS] all of the costs associated with required mitigative measures.”⁴⁷ Therefore, EIS § 10.6.2, which evaluates the economic cost of the proposed new facility, should be supplemented to take into account the additional costs that would be incurred if additional mitigative measures are required as a result of the Task Force’s recommendations.

B. Contention 11 Was Timely Filed

1. Legal Standard

A new contention must meet the timeliness requirements under either 10 C.F.R. § 2.309(f)(2), which governs admission of timely contentions, or 10 C.F.R. § 2.309(c), which governs admission of untimely contentions.⁴⁸

2. Board Ruling

Under section 2.309(f)(2), new contentions filed after the initial filing may only be admitted “upon a showing that . . . (i) [t]he information upon which the . . . new contention is based was not previously available; (ii) [t]he information upon which the . . . new contention is based is materially different than information

⁴⁴ *Id.*

⁴⁵ *Id.* (citing EIS §§ 5.11.1.1 and 5.11.4).

⁴⁶ *Id.*

⁴⁷ *Id.* at 13 (citing *Sierra Club v. Sigler*, 695 F.2d 957, 979 (5th Cir. 1983) (“There can be no ‘hard look’ at the costs and benefits unless all costs are disclosed.”)).

⁴⁸ *See* Motion to Admit New Contention at 2.

previously available; and (iii) [t]he . . . new contention has been submitted in a timely fashion based on the availability of the subsequent information.”⁴⁹

Contention 11 meets all three requirements of section 2.309(f)(2).⁵⁰ First, the new contention is based on conclusions and recommendations in the Task Force Report, which was not available to the Joint Intervenors until July 12, 2011.⁵¹ Thus, this contention is based upon information that was not previously available to Joint Intervenors.

We also agree with Joint Intervenors that the new information in the Task Force Report upon which the new contention is based is materially different than information previously available. This is the first report requested by the Commission following the Fukushima accident to evaluate the adequacy of the NRC’s regulation of both existing and new nuclear reactors in light of the lessons learned from the accident.⁵² Joint Intervenors state that the Task Force Report is the first occasion since the 1979 Three Mile Island accident that an internal agency report has fundamentally questioned the adequacy of the current level of safety provided by the NRC’s program for nuclear reactor regulation. The Task Force Report makes a number of new recommendations for the improvement of the NRC’s regulation of new and existing nuclear reactors. The Task Force Report also provided a new and detailed analysis explaining the justification for those recommendations. The Report’s recommendations, if implemented by the NRC, would make significant changes to the agency’s regulatory program to improve safety at both existing and new nuclear reactors. It is these new recommendations for improving safety at U.S. reactors that serve as the foundation of Joint Intervenors’ claim that the FEIS violates NEPA because it fails to evaluate the recommendations and the consequences of their implementation. Moreover, it is significant that not only are a number of the recommendations new, but that they come from the NRC itself, the federal agency with the exclusive authority to regulate nuclear safety. Thus, the Task Force Report contains information that is materially different from the information previously available to Joint Intervenors.⁵³

Finally, under the Scheduling Order for this case, new contentions are timely if submitted within 30 days of the occurrence triggering the event.⁵⁴ This motion was filed within 30 days of the publication of the Task Force Report, the triggering event for this contention. Thus, this contention was timely submitted. Neither the

⁴⁹ 10 C.F.R. § 2.309(f)(2).

⁵⁰ Motion to Admit New Contention at 2.

⁵¹ *See id.* at 2-3.

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *See* Licensing Board Order (Establishing Schedule to Govern Further Proceedings) (Apr. 22, 2009) at 4, 6 (unpublished).

Staff nor the Applicants dispute this point. We therefore conclude that Contention 11 satisfies the criteria of 10 C.F.R. § 2.309(f)(2).

Applicants assert, however, that the Task Force Report does not “directly contradict the conclusions in the Calvert Cliffs COL FEIS or the U.S. EPR design certification ER[.]” and thus, according to UniStar, “it does not provide any new or materially different information on environmental issues.”⁵⁵

It is true that the Task Force Report is not a critique of the FEIS. The Report concerns recommendations for improving safety at U.S. reactors, not NEPA compliance. But the Report nevertheless includes new and materially different information on environmental issues because it identifies gaps in the NRC’s current regulatory program revealed by the lessons learned as the result of the Fukushima accident and provides a number of new recommendations to close those gaps and improve safety at U.S. reactors, including proposed new reactors such as Calvert Cliffs Unit 3 that are currently undergoing COL reviews. The impact of the proposed action on public safety is an issue that must be considered under NEPA, as well as the Atomic Energy Act.⁵⁶

The Task Force Report thus provides new information that is at least potentially relevant to an environmental issue that the NRC must evaluate in the FEIS. And Contention 11 alleges that the FEIS violates NEPA because it fails to evaluate the new recommendations in the Task Force Report. Thus, the new information is material to the specific environmental issue raised by Contention 11.

UniStar also argues that “a contention challenging the discussion of accidents or SAMAs in the U.S. EPR design certification application or in the FEIS, could have been raised at the outset of the proceeding or following issuance of the DEIS/FEIS.”⁵⁷ Although this is true, the argument is irrelevant because Contention 11 raises the more specific claim that the FEIS is inadequate based on the conclusions and recommendations in the Task Force Report, and the Report was not publicly available until after the DEIS and FEIS were issued. And Joint Intervenor filed Contention 11 promptly upon issuance of the Report.

UniStar maintains that we must also determine whether the new contention may be admitted under the balancing test in 10 C.F.R. § 2.309(c), which applies to nontimely contentions. A number of licensing boards have disagreed with this argument.⁵⁸ Simply put, “[i]f a contention satisfies the timeliness requirement

⁵⁵ UniStar Response to Proposed Contention 11 (Sept. 6, 2011) at 19 [hereinafter UniStar Response].

⁵⁶ *City of Las Vegas v. Federal Aviation Administration*, 570 F.3d 1109, 1115 (9th Cir. 2009) (citing *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 772, 775 (1983)).

⁵⁷ UniStar Response at 19.

⁵⁸ See *Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), LBP-09-27, 70 NRC 992, 998-99 (2009); see also *Shaw AREVA MOX Services, LLC* (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 210 n.95 (2007); *AmerGen Energy Co., LLC* (Oyster Creek
(Continued)

of 10 C.F.R. § 2.309(f)(2)(iii), then, by definition, it is *not* subject to 10 C.F.R. § 2.309(c) which specifically applies to ‘nontimely filings.’”⁵⁹

Contention 11 was therefore timely filed based on the Task Force Report.

C. Under the Commission’s Ruling in CLI-12-7, Contention 11 Is Inadmissible

In CLI-12-7, the Commission denied a petition for review of a licensing board memorandum and order that declined to admit a contention filed similar to the one offered in this proceeding.⁶⁰ The Commission held that “reference to the Task Force Report recommendations alone, without facts or expert opinion that explain their significance for the unique characteristics of the sites or reactors that are the subject of the petitions, does not provide sufficient support for the common contention.”⁶¹ Accordingly, because the petitioners “did not relate their contention to any unique characteristics of the particular site at issue,” the Commission agreed with the licensing board that the contention was not adequately supported by alleged facts or expert opinions and did not raise issues material to the NRC’s reviews of the pending license applications.⁶² The Commission did not say that no contention based on the Fukushima accident could be admissible: “[a]s tangible Fukushima lessons emerge — whether from inside or outside the NRC — Fukushima-related contentions in individual adjudications may become more plausible, except insofar as the NRC is taking *generic* steps to address them.”⁶³

The Commission’s ruling in CLI-12-7 precludes admission of Contention 11. The Joint Intervenor’s proposed contention raises the same issue as the common contention that was rejected by the Commission — the NRC’s failure to comply with NEPA by failing to supplement the FEIS in response to the Task Force’s conclusions and recommendations. Like the petitioners in those proceedings, the Joint Intervenor has not offered any information that ties the recommendations of the Task Force Report to specific circumstances that are unique to the Calvert Cliffs site or to the proposed new reactor UniStar proposes to build — the U.S. EPR. Moreover, although the Joint Intervenor demands that “the NRC must

Nuclear Generating Station), LBP-06-11, 63 NRC 391, 396 n.3 (2006); *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-14, 63 NRC 568, 573-74 (2006); *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-05-32, 62 NRC 813, 821 n.21 (2005).

⁵⁹ *Vermont Yankee*, LBP-06-14, 63 NRC at 573 n.14 (emphasis in original).

⁶⁰ See *Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379 (2012).

⁶¹ *Id.* at 390.

⁶² *Id.* at 388; see also *id.* at 389, 390.

⁶³ *Id.* at 389 (emphasis added).

revisit any conclusions in the Calvert Cliffs-3 FEIS based on the assumption that compliance with NRC safety regulations is sufficient to ensure that environmental impacts of accidents are acceptable,” they do not identify any such conclusions in the FEIS, much less connect their argument to any unique features of the Calvert Cliffs site or the proposed new reactor.⁶⁴ And the supporting declaration of Joint Intervenor’s expert, Dr. Arjun Makhijani, makes no mention of Calvert Cliffs Unit 3.

Because the Joint Intervenor’s have not connected the Task Force recommendations to unique characteristics of the Calvert Cliffs site or the proposed new reactor, they have, under CLI-12-7, failed to present sufficient information to show a genuine dispute of material fact or law with the FEIS. Therefore, the Board may not admit Contention 11.

III. CONCLUSION

For the foregoing reasons, the Board declines to admit Contention 11.
It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Ronald M. Spritzer, Chairman
ADMINISTRATIVE JUDGE

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

Dr. William W. Sager
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 30, 2012

⁶⁴ Contention 11, at 11.

Concurring Opinion of Administrative Judge Arnold

Although I agree with the Board that Contention 11 is inadmissible, I do not agree with the reasoning provided in our Order. The Board's Order leaves the impression that the reason Contention 11 must be denied admission is because CLI-12-7 precludes its admission. The Concurring Opinion of Judge Spritzer further suggests that, if not for CLI-12-7, at least part of Contention 11 would be admissible. I disagree.

Contention 11, as submitted by Joint Intervenors, challenges the adequacy of the FEIS. It asserts that the expert opinions expressed in the Task Force Report would lead to changes in the regulations, and that accommodating those changes would necessarily change the environmental impacts of the plant. It then claims that those changes must be accounted for in a revision to the FEIS.

The Board's Order provides the following reasoning to find Contention 11 inadmissible. The Commission recently evaluated the appeal of a Board rejection of a site-specific Fukushima contention. The Commission found the Board's rejection correct because the "Board found that Petitioners did not relate their contention to any unique characteristics of the particular site at issue, and therefore, the contention was akin to the generic type of NEPA review that [the Commission] declared premature in CLI-11-5."⁶⁵ In the current case, Joint Intervenors' Contention 11 did not cite to any site-specific circumstances unique to Calvert Cliffs-3. Thus, Contention 11 similarly cannot be admissible in the case at hand.

While I agree that this reasoning provides sufficient grounds for rejecting Contention 11, I believe that, even in the absence of CLI-12-7, Contention 11 would be inadmissible.

Joint Intervenors claim that because environmental impacts of the proposed project may be affected by the expert opinions expressed by the Task Force Report, the FEIS must be supplemented to reflect those changed impacts. But the Commission, long before the events at Fukushima, clarified when an EIS must be updated to accommodate new information:

A Supplemental Environmental Impact Statement is not necessary "every time new information comes to light after the EIS is finalized." As a general matter, the agency must consider whether the new information is significant enough to require preparation of a supplement. The new information must present "a seriously

⁶⁵ See *Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 388 (2012).

different picture of the environmental impact of the proposed project from what was previously envisioned.”⁶⁶

Although Joint Intervenors claim that some environmental impacts may change, at no point in Contention 11 do they argue that these changes would be so significant as to satisfy the Commission’s criterion. And concerning this question, the Commission has explicitly stated that “[t]his is not the case.”⁶⁷

An assessment of environmental impacts need not be exact, and may be performed to bound those impacts. That is, it is common practice in an EIS to use bounding evaluations when more exact calculations cannot be performed or are not necessary.⁶⁸ For argument, we assume that the Calvert Cliffs FEIS provides an adequate assessment of the environmental effects of Calvert Cliffs 3. If some event occurs resulting in modification of the actual environmental impacts in such a way that they remain bounded by the description in the EIS, then the EIS remains an adequate assessment of the environmental effects of Calvert Cliffs 3.

Joint Intervenors have not provided any logic for believing that the twelve recommendations from the Task Force Report will lead to more adverse environmental impacts. Joint Intervenors have not even made such an allegation. They only claim that the environmental impacts will be different from those currently addressed in the FEIS. Thus they have not challenged the current contents of the FEIS.

In fact, all of the Task Force Report recommendations are aimed at improving the safety of current and future nuclear power plants. A reactor that has improved safety would decrease the probability or effect of a severe accident and thus should result in less of an adverse environmental impact. That being the case, implementation of the recommendations would be expected to lead to environmental impacts that are still bounded by those described in the FEIS. This may or

⁶⁶ *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 14 (1999) (citing *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 373 (1989); *Sierra Club v. Froehlke*, 816 F.2d 205, 210 (5th Cir. 1987)).

⁶⁷ *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 168 (2011).

⁶⁸ See *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 316 (2010) (“Because the GEIS provides a severe accident impacts analysis that envelopes the potential impacts at *all* existing plants, the environmental impacts of severe accidents during the license renewal term already have been addressed generically in bounding fashion.”). In *Louisiana Energy Services*, the Commission further stated that:

NEPA also does not call for certainty or precision, but an *estimate* of anticipated (not unduly speculative) impacts. An assessment of the estimated impacts at one or more representative or reference sites can be sufficient. In this type of analysis, the impacts for a range of potential facilities or locations having common site or design features can be bounded.

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005).

may not be true, but the important point is that Joint Intervenors have not claimed otherwise. Thus, Joint Intervenors have not established that this issue is material.

Contention 11 does not directly challenge the contents of the current FEIS and does not raise a genuine dispute on a material issue of law or fact. Thus, Contention 11 does not satisfy the criterion of 10 C.F.R. § 2.309(f)(1)(vi) and is inadmissible.

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

Concurring Opinion of Administrative Judge Ronald Spritzer

I agree that CLI-12-7 compels the Board to reject Contention 11. The Commission has ruled that, to be admissible, any new contention based on the Task Force Report must allege unique characteristics of the site or the proposed new reactor and show that they are significant with respect to the Task Force's recommendations. Contention 11 fails to allege any such unique characteristics and is therefore inadmissible under the Commission's ruling. I therefore conclude that the Commission's decision is controlling.

Nevertheless, I believe that the first part of Contention 11 summarized in the Board's Order⁶⁹ is admissible under our contention admissibility regulation, 10 C.F.R. § 2.309(f)(1). That part, which I shall refer to as Contention 11A, alleges a violation of the obligation imposed by NEPA and its implementing regulations to consider mitigation in an EIS.⁷⁰ Factually, Contention 11A is premised upon the Task Force recommendations for enhanced accident mitigation capabilities at U.S. reactors. As explained below, those include recommendations 4, 7, and 8. The Task Force stated those recommendations should apply to proposed new reactors currently undergoing COL review, one of which is Calvert Cliffs Unit 3. Contention 11A maintains that the NRC failed to fulfill its NEPA obligation to evaluate accident mitigation measures because the FEIS fails to evaluate those recommendations. Intervenors argue that the FEIS must be supplemented to address those recommendations.

Under its own regulations, the NRC's obligation to evaluate these new recommendations for enhanced accident mitigation does not depend upon whether Intervenors have identified unique characteristics of the site or the proposed new reactor.⁷¹ It is therefore sufficient to state a litigable issue under NEPA and its implementing regulations that the Task Force Report, a team of the agency's own experts, recommends new accident mitigation measures applicable to Calvert Cliffs Unit 3 (as well as other new reactors) that have not been evaluated in the FEIS. Thus, but for the Commission's holding in CLI-12-7, it seems apparent that the agency has a legal obligation under NEPA to take a hard look at the new accident mitigation measures.

Although the Board must follow CLI-12-7 and dismiss Contention 11 in its entirety, I respectfully submit that the Commission should consider whether the narrowed version of Contention 11 that I have designated Contention 11A should be admitted in this proceeding. I recognize that Contention 11 alleges the same

⁶⁹ See *supra* pp. 134-35.

⁷⁰ *Id.*

⁷¹ See 10 C.F.R. § 51.71(d); see also 40 C.F.R. § 1502.14(f).

types of NEPA deficiencies as did the contentions that were at issue in CLI-12-7.⁷² But, in its ruling, the Commission did not directly address the question whether a narrowed version of the contentions might be admissible. It had no need to do so, because the licensing board decision the Commission was reviewing (LBP-11-27) did not consider that question. The Commission did state, however, that “[a]s tangible Fukushima lessons emerge — whether from inside or outside the NRC — Fukushima-related contentions in individual adjudications may become more plausible, except insofar as the NRC is taking generic steps to address them.”⁷³

I believe that it is appropriate for the Commission to revisit that issue now, because there has been a significant new development since the licensing board issued LBP-11-27, in which it held that the contentions based on the Task Force Report were premature. On March 19, 2012, the NRC issued two immediately effective orders imposing requirements derived from Task Force recommendations 4 and 7 on current nuclear power reactor licensees and on holders of construction permits for new reactors (CP holders).⁷⁴ The FEIS, however, says nothing about whether or how those Task Force recommendations, or recommendation 8, will be applied to Calvert Cliffs Unit 3. In my view, the Commission’s March 19, 2012 orders foreclose any further argument that Contention 11A is premature.⁷⁵ I therefore conclude that Contention 11A is now appropriate for adjudication.

Below, I explain my analysis of the admissibility of Contention 11A under 10 C.F.R. § 2.309(f)(1). Initially, I will restate Contention 11A to focus upon the Task Force recommendations for enhanced mitigation that are relevant to Calvert Cliffs Unit 3.⁷⁶ After reviewing the Task Force’s justification for those recommendations, I explain my reasons for concluding that Contention 11A is admissible, and that the contrary result apparently compelled by CLI-12-7 is inconsistent with the obligations that NEPA imposes upon the agency. Finally,

⁷² See Contention 11, at 3 (“Joint Intervenor point out that this contention is substantially similar to contentions and comments that are being filed this week in other pending reactor licensing and re-licensing cases and standardized design certification proceedings.”)

⁷³ *Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 389 (2012).

⁷⁴ Nuclear Regulatory Commission, “In the Matter of All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status: Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Effective Immediately),” 77 Fed. Reg. 16,082 (Mar. 19, 2012); Nuclear Regulatory Commission, “Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Effective Immediately),” 77 Fed. Reg. 16,091 (Mar. 19, 2012).

⁷⁵ See *infra* p. 181.

⁷⁶ Boards may reformulate contentions to “eliminate extraneous issues or to consolidate issues for a more efficient proceeding.” *Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 552 (2009) (quoting *Shaw AREVA MOX Services* (Mixed Oxide Fuel Fabrication Facility), LBP-08-11, 67 NRC 460, 482 (2008) (emphasis omitted)); *Pennsylvania Power & Light Co.* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-79-6, 9 NRC 291, 295-96 (1979).

even under my understanding of NEPA’s requirements, the remaining parts of Contention 11, which I refer to as Contentions 11B, 11C, and 11D, would still be inadmissible. Thus, if the Board’s ruling was not constrained by CLI-12-7, the Board should have admitted Contention 11A but declined to admit the remainder of Contention 11.

I. CONTENTION 11A IS ADMISSIBLE

A. Contention 11A

I have restated Contention 11A to focus solely upon Task Force recommendations 4, 7, and 8, the recommendations referred to in Contention 11 that apply to new pressurized water reactors such as the U.S. EPR proposed for construction as Calvert Cliffs Unit 3.⁷⁷ Contention 11A alleges:

The FEIS fails to evaluate the Task Force’s recommendations to improve the mitigation capability of new U.S. reactors, including strengthening station black out mitigation capability for design basis and beyond-design-basis external events (Recommendation 4); enhancing spent fuel pool makeup capability and instrumentation for the spent fuel pool (Recommendation 7); and strengthening and integrating onsite emergency response capabilities such as emergency operating procedures (EOPs), severe accident management guidelines (SAMGs), and extensive damage mitigation guidelines (EDMGs) (Recommendation 8). The FEIS therefore violates NEPA’s requirement to provide a “‘reasonably complete discussion of possible mitigation measures.’” Accordingly, the FEIS must be supplemented to consider the use of these additional mitigation measures to reduce the project’s environmental impact in the event of design basis or beyond-design-basis external events.

B. The Basis of Contention 11A: Task Force Recommendations 4, 7, and 8

Task Force recommendations 4, 7, and 8 concern enhancing accident mitigation, “[t]he second level of defense-in-depth.”⁷⁸ Those recommendations, among others, are discussed in section 4.2 of the Task Force Report, which begins by explaining:

The Great East Japan Earthquake of 2011 and the ensuing tsunami resulted in many

⁷⁷ Contention 11 also refers to the recommendation to require hardened vent designs in boiling water reactor facilities with Mark I and Mark II containments. Contention 11, at 15. That recommendation is not applicable to the new pressurized water reactor proposed for construction at the Calvert Cliffs site. I have therefore eliminated that recommendation from Contention 11A.

⁷⁸ Task Force Report at 32.

mitigation systems at the Fukushima Dai-ichi Nuclear Power Plant being unable to operate. The subsequent challenges faced by the operators at Fukushima Dai-ichi were beyond any faced previously at a commercial nuclear reactor. The Task Force examined the U.S. regulations, guidance, and practices for mitigating the consequences of accidents similar to those that occurred at Fukushima Dai-ichi. The following sections discuss the Task Force evaluation of insights from Fukushima and provide recommendations for enhancing the mitigation capability of U.S. reactors with regard to prolonged loss of [alternating current] power, . . . spent fuel pool safety, and onsite emergency actions.⁷⁹

1. Recommendation 4: Mitigating Prolonged Loss of Alternating Current Power

The first mitigation enhancement discussed in the Task Force Report is directed at coping with the prolonged loss of alternating current power.

The Report explains that “[a]lternating current [ac] electrical power is critically important to the safety of nuclear power plants. Many of the SSC’s intended to cool the nuclear fuel in the reactor and in the spent fuel pools, to maintain radioactive containment systems, and to provide ventilation systems to minimize release of radioactive materials rely on ac power.”⁸⁰ Therefore, “the loss of all ac power both onsite and offsite, as occurred at Fukushima, is highly significant.”⁸¹ The Task Force noted that “the earthquake at Fukushima Dai-ichi on March 11, 2011, caused a loss of all offsite sources of power to the six units, and the ensuing tsunami caused failure of the emergency diesel generators for Units 1 through 4.”⁸² Because of the damage to the offsite power infrastructure from the earthquake and the damage at the site from the tsunami, Units 1 through 4 were without ac power for “many days.”⁸³

In its recommendation 4, “[t]he Task Force recommends that the NRC strengthen [station blackout] mitigation capability for all operating and new reactors for design-basis and beyond-design-basis external events.”⁸⁴ The Task Force concluded that “revising 10 C.F.R. § 50.63 to expand the coping capability to include cooling the spent fuel, preventing a loss-of-coolant accident, and preventing containment failure would be a significant benefit.”⁸⁵ The Task Force

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Id.* at 32-33.

⁸² *Id.* at 34.

⁸³ *Id.* at 35.

⁸⁴ *Id.* at 37.

⁸⁵ *Id.* at 35.

recommended a three-part revision to require NRC licensees to provide these functions during a prolonged loss of ac power, such as occurred at Fukushima.

- (1) Licensees should be required to establish the coping capability to maintain these functions for at least 8 hours at each unit during a loss of all ac power.⁸⁶
- (2) Licensees should be required to “establish the equipment, procedures, and training necessary to implement an ‘extended loss of all ac’ coping time of 72 hours for core and spent fuel cooling and for reactor coolant system and containment integrity as needed.”⁸⁷
- (3) Licensees should be required to “preplan and prestage offsite resources to support uninterrupted core and spent fuel pool cooling, and reactor coolant system and containment integrity as needed, including the ability to deliver the equipment to the site in the time period allowed for extended coping, under conditions involving significant degradation of offsite transportation infrastructure associated with significant natural disasters.”⁸⁸

2. *Recommendation 7: Enhancing Spent Fuel Pool Safety*

In recommendation 7, “[t]he Task Force recommends enhancing spent fuel pool makeup capability and instrumentation for the spent fuel pool.”⁸⁹

The Report explains that, during the protracted station blackout condition at Fukushima reactors 1-4, no ac power was available to operate equipment, and the plant’s batteries were depleted.

This resulted in having no onsite capability to provide water inventory or cooling to the spent fuel pools, and the operators were significantly challenged in understanding the condition of the spent fuel pools because of the lack of instrumentation or because of instrumentation that was not functioning properly. Eventually, spent fuel cooling was provided by pumper trucks employing high booms to spray water from a distance into the spent fuel pools.⁹⁰

The Task Force concluded that

Substantial additional defense-in-depth would be provided, and cooling the spent fuel in a prolonged SBO would have been substantially simplified, with an installed seismically qualified means to spray water into the spent fuel pools, including an

⁸⁶ *Id.* at 38.

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.* at 46.

⁹⁰ *Id.* at 45.

easily accessible connection to supply the water (e.g., using a portable pump or pumper truck) at grade outside the building.⁹¹

The Task Force also determined that “[t]he lack of information on the conditions of the fuel in the Fukushima spent fuel pools was a significant problem,” and that “reliable information on the conditions in the spent fuel pool is essential to any effective response to a prolonged SBO or other similarly challenging accident.”⁹²

The current fleet of U.S. reactors lacks the level of defense-in-depth that the Task Force considered essential.⁹³ To close this regulatory gap, the Task Force recommended that the Commission direct the NRC Staff to take the following actions:

- (1) Order licensees to provide sufficient safety-related instrumentation, able to withstand design basis natural phenomena, to monitor key spent fuel pool parameters (i.e., water level, temperature, and area radiation levels) from the control room.
- (2) Order licensees to provide safety-related ac electrical power for the spent fuel pool makeup system.
- (3) Order licensees to revise their technical specifications to address requirements to have one train of onsite emergency electrical power operable for spent fuel pool makeup and spent fuel pool instrumentation when there is irradiated fuel in the spent fuel pool, regardless of the operational mode of the reactor.
- (4) Order licensees to have an installed seismically qualified means to spray water into the spent fuel pools, including an easily accessible connection to supply the water (e.g., using a portable pump or pumper truck) at grade outside the building.
- (5) Initiate rulemaking or licensing activities, or both, to require the actions related to the spent fuel pool described in detailed recommendations 7.1-7.4.⁹⁴

3. *Recommendation 8: Strengthening and Integrating Onsite Emergency Response Capabilities*

Task Force recommendation 8 calls for strengthening and integrating the

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.* at 44.

⁹⁴ *Id.* at 46.

NRC's requirements for onsite emergency action programs at nuclear power plants.

At U.S. reactors, a number of guidelines and procedures guide the actions of reactor operators during an emergency. Design basis events such as the loss of offsite power are typically addressed by abnormal operating procedures, alarm response procedures, and emergency operating procedures (EOPs). "These procedures instruct the plant operators on the steps necessary to take the plant from full-power operation to a safe shutdown condition."⁹⁵ EOPs have long been part of the NRC's safety requirements.⁹⁶

An SBO is a beyond-design-basis event, however, and therefore the regulations requiring EOPs do not apply. "In the case of an SBO, the operators would follow a set of procedures . . . required by 10 C.F.R. § 50.63(c)(ii) and (iii). These procedures would instruct the operators in maintaining safety functions using the alternate ac power source or through coping strategies."⁹⁷

In addition, the U.S. nuclear industry has developed severe accident management guidelines (SAMGs). The SAMGs "are meant to enhance the ability of operators to manage accident sequences that progress beyond the point where EOPs and other plant procedures are applicable and useful."⁹⁸ Because the SAMGs are voluntary and targeted to technical support staff, however, "the formal training and licensing of plant operators does not address them."⁹⁹

Extensive damage mitigation guidelines (EDMGs) are also intended to guide onsite emergency actions. They include "guidance and strategies intended to maintain or restore core cooling and containment and spent fuel pool cooling capabilities under the circumstances associated with the loss of large areas of the plant due to fire or explosion."¹⁰⁰ The guidelines and strategies are required by an NRC regulation, 10 C.F.R. § 50.54(hh), issued in response to the terrorist events of September 11, 2001.¹⁰¹

Thus, as the Task Force Report observed, each of the onsite emergency action programs (the abnormal operating procedures, EOPs, SAMGs, and EDMGs) "was developed at a different time to serve a different purpose, and each of these programs is treated differently in the NRC's regulations, inspection program, and licensing process, as well as in the licensee programs and organizations."¹⁰² The Task Force concluded that "the overall effectiveness of those programs could

⁹⁵ *Id.*

⁹⁶ *Id.*

⁹⁷ *Id.* at 47.

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.* at 48.

be substantially enhanced through further integration, including clarification of transition points, command and control, decisionmaking, and through rigorous training that includes conditions that are as close to real accident conditions as feasible.”¹⁰³ The Report further states that “[s]ince the current requirements in this area apply only to normal operation and emergencies within the plant’s design basis, they appear outdated and inconsistent with Commission decisions in policy statements and rulemakings to regulate accident mitigation in other areas beyond the plant’s design basis.”¹⁰⁴ The Task Force concluded “that an expansion of the regulatory requirements to include procedures for beyond-design-basis events is warranted.”¹⁰⁵

4. The Task Force’s Implementation Strategy for Applying Recommendations 4, 7, and 8 to New Reactors

Intervenors correctly point out that “[t]he Task Force urge[d] that some of its recommendations be considered before certain licensing decisions are made.”¹⁰⁶ Intervenors particularly emphasize that the Task Force intended that recommendations 4 and 7 be evaluated before licensing if the recommended requirements are not addressed in the referenced certified design.¹⁰⁷

As to recommendations 4 and 7, the Task Force explained:

Recommendation 4, with new requirements for prolonged SBO mitigation, and Recommendation 7, about spent fuel pool makeup capability and instrumentation, should apply to all design certifications or to COL applicants if the recommended requirements are not addressed in the referenced certified design. The Task Force recommends that design certifications and COLs under active staff review address this recommendation *before licensing*.¹⁰⁸

The Task Force reached a similar conclusion concerning recommendation 8:

Recommendation 8 for the integration of EOPs, SAMGs, and EDMGs and for controlling accident decisionmaking under technical specifications would be applicable to COLs. For near-term COLs (i.e., those expected to be licensed before the NRC completes the proposed rulemakings), the Task Force recommends that the agency

¹⁰³ *Id.* at 48-49.

¹⁰⁴ *Id.* at 49.

¹⁰⁵ *Id.*

¹⁰⁶ Contention 11, at 16.

¹⁰⁷ *Id.*

¹⁰⁸ Task Force Report at 71 (emphasis added).

impose those requirements through inspections, tests, analyses, and acceptance criteria (ITAAC).¹⁰⁹

The Task Force recommended that the requirements of recommendation 8 be imposed through ITAAC because “this would be one of those areas in which it is not practical to resolve the issue before COL issuance, in that the integration of EOPs, SAMGs, and EDMGs could require a few years of effort by licensees, the industry, and the NRC staff.”¹¹⁰ The Task Force noted, however, that the strategy of imposing the requirements through ITAAC “would ensure implementation and NRC oversight *before plant operation*.”¹¹¹

The NRC generally reviews severe accident mitigation alternatives (SAMAs) using a cost-benefit analysis; SAMAs that are not cost-beneficial need not be implemented by the licensee.¹¹² But the Task Force took the position that recommendations 4, 7, and 8 should be mandatory without regard to such a test. The Task Force concluded that applying those recommendations to both new and existing reactors is necessary to provide defense-in-depth, and thus to fulfill the NRC’s statutory responsibility to ensure adequate protection of public health and safety. Explaining the purpose of its recommendations, the Task Force stated that, just as the Commission established new security requirements on the basis of adequate protection after the September 11, 2001 attacks, “the Fukushima Dai-ichi accident similarly provides new insights regarding low-likelihood, high-consequence events that warrant enhancements to defense-in-depth on the basis of redefining the level of protection that is regarded as adequate.”¹¹³ Each of the Task Force’s recommendations, including those that are the subject of Contention 11A, are a part of that effort to redefine the level of protection that is regarded as adequate. For example, concerning recommendation 4, the Task Force stated that “[t]hese recommendations for revision to 10 C.F.R. § 50.63 would provide additional safety margins for a prolonged SBO as a part of the overall risk-informed, defense-in-depth regulatory framework providing adequate protection of public health and safety.”¹¹⁴ Similarly, with respect to recommendation 7, the Task Force concluded that “clear and coherent requirements to ensure that the plant staff can understand the condition of the spent fuel pool and its water inventory and coolability and to provide reliable, diverse, and simple means to cool the spent fuel pool under various circumstances are essential to maintaining

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ *Id.* (emphasis added).

¹¹² See *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 2 (2002).

¹¹³ Task Force Report at viii.

¹¹⁴ *Id.* at 37.

defense-in-depth.”¹¹⁵ As to recommendation 8, the Task force stated that “[t]he NRC could strengthen the current system substantially by requiring more formal, rigorous, and frequent training of reactor operators and other onsite emergency response staff on realistic accident scenarios with realistic conditions.”¹¹⁶

Thus, the Task Force intended that recommendations 4, 7, and 8 be applied to U.S. reactors on the basis of the NRC’s statutory obligation to provide adequate protection of public health and safety, making cost-benefit analysis unnecessary.

5. The Commission’s Orders Implementing Recommendations 4 and 7 for Licensed Reactors

On March 19, 2012, the NRC issued two immediately effective orders imposing requirements derived from Task Force recommendations 4 and 7 on current nuclear power reactor licensees and on CP holders.¹¹⁷ The orders thus apply to the existing power reactors at the Calvert Cliffs Site (Units 1 and 2), as well as to all other currently licensed power reactors, but not to Unit 3 because the COL for that proposed new reactor has not yet been issued.

Both orders were intended to ensure attainment of “fundamental NRC regulatory objectives”: reasonable assurance of adequate protection of public health and safety and assurance of the common defense and security.¹¹⁸ The Commission noted that

[w]hile compliance with NRC requirements presumptively ensures adequate protection, new information may reveal that additional requirements are warranted. In such situations, the Commission may act in accordance with its statutory authority under Section 161 of the Atomic Energy Act of 1954, as amended, to require Licensees and CP holders to take action in order to protect health and safety and common defense and security.¹¹⁹

In both orders, the Commission concluded on the basis of the Task Force Report that new requirements should be imposed on all licensed U.S. reactors to ensure that those “fundamental NRC regulatory objectives” are met. The first

¹¹⁵ *Id.* at 45.

¹¹⁶ *Id.* at 49.

¹¹⁷ Nuclear Regulatory Commission, “In the Matter of All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status: Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Effective Immediately),” 77 Fed. Reg. 16,082 (Mar. 19, 2012); Nuclear Regulatory Commission, “Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Effective Immediately),” 77 Fed. Reg. 16,091 (Mar. 19, 2012).

¹¹⁸ *Id.* at 16,083; *id.* at 16,092.

¹¹⁹ *Id.* at 16,083; *id.* at 16,092.

order, which requires immediate implementation of measures to ensure reliable spent fuel instrumentation, explains that “Fukushima demonstrated the confusion and misapplication of resources that can result from beyond-design-basis external events when adequate instrumentation is not available.”¹²⁰ It observed that “[t]he spent fuel pool level instrumentation at U.S. nuclear power plants is typically narrow range and, therefore, only capable of monitoring normal and slightly off-normal conditions.”¹²¹ The Order states that the likelihood of a catastrophic event affecting nuclear power plants and the associated spent fuel pools in the United States remains very low, but it also acknowledges that “beyond-design-basis external events could challenge the ability of existing instrumentation to provide emergency responders with reliable information on the condition of spent fuel pools. Reliable and available indication is essential to ensure plant personnel can effectively prioritize emergency actions.”¹²² The Commission therefore concluded that “the spent fuel pool instrumentation required by this Order represents a significant enhancement to the protection of public health and safety and is an appropriate response to the insights from the Fukushima Dai-ichi accident.”¹²³ The Commission also decided that the new requirements should be imposed as an administrative exception to the agency’s Backfit Rule, which otherwise would have required a balancing of the public health and safety benefits of the new requirements against their costs.¹²⁴ The Commission described this as a “highly exceptional action limited to the insights associated with the extraordinary underlying circumstances of the Fukushima Dai-ichi accident and the NRC’s lessons learned.” The Commission further determined that “immediate action to commence implementation of the spent fuel monitoring requirements is warranted at this time.”¹²⁵

Similarly, in its Order requiring immediate implementation of mitigation strategies for beyond-design-basis external events, the Commission stated that “[t]he events at Fukushima . . . highlight the possibility that extreme natural phenomena could challenge the prevention, mitigation, and emergency preparedness

¹²⁰ *Id.* at 16,084.

¹²¹ *Id.*

¹²² *Id.*

¹²³ *Id.*

¹²⁴ *Id.* at 16,083. In general, the “Backfit Rule” allows the NRC to impose new requirements defined as “backfitting” on previously licensed power reactors only if the agency finds “that there is a substantial increase in the overall protection of the public health and safety or the common defense and security to be derived from the backfit and that the direct and indirect costs of implementation for that facility are justified in view of this increased protection.” 10 C.F.R. § 50.109(a)(3). Section 50.109(a)(4) provides several exceptions to the Rule. The Commission, however, chose to rely on an administrative exception rather than any of the exceptions listed in section 50.109(a)(4).

¹²⁵ 77 Fed. Reg. at 16,084.

defense-in-depth layers.”¹²⁶ To address “the uncertainties associated with beyond-design-basis external events,” the Commission decided to require “additional defense-in-depth measures at licensed nuclear power reactors so that the NRC can continue to have reasonable assurance of adequate protection of public health and safety in mitigating the consequences of a beyond-design-basis external event.”¹²⁷ The Commission determined that

ensuring adequate protection of public health and safety requires that power reactor Licensees and CP holders develop, implement and maintain guidance and strategies to restore or maintain core cooling, containment, and SFP cooling capabilities in the event of a beyond-design-basis external event. These new requirements provide a greater mitigation capability consistent with the overall defense-in-depth philosophy, and, therefore, greater assurance that the challenges posed by beyond-design-basis external events to power reactors do not pose an undue risk to public health and safety.¹²⁸

As with the first order, the Commission concluded that “the public health, safety and interest require that this Order be made immediately effective.”¹²⁹ In addition, the Commission relied on the exception to the Backfit Rule that applies when “regulatory action is necessary to ensure that the facility provides adequate protection to the health and safety of the public and is in accord with the common defense and security.”¹³⁰ Because the Commission concluded that the new measures satisfied that test, it did not need to conduct the balancing of public health and safety benefits against costs that otherwise would be required by the Backfit Rule.¹³¹

C. Contention 11A Is Admissible Under 10 C.F.R. § 2.309(f)(1)

As the Board correctly determined, Contention 11 was timely filed. Contention 11A, which is a part of Contention 11, is therefore also timely. That leaves the question whether Contention 11A satisfies the admissibility criteria of 10 C.F.R. § 2.309(f)(1). In the absence of the Commission’s decision in CLI-12-7, I would conclude that it does.

¹²⁶ *Id.* at 16,092.

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ 10 C.F.R. § 50.109(a)(4)(ii).

¹³¹ 77 Fed. Reg. at 16,092.

1. Legal Standard

Under section 2.309(f)(1), an admissible contention must: (i) provide a specific statement of the legal or factual issue sought to be raised; (ii) provide a brief explanation of the basis for the contention; (iii) demonstrate that the issue raised is within the scope of the proceeding; (iv) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding; (v) provide a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at the hearing; and (vi) provide sufficient information to show that a genuine dispute exists in regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or, in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief.¹³²

2. Contention 11A Is Admissible

a. Contention 11A Contains a Sufficient Statement of the Issue

Contention 11A provides a specific statement of the issue sought to be raised: the NRC has violated its obligations under NEPA and 10 C.F.R. Part 51 by failing to evaluate Task recommendations 4, 7, and 8 in the FEIS, and the FEIS must be supplemented to remedy that deficiency.

b. Contention 11A Contains a Brief Explanation of the Basis for the Contention

Intervenors have also satisfied the requirement to provide a brief explanation of the basis for the new contention.”¹³³

Intervenors rely on the NRC's obligation under NEPA and Part 51 to evaluate accident mitigation measures in the FEIS. Intervenors emphasize that under NEPA this issue cannot be deferred until after this licensing proceeding.¹³⁴ Intervenors have identified three specific task force recommendations that they contend would improve the mitigation capability of Calvert Cliffs Unit 3 and must accordingly be evaluated in the FEIS. The Task Force Report was issued after the FEIS, but Intervenors emphasize that NEPA imposes a nondiscretionary duty on the NRC to amend an EIS if new and significant information, such as the new recommen-

¹³² See 10 C.F.R. § 2.309(f)(1).

¹³³ 10 C.F.R. § 2.309(f)(1)(ii).

¹³⁴ Contention 11, at 3.

ditions for improved mitigation in the Task Force Report, comes to light.¹³⁵ This is true, they assert, even if the new and significant information first becomes available after the proposed EIS has received approval.¹³⁶ Intervenor stress that, in addition to NEPA, NRC's own regulations "require supplementation of an EIS where '[t]here are new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.'"¹³⁷ Furthermore, Intervenor argue that the admission of this contention is the only way that "the environmental implications of the Task Force recommendations [will be] taken into account in the licensing decision for Calvert Cliffs-3."¹³⁸

In sum, the basis for proposed Contention 11A is that Task Force recommendations 4, 7, and 8 constitute new and significant information relevant to environmental concerns and bearing on the licensing of Calvert Cliffs Unit 3 or its impacts, and that the FEIS must therefore be supplemented to evaluate those potential accident mitigation measures. Intervenor have thus adequately described the basis of the new contention.

c. Contention 11A Is Within the Scope of the Proceeding

Contention 11A is within the scope of this proceeding, as required by section 2.309(f)(1)(iii).

The scope of the proceeding is defined by the Commission in its initial hearing notice and order referring the proceeding to the Licensing Board.¹³⁹ Any contention that falls outside the specified scope of the proceeding is inadmissible.¹⁴⁰ The Notice of Hearing and Opportunity to Petition for Leave to Intervene for this proceeding explained that the Licensing Board would consider the Application under Part 52 for a COL for Calvert Cliffs Unit 3.¹⁴¹ Contention 11A challenges the adequacy of the NEPA analysis that the NRC must complete in order to issue the COL. Because Contention 11A challenges the legal sufficiency of the FEIS for the COL, it is within the scope of the proceeding.¹⁴²

¹³⁵ *Id.* at 4 (citing *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1049 (1983)).

¹³⁶ *Id.* at 10.

¹³⁷ *Id.* (citing 10 C.F.R. § 51.92(a)(2)).

¹³⁸ *Id.*

¹³⁹ *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985).

¹⁴⁰ See *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6 (1979).

¹⁴¹ 73 Fed. Reg. 55,876 (Sept. 26, 2008).

¹⁴² See 10 C.F.R. § 2.309(f)(1)(iii); see also *Pa'ina Hawaii, LLC*, LBP-06-12, 63 NRC 403, 414 (2006).

The Staff correctly states that “[t]o the extent the Proposed Contention is intended to challenge existing NRC safety regulations, it is barred from consideration in adjudicatory proceedings by 10 C.F.R. § 2.335(a).”¹⁴³ The Staff does not specifically argue, however, that the aspect of Contention 11 that I have identified as Contention 11A is a direct challenge to any NRC regulation. On the contrary, Contention 11A, far from seeking to invalidate or compel a change in any agency regulation, seeks to *enforce* the agency’s NEPA regulation directing that the FEIS must evaluate available accident mitigation alternatives. The contention thus challenges the FEIS, not an NRC regulation.

Assuming that Contention 11A were to succeed on the merits, the agency might have to supplement the FEIS to consider those three recommendations for improved mitigation. The Commission would remain free, however, to reject or accept the recommendations. This is because NEPA does not require agencies to “elevate environmental concerns over other appropriate considerations.”¹⁴⁴ “[I]t is now well settled that NEPA itself does not mandate particular results, but simply prescribes the necessary process If the adverse environmental impacts of the proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs.”¹⁴⁵ Thus, once an agency has complied with NEPA’s procedural obligations, it is free to follow any policy within the bounds of its statutory authority. Contention 11A therefore neither challenges any agency regulation nor seeks to require the NRC to take any action beyond the requirements of its present regulations.

Because Contention 11A is a procedural challenge to the FEIS, rather than a direct attack upon any agency regulation, it is within the scope of the proceeding.

d. Contention 11A Is Material to the Licensing Decision

To satisfy section 2.309(f)(1)(iv), the petitioner must demonstrate that a contention asserts an issue of law or fact that is “material to the findings the NRC must make to support the action that is involved in the proceeding.”¹⁴⁶ That is, the subject matter of the contention must impact the grant or denial of a pending license application.¹⁴⁷

¹⁴³ NRC Staff Answer to Joint Intervenor’s Motion to Admit New Contention Regarding the Safety and Environmental Implications of the NRC Task Force Report on the Fukushima Dai-ichi Accident (Sept. 6, 2011) at 8 [hereinafter Staff Response].

¹⁴⁴ *Strycker’s Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223, 227 (1980).

¹⁴⁵ See *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989) (citations omitted).

¹⁴⁶ 10 C.F.R. § 2.309(f)(1)(iv).

¹⁴⁷ *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 179-80 (1998), *aff’d as to other matters*, CLI-98-13, 48 NRC 26 (1998).

Contention 11A satisfies the materiality requirement by alleging that the FEIS violates NEPA. “The centerpiece of environmental regulation in the United States, NEPA requires federal agencies to pause before committing resources to a project and consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives.”¹⁴⁸ When, as in this case, an agency proposes a “major Federal action[] significantly affecting the quality of the human environment,” NEPA requires the preparation of an EIS concerning the proposed action.¹⁴⁹ The requirement to prepare an EIS is a procedural mechanism designed to assure that agencies give proper consideration to the environmental consequences of their actions.¹⁵⁰ Although NEPA’s requirements are procedural, the NRC, like other federal agencies, is held to a “strict standard of compliance” with the Act’s requirements.¹⁵¹

Contention 11A alleges that the FEIS violates two NEPA requirements. The first is that an EIS must include a “reasonably complete discussion of possible mitigation measures.”¹⁵² “[M]itigation [must] be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated.”¹⁵³ In addition, Contention 11A alleges that the FEIS must be supplemented because NEPA imposes on agencies a continuing obligation to gather and evaluate new information relevant to the environmental impact of its actions.¹⁵⁴

(i) THE FEIS MUST PROVIDE A REASONABLY COMPLETE DISCUSSION OF SEVERE ACCIDENT MITIGATION MEASURES

“Although NEPA does not mention mitigation, by administrative practice and regulation mitigation . . . plays an important role in the discharge by federal

¹⁴⁸ *New Mexico ex rel. Richardson v. Bureau of Land Management*, 565 F.3d 683, 703 (10th Cir. 2009) (citing 42 U.S.C. § 4331(b) (congressional declaration of national environmental policy); *U.S. Department of Transportation v. Public Citizen*, 541 U.S. 752, 756-57 (2004); *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989); *Forest Guardians v. U.S. Forest Service*, 495 F.3d 1162, 1172 (10th Cir. 2007)).

¹⁴⁹ 42 U.S.C. § 4332.

¹⁵⁰ See *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 558 (1978).

¹⁵¹ *Calvert Cliffs Coordinating Committee, Inc. v. AEC*, 449 F.2d 1109, 1112 (D.C. Cir. 1971).

¹⁵² Contention 11, at 15 (quoting *Robertson*, 490 U.S. at 352); see also *Mississippi River Basin Alliance v. Westphal*, 230 F.3d 170, 177 (5th Cir. 2000) (An EIS must include “a serious and thorough evaluation of environmental mitigation options.”).

¹⁵³ *Miss. River Basin Alliance v. Westphal*, 230 F.3d at 176-77 (quoting *Robertson*, 490 U.S. at 352).

¹⁵⁴ See Contention 11, at 9-10, 15 (citing *Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017, 1023-24 (9th Cir. 1980); *Essex County Preservation Association v. Campbell*, 536 F.2d 956, 960-61 (1st Cir. 1976); *Society for Animal Rights, Inc. v. Schlesinger*, 512 F.2d 915, 917-18 (D.C. Cir. 1975)).

agencies of their procedural duty under NEPA to prepare an EIS.”¹⁵⁵ NEPA does not mandate implementation of a mitigation plan, but the Supreme Court has interpreted the statute, as well as the regulations issued by Council on Environmental Quality (CEQ), to require that an EIS include

discussion of steps that can be taken to mitigate adverse environmental consequences. The requirement that an EIS contain a detailed discussion of possible mitigation measures flows both from the language of the Act and, more expressly, from CEQ’s implementing regulations. Implicit in NEPA’s demand that an agency prepare a detailed statement on “any adverse environmental effects which cannot be avoided should the proposal be implemented,” 42 U.S.C. § 4332(C)(ii), is an understanding that the EIS will discuss the extent to which adverse effects can be avoided. . . . More generally, omission of a reasonably complete discussion of possible mitigation measures would undermine the “action-forcing” function of NEPA. . . . Recognizing the importance of such a discussion in guaranteeing that the agency has taken a “hard look” at the environmental consequences of proposed federal action, CEQ regulations require that the agency discuss possible mitigation measures in defining the scope of the EIS, 40 CFR § 1508.25(b) (1987), in discussing alternatives to the proposed action, § 1502.14(f), and consequences of that action, § 1502.16(h), and in explaining its ultimate decision, § 1505.2(c).¹⁵⁶

The NRC’s NEPA regulations impose the same requirement. The draft EIS must “include a preliminary analysis that considers and weighs . . . alternatives available for reducing or avoiding adverse environmental effects”¹⁵⁷ And the NRC’s regulation governing preparation of an FEIS directs that the NRC Staff “prepare a final environmental impact statement in accordance with the requirements of . . . [10 C.F.R. § 51.71] for a draft environmental impact statement.”¹⁵⁸

The proposed action’s effect on public health and safety is an environmental issue that must be evaluated under NEPA. Adverse environmental effects under NEPA include the impact of the proposed action on public health and safety.

Although NEPA is primarily concerned about the environment, the regulations state that, in determining whether a federal action would “significantly” affect the environment, the agency should consider “[t]he degree to which the proposed action

¹⁵⁵ Thomas J. Schoenbaum and Richard B. Stewart, *The Role of Mitigation and Conservation Measures in Achieving Compliance with Environmental Regulatory Statutes: Lessons from Section 316 of the Clean Water Act*, 8 N.Y.U. Env’tl. L.J. 237, 276 (2000).

¹⁵⁶ *Robertson*, 490 U.S. at 352 (footnotes omitted).

¹⁵⁷ 10 C.F.R. § 51.71(d) (emphasis added).

¹⁵⁸ 10 C.F.R. § 51.90.

affects public health and safety.” 40 C.F.R. § 1508.27. The agency is therefore responsible for taking a “hard look” at the project’s effect on safety.¹⁵⁹

Thus, the NRC’s obligation to evaluate mitigation in an EIS for a new nuclear reactor license includes evaluating measures to mitigate the impact of severe accidents on public health and safety.¹⁶⁰

In a COL proceeding such as this, the Commission may require implementation of mitigation measures it deems necessary and appropriate by imposing conditions in the license.¹⁶¹ In addition, the NRC’s record of decision for the license must “[s]tate whether the Commission has taken all practicable measures within its jurisdiction to avoid or minimize environmental harm from the alternative selected, and if not, to explain why those measures were not adopted.”¹⁶² The record of decision must also “[s]ummarize any license conditions and monitoring programs adopted in connection with mitigation measures.”¹⁶³ It is therefore essential that the FEIS provide the Commission with a thorough evaluation of environmental mitigation options.

(ii) THE NRC MUST TAKE A HARD LOOK AT POTENTIALLY SIGNIFICANT
NEW INFORMATION

Because the Task Force Report was published after the FEIS for Calvert Cliffs Unit 3 was issued, Intervenor’s allege that the NRC Staff must supplement the FEIS to evaluate recommendations 4, 7, and 8. According to Intervenor’s, the recommendations, and the gaps in the agency’s regulations on which they are based, constitute significant new information relevant to the environmental consequences of the proposed action that must be evaluated in a supplement to the FEIS.

As the Supreme Court explained in *Marsh v. Oregon Natural Resources Council*, 490 U.S. at 370, “[t]he subject of postdecision supplemental environmental impact statements is not expressly addressed in NEPA.” The CEQ regulations implementing NEPA, however, require the preparation of a supplement to a draft or final EIS if, *inter alia*, “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts” arise.¹⁶⁴ Thus, if after the preparation of the EIS, the agency is presented with new

¹⁵⁹ *City of Las Vegas v. Federal Aviation Administration*, 570 F.3d 1109, 1115 (9th Cir. 2009) (citing *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 772, 775 (1983)).

¹⁶⁰ *Limerick Ecology Action v. NRC*, 869 F.2d 719, 739-41 (3d Cir. 1989); *see also Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 167 (2011).

¹⁶¹ *See* 10 C.F.R. §§ 51.107(a)(3), 52.97(c).

¹⁶² *Id.* § 51.103(a)(4).

¹⁶³ *Id.*

¹⁶⁴ *See* 40 C.F.R. § 1502.9(c)(1)(ii).

information or changed circumstances and “there remains ‘major federal action’ to occur, and if the new information is sufficient to show that the remaining action will ‘affect the quality of the human environment’ in a significant manner or to a significant extent not already considered, a supplemental EIS must be prepared.”¹⁶⁵ However, “an agency need not supplement an EIS every time new information comes to light after the EIS is finalized. To require otherwise would render agency decision making intractable.”¹⁶⁶

On this issue, like the duty to consider mitigation in an EIS, the NRC’s NEPA regulations parallel those of the CEQ. The Commission explained in its ruling denying the Emergency Petition that “[i]f . . . new and significant information comes to light that requires consideration as part of the ongoing preparation of application-specific NEPA documents, the agency will assess the significance of that information, as appropriate.”¹⁶⁷ The NRC’s regulations direct the Staff to prepare supplemental environmental review documents when:

(1) There are substantial changes in the proposed action that are relevant to environmental concerns; or

(2) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.¹⁶⁸

The Commission stated that “[t]o merit this additional review, information must be both ‘new’ and ‘significant,’ and it must bear on the proposed action or its impacts. As we have explained, ‘[t]he new information must present “a seriously different picture of the environmental impact of the proposed project from what was previously envisioned.”’”¹⁶⁹

Contention 11A thus alleges that the FEIS violates two NEPA requirements. If Intervenor prevail on those allegations, the license cannot be lawfully issued until the violation is corrected. Contention 11A is therefore material to the licensing decision.

e. Contention 11A Includes a Concise Statement of the Alleged Facts or Expert Opinions That Support the Contention

Section 2.309(f)(1)(v) requires the Intervenor to provide a concise statement

¹⁶⁵ *Marsh*, 490 U.S. at 374.

¹⁶⁶ *Id.* at 373 (footnote omitted).

¹⁶⁷ CLI-11-5, 74 NRC at 167.

¹⁶⁸ 10 C.F.R. § 51.92(a).

¹⁶⁹ CLI-11-5, 74 NRC at 167-68 (quoting *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 14 (1999)).

of the facts or expert opinions that support their position and upon which they intend to rely at the hearing.

To satisfy this requirement, Intervenor states that they “rely on facts and opinions of the Task Force members as set forth in their Task Force Report and as summarized [in Section B of Contention 11]. The high level of technical qualifications of the Task Force members has been recognized by the Commission.”¹⁷⁰ Thus, the expert opinions on which the Intervenor relies are those of the NRC experts who prepared the Task Force Report. An agency violates NEPA when its EIS fails to adequately respond to the critical opinions of its own experts.¹⁷¹ Thus, Intervenor may properly rely upon the opinions expressed in the Task Force Report as the basis of their proposed new contention. And Intervenor has provided the required “concise statement” of the expert opinions that support their position and upon which they intend to rely by summarizing recommendations 4, 7, and 8, and citing the sections of the Task Force Report in which those recommendations appear.¹⁷²

Intervenor has thus satisfied section 2.309(f)(1)(v).

f. Contention 11A Provides Sufficient Information to Show That a Genuine Dispute Exists in Regard to Material Issues of Law or Fact

The final admissibility criterion requires that Contention 11A reflect a genuine dispute with the FEIS on a material issue of law or fact.¹⁷³

To satisfy section 2.309(f)(1)(vi), Intervenor need not prove their case on the merits. They need only allege some facts or expert opinion that support their position and demonstrate a genuine dispute with the license application (or, in this instance, with the sufficiency of the FEIS). Explaining the level of support necessary for an admissible contention, the Commission observed:

Although [the contention admissibility rule] 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. . . . Nor does [the rule] 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,” [sic] sufficient “to withstand a summary disposition motion.” . . . On the other hand, a petitioner “must present

¹⁷⁰ Contention 11, at 18 (quoting May 12, 2011 Commission briefing transcript at 5).

¹⁷¹ See *Western Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 492-93 (9th Cir. 2011).

¹⁷² Contention 11, at 15. The Task Force Report sections cited by Intervenor describe in detail the basis of recommendations 4, 7, and 8. Those sections of the Task Force Report are summarized *supra* pp. 146-55.

¹⁷³ 10 C.F.R. § 2.309(f)(1)(vi).

sufficient information to show a genuine dispute” and reasonably “indicating that a further inquiry is appropriate.”¹⁷⁴

Intervenors, by citing and relying on the Task Force Report, have presented sufficient information to show a genuine dispute and that “a further inquiry is appropriate.”¹⁷⁵

- (i) CONTENTION 11A PROVIDES SUFFICIENT INFORMATION TO SHOW A
GENUINE DISPUTE WHETHER THE FEIS ADEQUATELY CONSIDERS
SEVERE ACCIDENT MITIGATION MEASURES

A licensing board must admit an adequately supported contention alleging that the agency’s NEPA analysis of severe accident mitigation alternatives is deficient.¹⁷⁶ Contention 11A alleges such a deficiency. It maintains that the FEIS’s evaluation of accident mitigation alternatives fails to comply with NEPA and Part 51 because it fails to evaluate Task Force recommendations 4, 7, and 8. The Task Force Report, which constitutes the expert opinion supporting Contention 11A, contains sufficient information to demonstrate a genuine dispute with the sufficiency of the FEIS. By identifying new accident mitigation measures that are not evaluated in the FEIS, recommending that those measures be considered in pending COL reviews, and explaining why those measures are necessary for the protection of public health and safety, the Task Force Report provides sufficient support for Intervenors’ argument that the FEIS fails to include a sufficient “discussion of steps that can be taken to mitigate adverse environmental consequences.”¹⁷⁷

Of course, although “it will always be possible to come up with some type of mitigation alternative that has not been addressed by the [FEIS],” every conceivable mitigation alternative does not require a detailed analysis.¹⁷⁸ But the Task Force’s recommendations are significant because they come from the agency’s own experts, following their detailed evaluation of one of the worst accidents in the history of the nuclear power industry. The agency’s NEPA documents must address significant concerns raised by its own experts that are

¹⁷⁴ *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 249 (1996) (citations omitted) (quoting *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 118 (1995) (quotation errors in original); see also *Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 51 (1994).

¹⁷⁵ *Yankee Nuclear Power Station*, CLI-96-7, 43 NRC at 249.

¹⁷⁶ See *McGuire Nuclear Station*, CLI-02-17, 56 NRC at 9-10.

¹⁷⁷ *Robertson*, 490 U.S. at 352 (footnotes omitted).

¹⁷⁸ *McGuire Nuclear Station*, CLI-02-17, 56 NRC at 11.

relevant to the proposed action.¹⁷⁹ Contention 11A alleges that the NRC has failed to comply with that obligation by failing to evaluate the Task Force's recommendations for enhancing accident mitigation capabilities at U.S. reactors. Contention 11A does not insist that the FEIS evaluate every conceivable mitigation alternative; it contends only that the NRC must fulfill its obligation under NEPA to take a hard look at mitigation alternatives recommended by its own experts.¹⁸⁰

To be sure, the Intervenor has not yet proven that all of the Task Force's recommendations are necessary and appropriate for Unit 3. It is possible, for example, that the substance of recommendations 4 and 7 will be addressed in the certified design rulemaking for the EPR. The Task Force Report acknowledged this possibility.¹⁸¹ But this does not preclude admission of the contention. The petitioner or intervenor need not prove that the analysis of mitigation is deficient; it is sufficient if the board finds "that a sufficient genuine dispute existed" concerning the alleged deficiency.¹⁸² In *McGuire Nuclear Station*, the Commission affirmed the licensing board's decision admitting a contention challenging the adequacy of the licensee's severe accident mitigation alternatives (SAMA) analysis based on a report from Sandia National Laboratories. The Commission stated that "[w]hile the contention might have been more detailed or otherwise better supported, the Petitioners have done enough to raise a question about the adequacy of the probability figures used in Duke's SAMA analysis, namely, whether they should have incorporated or otherwise acknowledged information from the Sandia study."¹⁸³ Although Duke contended that its own data were most appropriate for the SAMA analysis, and the Board acknowledged that Duke might be correct, the Commission agreed that "[w]hether the SAMA analysis in fact should have addressed the study was a question for the merits."¹⁸⁴

In this case, Intervenor has done enough to justify admitting their contention by citing mitigation alternatives that the Task Force concluded should be considered in pending COL reviews. By citing relevant portions of the Task Force Report, Intervenor has made a "showing sufficient to require reasonable minds to inquire further," which is all that our case law requires of them for a NEPA

¹⁷⁹ *W. Watersheds Project v. Kraayenbrink*, 632 F.3d at 492 (Agency violated NEPA when it "failed to address concerns raised by its own experts, [the United States Fish and Wildlife Service], the [Environmental Protection Agency], and state agencies.").

¹⁸⁰ *See id.* at 493.

¹⁸¹ Task Force Report at 71 (Stating that recommendations 4 and 7 "should apply to all design certifications or to COL applicants if the recommended requirements are not addressed in the referenced certified design.").

¹⁸² *McGuire Nuclear Station*, CLI-02-17, 56 NRC at 9-10.

¹⁸³ *Id.* at 7.

¹⁸⁴ *Id.* at 9.

contention.¹⁸⁵ Whether the FEIS must be supplemented to address those new recommendations is the question to be decided on the merits. Potential defenses, such as the claim that some aspects of the recommendations have been or will be addressed in the certified design rulemaking, do not preclude admission of Contention 11A. As the Commission has acknowledged, “the primary obligation of satisfying the requirements of NEPA rests on the agency.”¹⁸⁶ Thus, the NRC Staff, not the Intervenor, has the duty under NEPA to evaluate the suitability of the accident mitigation alternatives recommended in the Task Force Report. “Compliance with NEPA is a primary duty of every federal agency; fulfillment of this vital responsibility should not depend on the vigilance and limited resources of environmental plaintiffs.”¹⁸⁷

(ii) CONTENTION 11A PROVIDES SUFFICIENT INFORMATION TO SHOW
A GENUINE DISPUTE WHETHER THE NRC MUST SUPPLEMENT THE
FEIS IN LIGHT OF SIGNIFICANT NEW INFORMATION

Had the Task Force Report been published before the FEIS was issued, my analysis would be complete at this point. But, because the Report was issued after the FEIS, I must also determine whether Intervenor has raised a genuine dispute on the second NEPA issue: whether the NRC has violated its duty to supplement the FEIS in response to new and significant information.

“An agency that has prepared an EIS cannot simply rest on the original document. The agency must be alert to new information that may alter the results of its original environmental analysis, and continue to take a ‘hard look’ at the environmental effects of [its] planned action, even after a proposal has received initial approval.”¹⁸⁸ Contention 11A alleges that the NRC has violated that duty by failing to supplement the FEIS in response to the new and significant Task Force recommendations for enhanced accident mitigation capability at U.S. reactors. The NRC must supplement the FEIS if it learns of “new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.”¹⁸⁹

The question at the contention admissibility stage, however, is not whether the regulatory standard for supplementing the FEIS is met. That is the issue to be decided on the merits, and, as the Commission has instructed us, we are not to

¹⁸⁵ *Union Electric Co.* (Callaway Plant, Units 1 and 2), ALAB-348, 4 NRC 225, 229 (1976) (quoting *Indiana & Michigan Electric Co. v. Federal Power Commission*, 502 F.2d 336, 339 (D.C. Cir. 1974)).

¹⁸⁶ *Pa’ina Hawaii, LLC*, CLI-10-18, 72 NRC 56, 82 (2010).

¹⁸⁷ *Friends of Clearwater v. Dombeck*, 222 F.3d 552, 559 (9th Cir. 2000) (quoting *City of Davis v. Coleman*, 521 F.2d 661, 667 (9th Cir. 1975)).

¹⁸⁸ *Id.* at 557-58 (quoting *Marsh*, 490 U.S. at 373-74).

¹⁸⁹ 10 C.F.R. § 51.92(a)(2).

decide the merits at the contention admissibility stage.¹⁹⁰ At this point, the Board need only decide whether Intervenor has “present[ed] sufficient information to show a genuine dispute” concerning the NRC’s duty to supplement the FEIS, and reasonably indicating that further inquiry concerning that issue is appropriate.¹⁹¹

The Task Force Report is certainly new information; it was published several months after the FEIS was issued. Recommendations 4, 7, and 8 are intended to improve the accident mitigation capability of U.S. reactors and thereby enhance the protection of public health and safety, and the proposed action’s impact on public health and safety is an environmental concern that the NRC must address in the FEIS. Thus, the new information in the Task Force Report is “relevant to environmental concerns.”¹⁹² The Task Force intended that recommendations 4, 7, and 8 be considered in all pending COL reviews. Calvert Cliffs Unit 3 is currently the subject of such a review, and thus the recommendations that are the basis of Contention 11A “have a bearing on the proposed action or its impacts.”¹⁹³

The remaining question is whether the new information is “significant” to evaluating the environmental consequences of the proposed action. The Commission has stated that, to be significant, “[t]he new information must present ‘a seriously different picture of the environmental impact of the proposed project from what was previously envisioned.’”¹⁹⁴ Here, the environmental impact of concern is the proposed action’s impact upon public health and safety in the unlikely event of a severe accident. The accident mitigation capability of Calvert Cliffs Unit 3 is a significant factor in assessing that impact: the greater the mitigation capability, the lower the expected impact would be. Therefore, to determine whether the new information in the Task Force Report is potentially significant, and therefore justifies admitting Contention 11A, the Board should compare the analysis of severe accident mitigation in the FEIS with the new information on that subject in the Task Force Report.

The FEIS paints a reassuring picture of the accident mitigation capability of Calvert Cliffs Unit 3 and its ability to provide defense-in-depth in the event of a severe accident. Concerning U.S. reactors generally, the FEIS states:

Numerous features combine to reduce the risk associated with accidents at nuclear power plants. Safety features in the design, construction, and operation of the plants, which compose the first line of defense, are intended to prevent the release of radioactive materials from the plant. The design objectives and the measures for keeping levels of radioactive materials in effluents to unrestricted areas ALARA

¹⁹⁰ *Yankee Nuclear Power Station*, CLI-96-7, 43 NRC at 249.

¹⁹¹ *Id.*

¹⁹² 10 C.F.R. § 51.92(a)(2).

¹⁹³ *Id.*

¹⁹⁴ *Callaway*, CLI-11-5, 74 NRC at 167-68 (quoting *Hydro Resources*, CLI-99-22, 50 NRC at 14).

are specified in 10 CFR Part 50, Appendix I. Additional measures are designed to mitigate the consequences of failures in the first line of defense. These measures include the NRC's reactor site criteria in 10 CFR Part 100, which require the site to have certain characteristics that reduce the risk to the public and the potential impacts of an accident, and emergency preparedness plans and protective action measures for the site and environs All of these safety features, measures, and plans make up the defense-in-depth philosophy to protect the health and safety of the public and the environment.¹⁹⁵

The FEIS also evaluated Severe Accident Mitigation Alternatives (SAMAs) in order "to determine whether there are severe accident mitigation design alternatives (SAMDAs) or procedural modifications or training activities to further reduce the risks of severe accidents."¹⁹⁶ The Staff accepted Unistar's conclusions that none of the 167 design alternatives (SAMDAs) evaluated in its Environmental Report could be justified on the basis of a cost-benefit analysis.¹⁹⁷ According to the FEIS, "Unistar determined that the maximum averted cost risk for a single U.S. EPR at the Calvert Cliffs site is so low that none of the SAMDAs is cost beneficial."¹⁹⁸ Similarly, the FEIS concludes that "because the maximum attainable benefit is so low, a SAMA based on procedures or training would have to reduce the [core damage frequency] or risk to near zero to become cost beneficial. Based on its evaluation, the staff concludes that it is unlikely that any of the SAMAs based on procedures or training would reduce the [core damage frequency] or risk that much."¹⁹⁹

Thus, the overall picture presented in the FEIS is that Calvert Cliffs Unit 3 will have numerous features to reduce the risk associated with accidents, that these features will assure adequate protection of public health and the environment in the unlikely event of a severe accident, and that any residual risk is so small that the NRC need not require additional accident mitigation measures.

In contrast, the Task Force Report raises significant concerns about the accident mitigation capability of U.S. reactors based on lessons learned from the Fukushima accident, and concludes that significant benefits to public health and safety could be obtained by enhancing the accident mitigation capability of U.S. reactors. For example, concerning recommendation 4 for enhanced SBO mitigation capability, the Report identifies potential problems that the NRC's current regulations fail to address and recommends regulatory changes that would significantly reduce the impact of an SBO. The NRC's current SBO regulation, 10 C.F.R. § 50.63,

¹⁹⁵ FEIS at 5-75 to 5-76.

¹⁹⁶ *Id.* at 5-88 (citation omitted).

¹⁹⁷ *Id.* at 5-89.

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

requires that each nuclear power plant be able to cool the reactor core and maintain containment integrity in the event of an SBO of a specified duration. NRC Regulatory Guide 1.155 provides a method of calculating the required duration for withstanding an SBO based on the four factors identified in the regulation. “The result for all operating plants was a coping duration of 4 to 8 hours.”²⁰⁰ Thus, “[t]he Commission’s SBO requirements provide assurance that each nuclear power plant can maintain adequate core cooling and maintain containment integrity for its approved coping period [typically 4 or 8 hours] following an SBO.”²⁰¹ But this will not necessarily be sufficient, for reasons the Report explains:

[t]he implementing guidance for SBO focuses on high winds and heavy snowfalls in assessing potential external causes of loss of offsite power, but does not consider the likelihood of loss of offsite power from other causes such as earthquakes and flooding. Also, the SBO rule does not require the ability to maintain reactor coolant system integrity (i.e., PWR reactor coolant pump seal integrity) or to cool spent fuel. Further, the SBO rule focuses on preventing fuel damage and therefore does not consider the potential for the buildup of hydrogen gas inside containment during a prolonged SBO condition and the potential need to power hydrogen igniters in certain containment designs to mitigate the buildup of hydrogen. Nor does it consider containment overpressure considerations and the need to vent the containment in certain designs. Finally, the SBO rule does not require consideration of the impact on the station, and particularly on the onsite ac generation and distribution, of the natural event that caused the loss of offsite ac electrical power.²⁰²

The Task Force concluded that “revising 10 C.F.R. § 50.63 to expand the coping capability to include cooling the spent fuel, preventing a loss-of-coolant accident, and preventing containment failure would be a significant benefit.”²⁰³ Revising the regulation to incorporate these changes would “further enhance the ability of nuclear power plants to deal with the effects of prolonged SBO conditions at single and multiunit sites without damage to the nuclear fuel in the reactor or spent fuel pool and without the loss of reactor coolant system or primary containment integrity.”²⁰⁴ Moreover, as previously explained, the Task Force stated that this recommendation (among others) should be applied in all

²⁰⁰ Task Force Report at 33.

²⁰¹ *Id.* at 35.

²⁰² *Id.* The Task Force’s concerns with the buildup of hydrogen gas inside containment during a prolonged SBO condition, the potential need to power hydrogen igniters, and containment overpressure and the need to vent the containment appear to be directed at BWRs. However, the Task Force’s other concerns are also relevant to PWRs.

²⁰³ *Id.* at 35.

²⁰⁴ *Id.* at 37.

pending COL reviews, thereby making it applicable to Calvert Cliffs Unit 3. Thus, the Task Force effectively recommends what the FEIS rejects: requiring enhanced accident mitigation capability at Calvert Cliffs Unit 3.

Task Force recommendation 7 paints a similar picture of the need for enhanced accident mitigation capability at U.S. reactors to address another lesson learned from the Fukushima accident. The Report states that “clear and coherent requirements to ensure that the plant staff can understand the condition of the spent fuel pool and its water inventory and coolability and to provide reliable, diverse, and simple means to cool the spent fuel pool under various circumstances are essential to maintaining defense-in-depth.”²⁰⁵ But the Report concludes that the current fleet of U.S. reactors lacks such defense-in-depth:

[c]urrent spent fuel pool instrumentation provides limited indication and typically depends on the availability of dc electrical power at the facility. That power is provided either through inverters powered by ac electrical power or by the station’s safety-grade redundant battery banks. Direct spent fuel pool level indication is rarely provided in the control room for the current nuclear fleet. Typically, level is measured using a level switch in the skimmer surge tank. During a prolonged SBO, ac power would not be available and the battery banks would be depleted, resulting in functional failure of nearly all instrumentation and control systems for monitoring spent fuel pool parameters and operating systems ensuring the integrity of the fuel in the spent fuel pools.²⁰⁶

Recommendation 7 addresses the problems the Task Force identified by requiring enhanced spent fuel pool makeup capability and instrumentation, thereby providing the defense-in-depth that the Task Force found necessary.²⁰⁷ Here again, the Task Force effectively recommends what the FEIS rejects.

As previously explained, the FEIS concludes that SAMAs based on improved procedures or training could not be justified “because the maximum attainable benefit is so low.”²⁰⁸ In contrast, the Task Force concluded that recommendation 8, which calls for “strengthening and integrating emergency response capabilities such as EOPs, SAMGs, and EDMGs,” would significantly enhance the protection of public health and safety.²⁰⁹ According to the Task Force, “[t]he accidents at Fukushima highlight the importance of having plant operators who are well prepared and well supported by technically sound and practical procedures, guidelines, and strategies.”²¹⁰ The Task Force observed that “[t]he effectiveness

²⁰⁵ *Id.* at 45.

²⁰⁶ *Id.* at 44.

²⁰⁷ *Id.* at 45-46.

²⁰⁸ FEIS at 5-89.

²⁰⁹ Task Force Report at 45-46.

²¹⁰ *Id.* at 48.

of onsite emergency actions is a very important part of the overall safety of nuclear power plants,” and that “[t]he NRC could strengthen the current system substantially by requiring more formal, rigorous, and frequent training of reactor operators and other onsite emergency response staff on realistic accident scenarios with realistic conditions.”²¹¹

The Task Force concluded that SAMGs, which are currently voluntary industry initiatives, should be regulatory requirements. The Report explains:

To gain insights into the current implementation of the SAMGs, the Task Force requested that NRC inspectors collect information on how each licensee had implemented that industry voluntary initiative. The inspectors collected information on the initial implementation, ongoing training, and maintenance of the SAMGs The results of the inspection . . . reinforced the value of making SAMGs a requirement. The inspectors observed inconsistent implementation of SAMGs and attributed it to the voluntary nature of this initiative.²¹²

The Task Force also found that, although “U.S. plants have addressed all of the elements of onsite emergency actions that need to be accomplished by reactor operators[,] . . . the overall effectiveness of those programs could be substantially enhanced through further integration, including clarification of transition points, command and control, decisionmaking, and through rigorous training that includes conditions that are as close to real accident conditions as feasible.”²¹³

The Task Force also determined that “action is warranted to confirm, augment, consolidate, simplify, and strengthen current regulatory and industry programs in a manner that produces a single, comprehensive framework for accident mitigation, built around NRC-approved licensee technical specifications.”²¹⁴ The Task Force found that integration of EOPs, SAMGs, EDMGs, and other important elements of emergency procedures, guidance, and tools, together with appropriate regulatory requirements to ensure the effectiveness of operator actions during events, would “substantially increase the effectiveness of the overall event mitigation.”²¹⁵ The Task Force also concluded that the NRC’s requirements in this area should be expanded to cover beyond-design-basis events.

Since the current requirements in this area apply only to normal operation and emergencies within the plant’s design basis, they appear outdated and inconsistent with Commission decisions in policy statements and rulemakings to regulate accident mitigation in other areas beyond the plant’s design basis. The Task Force

²¹¹ *Id.* at 49.

²¹² *Id.* at 48.

²¹³ *Id.* at 48-49.

²¹⁴ *Id.* at 49.

²¹⁵ *Id.*

concludes that an expansion of the regulatory requirements to include procedures for beyond-design-basis events is warranted, and that such an expansion would redefine the scope of such activities to include them in the regulatory framework to provide defense-in-depth and to ensure adequate protection of public health and safety.²¹⁶

Thus, the NRC's experts have made three recommendations to improve the accident mitigation capability of U.S. reactors. According to those experts, there are significant gaps in the NRC's current regulations and a corresponding need to close those gaps with new requirements in order to adequately protect public health and safety in the event (however unlikely) of a severe accident. The Task Force's analysis applies with as much force to Unit 3 as to any other existing or proposed U.S. reactor. But the FEIS fails to mention, much less evaluate, any of the Task Force's recommendations, nor does it acknowledge any other aspect of the Task Force Report or the Fukushima accident itself. The Task Force Report thus paints a significantly different picture of the accident mitigation capabilities of U.S. reactors and the need to enhance those capabilities than the far more sanguine picture presented in the FEIS.

The significance of the Task Force recommendations to the adequate protection of public health and safety is further demonstrated by the Commission's recent orders making all U.S. power reactors, including Calvert Cliffs Units 1 and 2, subject to additional requirements stemming from Task Force recommendations 4 and 7. The Commission's orders leave no doubt of the importance of those recommendations to ensure attainment of "fundamental NRC regulatory objectives": reasonable assurance of adequate protection of public health and safety and assurance of the common defense and security.²¹⁷

The Task Force Report is therefore sufficient to raise a genuine dispute concerning the NRC's duty to supplement the FEIS. An agency violates NEPA when it fails to take a hard look at significant safety concerns raised by qualified experts to determine whether they require a supplemental EIS (SEIS).²¹⁸ It makes no difference that, as the Staff notes, "the Task Force Report does not take any position on NRC's environmental reviews."²¹⁹ It is equally irrelevant that the Commission's recent orders are not directed at NEPA compliance. Alternatives to mitigate the impacts of severe accidents must be given careful consideration in EISs supporting NRC licensing decisions.²²⁰ That obligation is not contingent

²¹⁶ *Id.*

²¹⁷ 77 Fed. Reg. at 16,083; *id.* at 16,092; *see supra* p. 155.

²¹⁸ *See Warm Springs Task Force*, 621 F.2d at 1025.

²¹⁹ NRC Staff Response at 9.

²²⁰ *Limerick*, 869 F.2d at 741.

upon whether the agency's experts or Commission orders question the adequacy of the agency's NEPA reviews.²²¹

To satisfy the hard look requirement, the NRC must provide detailed analysis of the new information and a reasonable explanation of the agency's decision concerning supplementation, not merely a conclusory assertion that the agency has reviewed the new information and concluded that no supplement is required. For example, in *Warm Springs Dam Task Force v. Gribble*,²²² the Army Corps of Engineers had conducted an extensive 10-month study of new information to determine whether further NEPA analysis was required.²²³ Similarly, in *Friends of Clearwater v. Dombeck*, the Forest Service had prepared a "supplemental information report," which is a "formal instrument[] for documenting whether new information is sufficiently significant to trigger the need for a SEIS," and "several other analyses that specifically addressed the significance of the new information."²²⁴ The court of appeals "conclud[ed] that the Forest Service [had] taken the requisite 'hard look' at the newly-designated sensitive species [albeit only after it faced this litigation] . . . , and that its determination that an SEIS [was] not required [was] not arbitrary and capricious."²²⁵

In this case, in contrast, the NRC Staff has not claimed, much less demonstrated, that it has performed or intends to perform any detailed analysis to determine whether the FEIS should be supplemented. On the contrary, the Staff's position is that "if intervenors have new design features they wish to see implemented at nuclear facilities, the correct procedural option is to file a Petition for Rulemaking under 10 C.F.R. § 2.802 rather than contentions in individual proceedings."²²⁶ Thus, the Staff's position appears to be that all of Contention 11, and thus necessarily Contention 11A, is outside the scope of its NEPA obligations concerning Calvert Cliffs Unit 3.

Intervenors, however, are not requesting implementation of new mitigation alternatives at nuclear facilities generally. They are requesting that new mitigation measures recommended by the agency's experts be evaluated in the FEIS as alternatives for one specific nuclear facility: Calvert Cliffs Unit 3. Absent a

²²¹ In fact, the agency policy at issue in *Limerick* was that SAMDAs should not be considered in the agency's NEPA reviews for individual facilities, yet the court held the SAMDAs must be given careful consideration in the *Limerick* EIS. 869 F.2d at 727, 741.

²²² 621 F.2d at 1017.

²²³ *Id.* at 1025-26. The study was completed after the agency's final decision, but before the case was heard on appeal. The court of appeals held that the agency's hard look cured the NEPA violation, and therefore remand to the district court was unnecessary.

²²⁴ 222 F.3d at 555, 559.

²²⁵ *Id.* at 561. Accordingly, although the court of appeals held that the agency violated NEPA by not taking the required hard look before suit was filed, it affirmed the district court's decision not to enter injunctive relief. *Id.*

²²⁶ Staff Response at 15.

valid regulation limiting the agency's NEPA obligations, the consideration of alternative severe accident mitigation measures may not be excluded from the agency's NEPA reviews,²²⁷ and the agency's refusal to conduct such an analysis is therefore an appropriate subject for litigation in a licensing proceeding when, as here, no such regulation applies. Contention 11A therefore presents a genuine dispute concerning the agency's legal obligations under NEPA that is appropriate for resolution in the hearing process.

I would therefore admit Contention 11A. Intervenor has presented, at a minimum, sufficient information to show a genuine dispute and that "a further inquiry is appropriate."²²⁸

D. Although CLI-12-7 Requires That the Board Reject Contention 11A, That Result Should Be Reconsidered

Under the Commission's holding in CLI-12-7, any new contention based on the Task Force Report must allege unique characteristics of the site or the proposed new reactor and show that they are significant with respect to the Task Force's recommendations. Although this requirement precludes the Board from admitting Contention 11A, I respectfully submit that its application to the Contention should be reconsidered.

The issue raised by Contention 11A, the NRC's duty to evaluate severe accident mitigation measures in its NEPA review for Calvert Cliffs Unit 3, presents virtually the same NEPA issue that was resolved against the agency in *Limerick Ecology Action v. NRC*.²²⁹ The Third Circuit held that the agency violated NEPA by failing to evaluate SAMDAs in its EIS for the Limerick Nuclear Power Generating Station Unit 1 operating license (the Limerick EIS). Like the present case, *Limerick* arose in the aftermath of another serious nuclear power plant accident, the accident at Three Mile Island Unit 2. Before the Three Mile Island accident, the NRC "thought severe accidents too unlikely to justify consideration of their likelihood in reviewing and determining the safety of nuclear power plants."²³⁰ But the NRC "retreated from that viewpoint following the TMI accident and subsequently set safety goals with respect to severe accidents."²³¹ The agency also "initiate[d] a research program into severe accident risks and mitigation alternatives, including a review of Limerick and other facilities located near major population centers."²³² Nevertheless, in a policy

²²⁷ See *Limerick*, 869 F.2d at 739.

²²⁸ *Yankee Nuclear Power Station*, CLI-96-7, 43 NRC at 249.

²²⁹ *Limerick*, 869 F.2d at 729-41.

²³⁰ *Id.* at 728.

²³¹ *Id.*

²³² *Id.* at 726.

statement, the NRC directed that SAMDAs “should not be studied on a case-by-case basis,” “excluded consideration of [SAMDAs] from individual licensing proceedings,” and also “excluded environmental considerations under NEPA” related to SAMDAs from the Limerick licensing proceeding.²³³

As a result of this NRC policy, SAMDAs were not evaluated in the Limerick EIS. An intervenor group, Limerick Ecology Action, challenged this omission. It argued that “[f]iltered-vented containment systems,” one of the mitigation alternatives studied by the NRC, should have been considered in the Limerick EIS.²³⁴ The Appeal Board affirmed the Licensing Board decision excluding the contention. The Appeal Board “noted that because the [Commission’s] Final Policy Statement found that existing plants posed no undue risk to the public health and safety and that research was ongoing, the policy statement precluded review of design alternatives.”²³⁵ The Appeal Board further ruled that the policy statement precluded NEPA contentions as well as safety contentions because NEPA could not logically require more than the Atomic Energy Act (AEA).²³⁶ After the Commission affirmed the Appeal Board’s decision, the intervenor petitioned for review in the Third Circuit.

The court of appeals granted the petition for review as to the NEPA issue.²³⁷ The court ruled that the NRC must evaluate measures to mitigate the effects of severe accidents under NEPA even if the agency finds that granting a license will be consistent with the adequate protection of public health and safety standard of section 182(a) of the AEA, 42 U.S.C. § 2232(a).²³⁸ The court further concluded that the Limerick EIS “failed adequately to consider SAMDAs and, therefore, the decisionmaker did not take the requisite ‘hard look’ at SAMDAs,” and that “the underlying issue of SAMDAs may not be treated as a generic issue and therefore summary treatment of SAMDAs was inappropriate.”²³⁹ The court of appeals noted that the NRC’s own NEPA regulations require that the agency consider “the alternatives available for reducing or avoiding adverse environmental and

²³³ *Id.* at 727.

²³⁴ *Id.* at 726.

²³⁵ *Id.* at 732.

²³⁶ *Id.* at 732-33.

²³⁷ *Id.* at 741.

²³⁸ The court of appeals agreed with the intervenor that “[t]he language of NEPA indicates that Congress did not intend that it be precluded by the AEA.” 869 F.2d at 730-31. The Third Circuit determined that the legislative history and case law require compliance with NEPA unless compliance is impossible, or another statute specifically prohibits compliance with NEPA. *Id.* at 729-30. In this case, the NRC did not argue that compliance was impossible, and the Atomic Energy Act does not expressly prohibit compliance with NEPA; thus the Third Circuit found that the NRC could not look to the sufficiency of safety standards enacted under the Atomic Energy Act to avoid its NEPA obligations. *See id.* at 730-31.

²³⁹ *Id.* at 739.

other effects.”²⁴⁰ The court of appeals concluded that “the NRC was required to address SAMDAs and cannot now look to sufficiency under the AEA to avoid that obligation.”²⁴¹

More than two decades after *Limerick* was decided, the agency finds itself in a similar position. The Fukushima accident, like the Three Mile Island accident, has caused the NRC to reassess the sufficiency of its regulatory program for protection of public health and safety. In response to the Fukushima accident, a task force of the agency’s experts has made detailed recommendations to enhance the capability of U.S. reactors to mitigate the impact of a severe accident on public health and safety. The same requirement that the court of appeals relied on in *Limerick*, that the agency consider “the alternatives available for reducing or avoiding adverse environmental and other effects,”²⁴² remains in force. The NRC did include an evaluation of SAMAs in the FEIS,²⁴³ but the FEIS was issued before the Task Force Report and thus did not evaluate its recommendations. Intervenor here, like the intervenor in *Limerick*, have identified specific accident mitigation measures recommended by the Task Force that they maintain must be evaluated in the agency’s NEPA review for Unit 3. The agency’s position in *Limerick* was that SAMDAs need not be considered in the EIS because “ongoing studies were still considering design alternatives,”²⁴⁴ and that it could refuse to review SAMDAs in the Limerick EIS absent “special or unique circumstances about the Limerick site and environs that would warrant consideration of alternatives for Limerick Units 1 and 2.”²⁴⁵ Those arguments were evidently not persuasive to the Third Circuit, nor were any of the agency’s other justifications for excluding SAMDAs from the Limerick EIS. Nevertheless, as it did with SAMDAs in *Limerick*, the NRC has attempted to exclude evaluation of the new mitigation alternatives recommended by the Task Force from individual NEPA reviews and licensing proceedings unless intervenors identify factors unique to the site or the proposed new reactor.²⁴⁶

The Commission’s analysis begins by noting its previous ruling in CLI-11-5 that a generic NEPA analysis of the Fukushima accident and the Task Force Report is premature given the agency’s ongoing evaluation of the accident.²⁴⁷ The Commission then implies that a contention based on the Report or the

²⁴⁰ *Id.* at 730 (quoting 10 C.F.R. § 51.71(d)).

²⁴¹ *Id.* at 730-31.

²⁴² *Id.* at 730 (quoting 10 C.F.R. § 51.71(d)).

²⁴³ FEIS at 5-88 to 5-89. SAMAs include both SAMDAs and “procedural modifications or training activities that can be justified to further reduce the risks of severe accidents.” *Id.* at 5-88.

²⁴⁴ 869 F.2d at 733.

²⁴⁵ *Id.* at 732 (quoting the Limerick FEIS at 5-126).

²⁴⁶ See CLI-12-7, 75 NRC at 388-91.

²⁴⁷ *Id.* at 387.

accident that seeks a site-specific NEPA review is the equivalent of the request for a generic NEPA analysis that the Commission previously rejected, unless it is based on factors unique to the site or the proposed new reactor.²⁴⁸ The Commission accordingly affirmed the licensing board decisions not to admit Fukushima contentions because they were “akin to the generic type of NEPA review that [the Commission] declared premature in CLI-11-05.”²⁴⁹

Contention 11A, however, cannot be dismissed as a request for a “generic type of NEPA review,” even though it is based on the Task Force Report rather than factors unique to the site or the proposed new reactor. If an environmental issue is common to all or a number of U.S. reactors, the NRC may in its discretion decide to prepare a generic EIS to evaluate the issue. As the D.C. Circuit recently explained, “[b]oth the Supreme Court and this court have endorsed the Commission’s longstanding practice of considering environmental issues through general rulemaking in appropriate circumstances.”²⁵⁰ Thus, a comprehensive generic analysis may be used to evaluate “on-site risks that are essentially common to all plants,” as long as the agency provides “the opportunity for concerned parties to raise site-specific differences at the time of a specific site’s licensing.”²⁵¹

Therefore, a generic NEPA review is, by definition, based on factors that are not unique to any particular site. But it does not follow that a contention based on an expert report that is not focused on a particular site is necessarily a request for a generic NEPA review. Contention 11A does not request that the implications of Task Force recommendations 4, 7, and 8 be assessed at any proposed new reactor other than Calvert Cliffs Unit 3. Whether the recommendations are indeed appropriate for Unit 3 must be determined based on the characteristics of the nuclear power plant to be constructed at the site, the risks to the surrounding population, and other factors that the Staff must evaluate to determine whether the recommendations will be beneficial in the event of a severe accident at Unit 3. Thus, the resolution of the contention will necessarily be based on site- and reactor-specific factors that would be outside the scope of a generic NEPA review. Therefore, the fact that Contention 11A does not refer to site-specific factors does not mean that is a request for a generic EIS. As the Third Circuit stated in *Limerick*, “the impact of SAMDAs on the environment will differ with the particular plant’s design, construction and location,”²⁵² and therefore “the underlying issue of SAMDAs may not be treated as a generic issue and . . .

²⁴⁸ See *id.* at 388-91.

²⁴⁹ *Id.* at 388.

²⁵⁰ *New York v. NRC*, 681 F.3d 471, 480 (D.C. Cir. 2012).

²⁵¹ *Id.*

²⁵² 869 F.2d at 738.

summary treatment of SAMDAs was inappropriate.”²⁵³ This conclusion applies with equal force to Task Force recommendations 4, 7, and 8. Contention 11A may therefore not be rejected as a request for a generic NEPA review.

Moreover, even assuming that the application of Task Force recommendations 4, 7, and 8 to Calvert Cliffs Unit 3 could have been resolved in a generic EIS, the NRC has neither prepared such a generic NEPA document nor indicated the intent to do so. If the NRC had appropriately chosen to prepare a generic EIS analyzing the applicability of Task Force recommendations 4, 7, and 8 to all U.S. reactors, it could justifiably insist that any demand for a site-specific analysis of that issue be based on factors unique to the site or reactor because the common factors would have been covered in the generic EIS. But, in CLI-11-5, the Commission rejected the request to prepare a generic EIS to evaluate the implications of the Fukushima accident and the Task Force Report. Having made that choice, the NRC may not now insist that the request for a NEPA analysis of the implications of Task Force Report for Unit 3 (or any other specific facility) be based on factors unique to the site or reactor. As the D.C. Circuit explained, “whether the analysis is generic or site-by-site, it must be thorough and comprehensive.”²⁵⁴ Thus, the NRC must produce a comprehensive and thorough NEPA analysis of all NEPA issues relevant to Calvert Cliffs Unit 3, including mitigation of severe accidents, and if the issue is not covered in a generic EIS it must be covered in the site-specific NEPA document.

It is therefore sufficient that the Task Force Report states that recommendations 4, 7, and 8 should be considered in pending COL reviews, which activates the NRC’s duty to take a hard look at them as accident mitigation measures for Unit 3. The license application for Unit 3 is one of the COL reviews currently pending before the NRC Staff, and therefore the recommendations apply as much to Unit 3 as to any other proposed new reactor undergoing COL review. Nothing in the recommendations suggests that their applicability to any pending COL review is contingent upon unique characteristics of the site or the proposed new reactor.

That the Task Force recommendations are not limited to sites or reactors with unique characteristics is confirmed by the Commission’s recent orders imposing requirements derived from recommendations 4 and 7 on all current nuclear power reactor licensees and on CP holders. Those orders were not limited to reactors with particular site or design characteristics.²⁵⁵ Because of the orders, Calvert Cliffs Units 1 and 2 must comply with the substance of Task Force recommendations 4 and 7, yet the FEIS for Unit 3 is completely silent as to whether, or how, any of

²⁵³ *Id.* at 739.

²⁵⁴ *New York v. NRC*, 681 F.3d at 480-81.

²⁵⁵ *See supra* p. 155.

the Task Force recommendations will be applied to the proposed new reactor at the same site.

This omission frustrates NEPA's twin goals of "forc[ing] agencies to take a 'hard look' at the environmental consequences of a proposed project, and, making relevant analyses openly available, to permit the public a role in the agency's decision-making process."²⁵⁶ An impact statement cannot fulfill its role of providing "a springboard for public comment"²⁵⁷ if it fails to evaluate significant issues such as measures that the agency's experts recommend to mitigate the consequences of a severe accident. "The impact statement must be sufficient to enable those who did not have a part in its compilation to understand and consider meaningfully the factors involved."²⁵⁸ But, if the FEIS fails to address the Task Force recommendations for enhanced mitigation, it will fail to inform the public whether or how the NRC intends to apply the Task Force recommendations to Unit 3 in order to close the gaps in the agency's regulations that the Task Force identified. This would frustrate NEPA's intent that the FEIS should provide the public with detailed information concerning significant environmental impacts of the proposed federal action and alternatives available to mitigate those impacts.²⁵⁹ If the FEIS fails to explain whether or how the NRC intends to apply the Task Force recommendations for enhanced mitigation to Calvert Cliffs Unit 3, it would fail to "fulfill its vital role of 'exposing the reasoning and data of the agency proposing the action to scrutiny by the public and by other branches of the government.'"²⁶⁰

In CLI-12-7, the Commission referred to its ongoing review of the Fukushima accident and the Task Force Report,²⁶¹ and suggested that the Report is only "inchoate information" that has no present impact on its NEPA obligations for specific facilities.²⁶² Even if the Commission is still reviewing the Task Force's recommendations, however, the agency must take a hard look at the implications of the new information for the proposed action *before* it makes the licensing decision for Unit 3. In *Friends of Clearwater v. Dombeck*, the court held that "the Forest Service's failure to evaluate in a timely manner the need to supplement the

²⁵⁶ *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87 (1998) (citing *Robertson*, 490 U.S. at 349-50; *Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 443 (4th Cir.1996)).

²⁵⁷ *Robertson*, 490 U.S. at 349 (citation omitted).

²⁵⁸ *Limerick*, 869 F.2d at 737.

²⁵⁹ See *Robertson*, 490 U.S. at 349-52.

²⁶⁰ *State of Alaska v. Andrus*, 580 F.2d 465, 475 (D.C. Cir. 1978) (quoting *Natural Resources Defense Council, Inc. v. Callaway*, 524 F.2d 79, 93-94 (2d Cir. 1975); *Silva v. Lynn*, 482 F.2d 1282, 1286-67 (1st Cir. 1973)).

²⁶¹ CLI-12-7, 75 NRC at 387.

²⁶² See *id.* at 391-92.

original EIS in light of . . . new information violated NEPA.”²⁶³ It admonished the Forest Service for failing to comply with NEPA by waiting until suit was filed to take a hard look at the new information and to “consider whether the seven new sensitive species designations . . . upon which the original EIS relied were sufficiently significant to require preparation of an SEIS.”²⁶⁴

The hard look requirement applies even if the implications of the new and potentially significant information are not entirely clear. In *Warm Springs Dam Task Force v. Gribble*,²⁶⁵ the Ninth Circuit held that the Army Corps of Engineers’ SEIS for a new dam violated NEPA because it failed to take a hard look at a new report from the United States Geological Survey which suggested that the dam might experience an earthquake stronger than the SEIS indicated it was designed to withstand.²⁶⁶ The accuracy of the report was “far from settled” at the time of litigation, and “admittedly dealt in possibilities. [Thus, this report] was more significant for the questions it raised than for the answers it gave.”²⁶⁷ Nonetheless, the Court of Appeals held that the new information required the Corps to take a hard look at the report.²⁶⁸ According to the Court, “[w]hen new information comes to light the agency must consider it, evaluate it, and make a reasoned determination whether it is of such significance as to require implementation of formal NEPA filing procedures.”²⁶⁹ The Court held that “[w]hile not so definitive as to compel initiation of the formal supplementation process, [the] study raised sufficient environmental concerns to require the Corps to take another hard look at the issues.”²⁷⁰

Thus, potentially significant new information related to public health and safety cannot be dismissed from the NEPA analysis because it is “more significant for the questions it raise[s] than for the answers it g[ives]”; it still requires a hard look under NEPA.²⁷¹ The NRC is not absolved of its NEPA duty to take a hard look at the new information because the Task Force Report raises questions and concerns about the safety of domestic nuclear reactors and makes suggestions

²⁶³ 222 F.3d at 559.

²⁶⁴ *Id.* at 558.

²⁶⁵ 621 F.2d at 1017.

²⁶⁶ *See id.* at 1025. The case concerned a Corps project to construct a 319-foot earth-fill dam in California. *Id.* at 1019. The Corps prepared an EIS, followed by a SEIS “addressing the problems of seismic safety and water quality.” *Id.* The report mapped fault lines at and surrounding the dam site and estimated that fault lines near the dam site were longer than the Corps had estimated in its SEIS. *See id.* at 1020-21. Therefore, it was possible that these fault lines could cause higher magnitude earthquakes at the dam site than those discussed in the SEIS. *See id.* at 1025.

²⁶⁷ *Id.*

²⁶⁸ *See id.*

²⁶⁹ *Id.* at 1024.

²⁷⁰ *Id.* at 1025.

²⁷¹ *Id.*

about strengthening current safety regulations for these reactors, but the NRC has not yet decided how those recommendations should be implemented at Unit 3. Thus, even if all the implications of the Task Force Report for U.S. reactors are not fully clear, Contention 11A should be admitted for hearing.

Finally, the Commission's March 19, 2012 orders foreclose any further argument that Contention 11A is premature. Those immediately effective orders impose requirements derived from Task Force recommendations 4 and 7 on current nuclear power reactor licensees and on CP holders.²⁷² The determinations reflected in those orders show that the Commission has progressed beyond merely evaluating the Task Force recommendations, and has decided that specific requirements recommended by the Task Force must be imposed on licensees and on CP holders to ensure adequate protection of public health and safety. Thus, even assuming that the Task Force recommendations were once outside the scope of the agency's NEPA obligations because they were merely "inchoate information," that is no longer true after the March 19 orders.

The NRC may choose to promulgate new regulations under the AEA that would require new reactors, including Unit 3, to implement mitigation measures equivalent to Task Force recommendations 4, 7, and 8. Alternatively, the Applicant might amend its application to adopt the substance of those recommendations, or the certified design to be utilized at Calvert Cliffs Unit 3 might be amended to incorporate those measures. If and when any such event occurs, the FEIS need not evaluate those mitigation measures as alternatives because they will have become part of the proposed action. But, as long as the agency is only considering regulatory changes and neither the application nor the certified design has been amended, the NRC's obligation under NEPA to consider mitigation alternatives remains unaltered. Contention 11A therefore raises a significant NEPA compliance issue, and the Commission should reconsider CLI-12-7 to the extent it forecloses admission of that contention.

II. THE REMAINING PARTS OF CONTENTION 11 ARE INADMISSIBLE

The remaining parts of Contention 11, which I refer to as Contentions 11B, 11C, and 11D, fail to meet the requirements of 10 C.F.R. § 2.309(f)(1) and are therefore inadmissible.

All three proposed contentions assert alternative grounds for requiring supplementation of the FEIS in light of the Task Force Report. Contention 11B maintains that the FEIS must take a hard look at the consequences of the Task Force's recommendation (recommendation 2) to change the way in which the NRC

²⁷² See *supra* pp. 146-55.

evaluates SAMAs. Intervenors maintain that by recommending the incorporation of accidents formerly classified as “severe” or “beyond design basis” into the design basis, the Task Force Report effectively recommends a complete overhaul of the NRC’s system for mitigating severe accidents through consideration of SAMAs.²⁷³

Unlike Contention 11A, Contention 11B concerns a recommendation for a general change to the NRC’s regulatory program. Task Force recommendation 2 is not a recommendation for a specific accident mitigation measure, and, unlike recommendations 4, 7, and 8, it is not the type of recommendation that could be considered in an individual COL proceeding. It can be implemented only through a change to the agency’s SAMA requirements. Given the nature of Task Force recommendation 2, it fails to provide a basis for supplementing the FEIS.

Contention 11C alleges that the Task Force Report questions the sufficiency of the NRC’s existing regulatory regime to provide adequate protection of public health and safety. Intervenors state that the NRC must therefore “revisit any conclusions in the Calvert Cliffs-3 EIS based on the assumption that compliance with NRC safety regulations is sufficient to ensure that environmental impacts of accidents are acceptable.”²⁷⁴ At bottom, this appears to be an attack upon the probabilistic risk assessment that was used to estimate the probability-weighted consequences of a severe accident at Unit 3.²⁷⁵ But Intervenors do no more than make a sweeping demand to revisit conclusions in the FEIS that they believe are incorrect, without identifying specific aspects of the probabilistic risk assessment they contend are no longer tenable. If a petitioner neglects to provide the requisite support for its contentions, it is not within the board’s power to make assumptions or draw inferences that favor the petitioner, nor may the board supply information that is lacking.²⁷⁶ Contention 11C is accordingly inadmissible.

Contention 11D depends upon Contention 11B. Intervenors contend that, if additional mitigative measures were to be imposed on Calvert Cliffs 3, this could substantially increase the cost of the new facility. The increased costs could alter the cost-benefit balance, making alternatives more attractive. Therefore, FEIS § 10.6.2, which evaluates the economic cost of the proposed new facility, should be supplemented to take into account the additional costs that would be incurred if additional mitigative measures are required as a result of the Task Force’s recommendations.²⁷⁷ It is the NRC’s position, however, that it need not compare the costs of alternatives to the proposed action if, as is true here, its FEIS does

²⁷³ Contention 11, at 11.

²⁷⁴ *Id.*

²⁷⁵ See FEIS at 5-88 to -89.

²⁷⁶ See *Crow Butte*, CLI-09-12, 69 NRC at 553; *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991).

²⁷⁷ Contention 11, at 12-13.

not identify an environmentally preferable alternative.²⁷⁸ Contention 11D does not contest the finding that there is no environmentally preferable alternative, and therefore Contention 11D may not be admitted.²⁷⁹

I would therefore admit only Contention 11A for hearing.

Ronald M. Spritzer, Chairman
ADMINISTRATIVE JUDGE

²⁷⁸ *South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-21, 72 NRC 197, 200 (2010).

²⁷⁹ *Id.*

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Ronald M. Spritzer, Chairman
Dr. Gary S. Arnold
Dr. William W. Sager

In the Matter of

Docket No. 52-016-COL
(ASLBP No. 09-874-02-COL-BD01)
(Combined License Application)

**CALVERT CLIFFS 3 NUCLEAR
PROJECT, LLC, and UNISTAR
NUCLEAR OPERATING
SERVICES, LLC**
**(Calvert Cliffs Nuclear Power
Plant, Unit 3)**

August 30, 2012

This proceeding concerns the application of Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC, under 10 C.F.R. Part 52 for a combined license (COL) to construct and operate a new nuclear unit, using the U.S. Evolutionary Power Reactor certified design, at its site in Lusby, Calvert County, Maryland. The licensing board grants summary disposition in favor of Joint Intervenors as to Contention 1 and finds Applicants ineligible to obtain a license because they are owned by a United States (U.S.) corporation that is 100% owned by a foreign corporation, failing to meet the requirements of section 103(d) of the Atomic Energy Act (AEA) and 10 C.F.R. § 50.38.

RULES OR PRACTICE: SUMMARY DISPOSITION

Under 10 C.F.R. § 2.710(d)(2), a moving party is entitled to summary disposition “if the filings in the proceeding, . . . together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.” Generally, when ruling on motions for summary disposition, the Commission applies standards analogous to the standards used by the federal courts when ruling on motions for summary judgment under the comparable Rule 56 of the Federal Rules of Civil Procedure. *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

AEA § 103(d), 10 C.F.R. § 50.38: FOREIGN OWNERSHIP

Section 103(d) of the AEA, prohibits the NRC from issuing a reactor license to “any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government.” 42 U.S.C. § 2133(d). This proscription is reiterated in 10 C.F.R. § 50.38 of the NRC regulations, “Ineligibility of certain applicants,” which states that: “[a]ny person who is a citizen, national, or agent of a foreign country, or any corporation, or other entity which the Commission knows or has reason to believe is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, shall be ineligible to apply for and obtain a license.”

AEA § 103(d), 10 C.F.R. § 50.38: FOREIGN OWNERSHIP

According to the NRC’s Standard Review Plan on Foreign Ownership, Control, or Domination (SRP), an entity is considered to be under foreign ownership, control, or domination (FOCD) “whenever a foreign interest has the ‘power,’ direct or indirect, whether or not exercised, to direct or decide matters affecting the management or operations of the applicant.” 64 Fed. Reg. at 52,358. The SRP cautions that there is generally no specific ownership percentage above which the NRC Staff would conclusively determine that an applicant is *per se* controlled by foreign interests. *Id.* Instead, foreign control “must be interpreted in light of all the information that bears on who in the corporate structure exercises control over what issues and what rights may be associated with certain types of shares.” *Id.*

AEA § 103(d), 10 C.F.R. § 50.38: FOREIGN OWNERSHIP

Although, in general, the SRP on foreign ownership, control, or domination avoids designating a foreign ownership percentage that would make an applicant *per se* controlled by foreign interests, it nonetheless repeatedly states that a

completely (i.e., 100%) foreign-owned applicant would be ineligible to receive a license. The SRP provides that “[w]here an applicant that is seeking to acquire a 100 percent interest in the facility is wholly owned by a U.S. company that is wholly owned by a foreign corporation, the applicant will not be eligible for a license.” 64 Fed. Reg. at 52,358.

AEA § 103(d), 10 C.F.R. § 50.38: FOREIGN OWNERSHIP

The AEA clearly prohibits the NRC from issuing a reactor license to “any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government.” 42 U.S.C. § 2133(d). The fact that Congress connected the three prohibitions with the conjunction “or” rather than “and” shows that a license may not be granted if any of the three prohibitions is violated. The same proscription is reiterated in 10 C.F.R. § 50.38.

AEA § 103(d), 10 C.F.R. § 50.38: FOREIGN OWNERSHIP

The prohibition of foreign ownership in 10 C.F.R. § 50.38 would be rendered superfluous if 100% foreign ownership is acceptable. Therefore, section 103(d) of the AEA and 10 C.F.R. § 50.38 must be interpreted, at a minimum, as making a 100% foreign-owned applicant ineligible to receive a license.

10 C.F.R. §§ 50.38, 52.75: FOREIGN OWNERSHIP

Under 10 C.F.R. § 50.38 and 10 C.F.R. § 52.75, a foreign-owned, -controlled, or -dominated entity is ineligible to apply for, let alone obtain, a COL.

ORDER
(Granting Summary Disposition of Contention 1)

This adjudicatory proceeding arises from an application by UniStar Nuclear Operating Services, LLC, and Calvert Cliffs 3 Nuclear Project, LLC (Applicants) for a combined license (COL) to construct and to operate one U.S. Evolutionary Power Reactor (U.S. EPR), designated Unit 3, to be located at the existing Calvert

Cliffs site in Lusby, Calvert County, Maryland.¹ Applicants are subsidiaries of UniStar Nuclear Energy, LLC (UniStar), a Delaware corporation.²

For the reasons set forth below, the Board grants summary disposition in favor of Joint Intervenor as to Contention 1 and finds Applicants ineligible to obtain a license because they are owned by a United States (U.S.) corporation that is 100% owned by a foreign corporation. As such, Applicants fail to meet the requirements of section 103(d) of the Atomic Energy Act (AEA) and 10 C.F.R. § 50.38.

The Board is also issuing today its Partial Initial Decision (PID) resolving the other pending contention (Contention 10C). In accordance with precedent delineated by the Commission in the *North Anna* proceeding,³ if Applicants fail to find a domestic partner within 60 days of this ruling, this proceeding will be terminated.

A license cannot be issued in this proceeding until the ownership issue is properly corrected. Should the foreign ownership situation change, Applicants may motion to reopen the record in accordance with 10 C.F.R. § 2.326.

I. BACKGROUND

Joint Intervenor's Contention 1, which the Board admitted in its March 24, 2009, Memorandum and Order, alleges that "[c]ontrary to the Atomic Energy Act and NRC Regulations, Calvert Cliffs-3 would be owned, dominated, and controlled by foreign interests."⁴ From the commencement of this proceeding until November 3, 2010, UniStar was owned in near-equal shares, through intermediate parent companies, by Constellation Energy Group, Inc. (Constellation), a U.S. corporation, and Électricité de France, S.A. (EDF), a French corporation.⁵ On November 3, 2010, Applicants filed a letter with the Board stating that EDF had acquired Constellation's 50% interest in UniStar, thus making EDF the sole

¹ See Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC Notice of Hearing and Opportunity to Petition for Leave to Intervene and Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation on a Combined License for the Calvert Cliffs Nuclear Power Plant Unit 3, 73 Fed. Reg. 55,876 (Sept. 26, 2008).

² Letter from David A. Repka, Counsel for Calvert Cliffs 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC, to Calvert Cliffs Board (Nov. 3, 2010) at 1 [hereinafter UniStar Letter].

³ *Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), CLI-12-14, 75 NRC 692, 699 (2012) ("[T]he longstanding practice in our proceedings [is] that[] once all contentions have been decided, the contested proceeding is terminated.").

⁴ See Petition to Intervene in Docket No. 52-016, Calvert Cliffs-3 Nuclear Power Plant Combined Construction and License Application (Nov. 19, 2008) at 5. The Board has previously found that Joint Intervenor has standing and granted their request for a hearing. See LBP-09-4, 69 NRC 170 (2009).

⁵ UniStar Letter at 1.

owner of UniStar.⁶ On November 4, 2010, Constellation filed a Schedule 13D with the U.S. Securities and Exchange Commission confirming this transaction.⁷

Based on this letter, the NRC Staff issued a request for additional information (RAI), RAI 281, that asked UniStar to explain how it complies with the foreign ownership, control, or domination regulations contained in 10 C.F.R. § 50.38, given that Applicants are 100% owned by UniStar, which in turn is now 100% owned by a foreign corporation — namely EDF.⁸ On January 31, 2011, UniStar submitted its response to RAI 281, along with revisions to the ownership and financial information contained in the Calvert Cliffs Unit 3 COL application.⁹ Included in UniStar's response to RAI 281 was a proposed "Negation Action Plan," which proposed measures intended to ensure negation of potential foreign ownership, control, or domination of Calvert Cliffs Unit 3.¹⁰ Such measures include the establishment of a "Security Subcommittee" of its Board of Directors, made up of U.S. citizens, who have the exclusive right to exercise the Board of Director's authority over matters that are required to be under U.S. control.¹¹

On April 6, 2011, the NRC Staff issued a Determination Letter in which it informed UniStar that it had completed its review of UniStar's response to RAI 281 and determined that the COL application did not meet the foreign ownership, control, or domination requirements contained in 10 C.F.R. § 50.38.¹² In that letter, the NRC Staff outlined three bases underlying its determination that the COL application, as revised, fails to meet the requirements set out in 10 C.F.R. § 50.38: "(1) UniStar is 100% owned by a foreign corporation (EDF), which is 85% owned by the French government; (2) EDF has the power to exercise foreign ownership, control, or domination over UniStar; and (3) the Negation Action Plan submitted by UniStar does not negate foreign ownership, control or domination issues discussed above."¹³ Further, the NRC Staff stated that it would continue

⁶ *Id.*

⁷ Letter from David B. Matthews, Director, Division of New Reactor Licensing, Office of New Reactors, U.S. NRC, to George Vanderheyden, President and CEO, UniStar Nuclear Energy (Apr. 6, 2011) at 1 [hereinafter NRC Determination Letter].

⁸ E-mail from Surinder Arora, Project Manager, Office of New Reactors, U.S. NRC, to Robert Poche (Dec. 12, 2010) at 3.

⁹ Letter from Gregory T. Gibson, Vice President, Regulatory Affairs, UniStar Nuclear Energy, LLC to Document Control Desk, U.S. NRC (Jan. 31, 2011) at 1.

¹⁰ Letter from Gregory T. Gibson, Vice President, Regulatory Affairs, UniStar Nuclear Energy, LLC, to Document Control Desk, U.S. NRC (Jan. 31, 2011), Enclosure 1, at 2 [hereinafter Proposed Negation Action Plan].

¹¹ *Id.* at 3.

¹² NRC Determination Letter at 1. Although the COL applicants are UniStar Nuclear Operating Services, LLC and Calvert Cliffs 3 Nuclear Project, LLC, the NRC Staff's correspondence was directed to UniStar, their corporate parent. *See* Proposed Negation Action Plan at 2.

¹³ NRC Determination Letter at 1.

to review the Calvert Cliffs Unit 3 COL application while UniStar “considers its options to move forward,” but that a license would not be issued unless the requirements of 10 C.F.R. § 50.38 were met.¹⁴

In response to the NRC Staff’s Determination Letter, on April 18, 2011, the Board issued an Order directing the parties to show cause why the Board should not grant summary disposition as to Contention 1, deny authorization to issue the license, and terminate the proceeding.¹⁵ Joint Intervenor filed a response in support of summary disposition and Applicants filed a response opposing summary disposition. The NRC Staff’s response did not oppose summary disposition.¹⁶ The Board held oral argument on July 7, 2011, in the Atomic Safety and Licensing Board Panel’s hearing room in Rockville, Maryland, to discuss: “(1) the parties’ responses to the Board’s April 18, 2011 Order; and (2) whether an evidentiary hearing should proceed on Contention 10C were the Board to grant summary disposition as to Contention 1.”¹⁷

On August 26, 2011, the Board issued a Memorandum and Order in which it deferred ruling on Contention 1 until the issuance of the Board’s Partial Initial Decision on Contention 10C.¹⁸ The Board is issuing its Partial Initial Decision on Contention 10C separate from, but concurrently with, this Order.¹⁹

¹⁴ *Id.*

¹⁵ Licensing Board Order (To Show Cause Why the Board Should Not Grant Summary Disposition as to Contention 1, Deny Authorization to Issue the License, and Terminate this Proceeding) (Apr. 18, 2011) at 4 (unpublished) [hereinafter Show Cause Order].

¹⁶ Applicants’ Response to Show Cause Order (May 9, 2011) at 1 [hereinafter Applicants’ Show Cause Response]; Joint Intervenor Reply to Licensing Board Order ASLBP No. 09-874-02-COL-BD01 (May 9, 2011) at 1 [hereinafter Joint Intervenor’s Show Cause Response]; Staff’s Response to the Atomic Safety and Licensing Board’s Show Cause Order Regarding Contention 1 (May 9, 2011) at 1 [hereinafter NRC Staff’s Show Cause Response]; Applicants’ Reply to Responses to Show Cause Order (May 23, 2011) at 1 [hereinafter Applicants’ Show Cause Reply]; Joint Intervenor Reply to Applicant’s and NRC Staff’s Responses to Licensing Board Order ASLBP No. 09-874-02-COL-BD01 (May 23, 2011) at 1 [hereinafter Joint Intervenor’s Show Cause Reply]; Staff’s Reply to the Applicants’ and Joint Intervenor’s Response to the Atomic Safety and Licensing Board’s Show Cause Order (May 23, 2011) at 1 [hereinafter NRC Staff’s Show Cause Reply]; *see also* NRC Staff’s Show Cause Response, Attachment 1, Affidavit of Anneliese Simmons Concerning Contention 1 Foreign Ownership Control or Domination (May 9, 2011) at 1 [hereinafter NRC Staff Affidavit]. In addition, the NRC Staff filed a surreply on June 2, 2011, and Applicants filed a reply to the NRC Staff’s surreply on June 13, 2011. NRC Staff’s Motion to Allow a Surreply (June 2, 2011) at 1; Staff’s Surreply to Applicant’s Reply to Show Cause Order (June 2, 2011) at 1 [hereinafter NRC Staff Surreply]; Applicants’ Response to NRC Staff Motion for Leave to File a Surreply (June 13, 2011) at 1 [hereinafter Applicants’ Response to Surreply].

¹⁷ *See* Licensing Board Order (Scheduling Oral Argument) (June 24, 2011) at 1 (unpublished).

¹⁸ Licensing Board Order (Denying Summary Judgment of Contention 10C, Denying Amended Contention 10C, and Deferring Ruling on Contention 1) (August 26, 2011) at 1 (unpublished) [hereinafter Order Deferring Ruling].

¹⁹ LBP-12-17, 76 NRC 71 (2012).

II. LEGAL STANDARDS

A. Summary Disposition

The standards for summary disposition in Subpart L proceedings, such as this, are set forth in 10 C.F.R. § 2.1205. That regulation in turn directs licensing boards to apply the same standards for granting or denying summary disposition as would be applied in Subpart G proceedings, which are set forth in 10 C.F.R. § 2.710.²⁰ Under 10 C.F.R. § 2.710(d)(2), a moving party is entitled to summary disposition “if the filings in the proceeding, . . . together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.” Generally, when ruling on motions for summary disposition, the Commission applies standards analogous to the standards used by the federal courts when ruling on motions for summary judgment under the comparable Rule 56 of the Federal Rules of Civil Procedure.²¹

A party seeking summary disposition bears the initial burden of “showing the absence of a genuine issue as to any material fact” and that it is entitled to judgment as a matter of law.²² In addition, the Board must view the record in the light most favorable to the nonmoving party.²³ Consequently, if the moving party fails to meet its burden, then “the Board must deny the motion — even if the opposing party chooses not to respond or its response is inadequate.”²⁴ Thus, “[n]o defense to an insufficient showing is required.”²⁵

However, if the moving party meets its burden,²⁶ the party opposing the motion must “set forth specific facts showing that there is a genuine issue,” and may not rely on “mere allegations or denials.”²⁷ Mere assertions or general denials

²⁰ 10 C.F.R. § 2.1205(c) (“In ruling on motions for summary disposition, the presiding officer shall apply the standards for summary disposition set forth in subpart G of this part.”).

²¹ *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

²² *Id.*

²³ *Id.* at 102; see *Poller v. Columbia Broadcasting Systems, Inc.*, 368 U.S. 464, 473 (1962).

²⁴ *Advanced Medical Systems*, CLI-93-22, 38 NRC at 102.

²⁵ *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-443, 6 NRC 741, 754 (1977) (internal citations omitted).

²⁶ Although this summary disposition motion arises originally from the Board’s Order directing the parties to show cause why the Board should not grant summary disposition as to Contention 1, deny authorization to issue the license, and terminate the proceeding, for practical purposes Joint Intervenors will be considered the moving party since they filed a response to that Order supporting summary disposition of Contention 1. See Show Cause Order; Joint Intervenors’ Show Cause Response.

²⁷ *Advanced Medical Systems*, ALAB-433, 38 NRC at 102-03.

are insufficient.²⁸ While the opposing party need not demonstrate that it would prevail on the issues at hand, it must at least show that there is a genuine dispute of material fact to be tried.²⁹ Thus, if, after considering all of the arguments and facts proffered by the parties, no genuine issue of material fact exists, the Board may dispose of all arguments based on the pleadings.³⁰

B. Foreign Ownership, Control, or Domination

Section 102 of the Atomic Energy Act of 1954 (AEA) states that any license issued for a utilization or production facility for industrial or commercial purposes must meet the requirements set out in section 103 of the AEA.³¹ Section 103(d) of the AEA, in turn, prohibits the NRC from issuing a reactor license to “any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government.”³²

This proscription is reiterated in 10 C.F.R. § 50.38 of the NRC regulations, “Ineligibility of certain applicants,” which states that:

“[a]ny person who is a citizen, national, or agent of a foreign country, or any corporation, or other entity which the Commission knows or has reason to believe is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, shall be ineligible to apply for and obtain a license.”

Moreover, 10 C.F.R. § 52.75, which applies specifically to applications for combined licenses under 10 C.F.R. Part 52, Subpart C, provides that “[a]ny person except one excluded by § 50.38 of this chapter may file an application for a combined license for a nuclear power facility with the Director, Office of New Reactors or Director, Office of Nuclear Reactor Regulation, as appropriate.” Thus, a person excluded by section 50.38 is ineligible even to apply for a license, much less to receive one.

²⁸ *Id.* at 102; *Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-629, 13 NRC 75, 78 (1981); *see also Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-584, 11 NRC 451, 455 (1980).

²⁹ *Advanced Medical Systems*, CLI-93-22, 38 NRC at 102; *see Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-92-8, 35 NRC 145, 154 (1992) (to avoid summary disposition, intervenors must present contrary evidence so significantly probative that it creates a material factual issue).

³⁰ *Advanced Medical Systems*, CLI-93-22, 38 NRC at 102.

³¹ Atomic Energy Act of 1954 as amended, 42 U.S.C. § 2132(a). Calvert Cliffs Unit 3 is a “production or utilization facility” as defined in 10 C.F.R. § 50.2. *See* 10 C.F.R. § 50.2 (defining production and utilization facilities).

³² 42 U.S.C. § 2133(d).

The NRC's Standard Review Plan on Foreign Ownership, Control, or Domination (SRP)

"contains the review procedures used by the staff to evaluate applications for the issuance or transfer of control of a production or utilization facility license in light of the prohibitions in sections 103d and 104d of the Atomic Energy Act and in 10 CFR 50.38 against issuing such reactor licenses to aliens or entities that the Commission 'knows or has reason to believe' are owned, controlled, or dominated by foreign interests."³³

The SRP explains that an entity is considered to be under foreign ownership, control, or domination "whenever a foreign interest has the 'power,' direct or indirect, whether or not exercised, to direct or decide matters affecting the management or operations of the applicant."³⁴ The SRP cautions that there is generally no specific ownership percentage above which the NRC Staff would conclusively determine that an applicant is *per se* controlled by foreign interests.³⁵ Instead, foreign control "must be interpreted in light of all the information that bears on who in the corporate structure exercises control over what issues and what rights may be associated with certain types of shares."³⁶ Under the SRP, applicants are permitted to use negation action plans to negate potential foreign ownership, control, or domination.³⁷ When conducting a foreign ownership, control, or domination inquiry, the focus should be on "safeguarding the national defense and security."³⁸

Although, in general, the SRP avoids designating a foreign ownership percentage that would make an applicant *per se* controlled by foreign interests, it nonetheless repeatedly states that a completely (i.e., 100%) foreign-owned applicant would be ineligible to receive a license. The SRP provides that "[w]here an applicant that is seeking to acquire a 100 percent interest in the facility is wholly owned by a U.S. company that is wholly owned by a foreign corporation, the applicant will not be eligible for a license."³⁹ The only such situation that the SRP suggests might be permissible is where the Commission knows that the foreign owner's stock is "largely" owned by U.S. citizens.⁴⁰ That limited qualification to

³³ Final Standard Review Plan on Foreign Ownership, Control, or Domination, 64 Fed. Reg. 52,355 (Sept. 28, 1999), cited in *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 920 (2009).

³⁴ 64 Fed. Reg. at 52,358.

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.* at 52,359.

³⁸ *Id.* at 52,358.

³⁹ *Id.*; see also Tr. at 198.

⁴⁰ 64 Fed. Reg. at 52,358.

the general prohibition on 100% foreign ownership does not apply in this case. No party has argued that EDF is largely owned by U.S. citizens. On the contrary, it is undisputed that EDF is largely owned by the French government.

III. ANALYSIS

A. Parties' Positions

Joint Intervenors argue that the Board should grant summary disposition as to Contention 1, deny authorization to issue the license, and terminate this proceeding. According to Joint Intervenors, UniStar's acquisition of Constellation's 50% interest in Calvert Cliffs Unit 3 (thereby raising UniStar's interest to 100%) renders Applicants ineligible to receive, or even to apply for, a license under both 10 C.F.R. § 50.38 and the AEA.⁴¹ Joint Intervenors caution that giving Applicants additional time to find a suitable American partner, and thus to meet the foreign ownership, control, or domination requirements, could lead to an "open-ended proceeding."⁴² They find this particularly disturbing given that "the Applicant provides no information whatsoever as to whether it has identified a potential partner(s); whether it has been or currently is in any negotiations with a potential partner(s); or any type of time frame at all as to when a partner may be expected to join with Applicant."⁴³ In addition, Joint Intervenors note that an open-ended proceeding would pose unnecessary burdens on them, given that they are *pro se* and would be required to make "endless" monthly disclosures.⁴⁴

NRC Staff does not oppose granting summary disposition of Contention 1.⁴⁵ The NRC Staff acknowledges that there are no genuine issues as to any material fact in dispute concerning Contention 1 and agrees that the Board could deny

⁴¹ Joint Intervenors' Show Cause Response at 1. Further, Joint Intervenors argue that the NRC Staff should not be allowed to continue reviewing the license applications of ineligible applicants and that the NRC Staff should direct its resources toward other priorities such as examining the implications of the recent Fukushima nuclear accident. *Id.* at 2. In making this argument, Joint Intervenors imply that the Board should direct the NRC Staff to discontinue its review of the license application at issue. However, it is well established that boards lack the authority to direct the NRC Staff's regulatory reviews. *See Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 74 (2004). If Joint Intervenors wish to pursue this issue, they will have to do so with the NRC Staff or before the Commission.

⁴² Joint Intervenors' Show Cause Response at 3 ("[h]aving been ruled ineligible to receive a combined license, the April 26 letter from the Applicant appears to now seek an unlimited amount of time to attempt to become eligible").

⁴³ *Id.*

⁴⁴ *Id.* at 4.

⁴⁵ NRC Staff's Show Cause Response at 1, 10.

authorization to issue the license and terminate this proceeding.⁴⁶ Upon review of Applicants' response to RAI 281, the NRC Staff confirmed that Applicants are currently 100% owned by a foreign corporation, EDF.⁴⁷ The NRC Staff then determined whether EDF exercises foreign control or domination over Applicants.⁴⁸ Based on its review of Applicants' response to RAI 281, the NRC Staff found that "EDF exercises both direct and indirect influence over the applicant in the governance structure" and thus is foreign owned, controlled, or dominated in contravention of the SRP on Foreign Ownership, Control, or Domination.⁴⁹ Specifically, the NRC Staff concluded that: (1) "EDF, as the 100% owner of UniStar, exercises extensive and broad authority over UniStar and the intermediate companies"; (2) "[n]on U.S. Citizen representatives of EDF sit on the boards of directors of all the intermediate companies from the parent to the licensee"; and (3) EDF has the authority to appoint manager and key officers for all the intermediate authorities."⁵⁰ Moreover, the NRC Staff reviewed the proposed Negation Action Plan submitted by Applicants in conjunction with their response to RAI 281 and concluded that the plan does not sufficiently negate EDF's ownership, control, or domination of Applicants.⁵¹ As a result, the NRC Staff does not oppose summary disposition of Contention 1.⁵²

The NRC Staff also stated, however, that, were the Board to grant summary disposition of Contention 1, the Board could terminate the proceeding, but it could also decide to move ahead with the pending environmental contention (Contention 10C).⁵³ The NRC Staff also suggested that the Board might "wish to hold Contention 1 in abeyance until such time as the Applicant amends its application to address the foreign ownership issue and the Staff concludes its review of the amended application."⁵⁴ This is because, according to the NRC Staff, "[a]t this point it is not known what degree of foreign ownership may be present for CCNNP3 in the event UniStar obtains a domestic partner and amends its application."⁵⁵ Thus, "even if the Board were to find the license could not issue

⁴⁶ *Id.* at 5, 10.

⁴⁷ *Id.* at 7.

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² *Id.* at 10; *see also* NRC Staff Affidavit.

⁵³ NRC Staff's Show Cause Response at 10 (citing *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-10-20, 72 NRC 571 (2010)).

⁵⁴ *Id.* at 11.

⁵⁵ *Id.*

with the current application, the issue may come before the Board again after a domestic partner is obtained.”⁵⁶

Applicants argue that summary disposition as to Contention 1 should not be granted, authorization to issue the license should not be denied, and this proceeding should not be terminated.⁵⁷ Applicants reiterate that they are committed to obtaining a U.S. partner and recognize that a COL for Calvert Cliffs Unit 3 may not be issued until an appropriate U.S. partner is obtained.⁵⁸ As a result, Applicants contend that any foreign ownership, control, or domination concerns can be addressed once an appropriate U.S. partner is found and the COL is amended accordingly.⁵⁹ Until then, Applicants contend that the issue is not ripe for review and any decision on the matter would be a mere advisory opinion.⁶⁰ Similarly, Applicants argue that the Board should not deny authorization to issue the license or terminate the proceeding because “[a]pplicants are routinely entitled to an opportunity to address any deficiency perceived in the application” and “[r]esponding to issues raised during the NRC Staff review is fully consistent with the dynamic licensing process followed in Commission licensing matters.”⁶¹

In addition, Applicants appear to argue that Contention 1 is moot. Because Joint Intervenor originally proffered Contention 1 to address the then-current 50% foreign ownership scenario, and never supplemented or amended it to reflect the now-current 100% foreign ownership scenario, Applicants claim that Contention 1 is, or is at least soon to be, moot and is thus a “poor vehicle[] for adjudicatory pronouncements of possible significance.”⁶²

B. Summary Disposition

The Board agrees with Joint Intervenor that summary disposition of Contention 1 is appropriate, given that the license applicants are wholly owned by a U.S. company (UniStar) that is wholly owned by a foreign corporation (EDF).

The AEA clearly prohibits the NRC from issuing a reactor license to “any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government.”⁶³ The fact that Congress connected the three prohibitions with the conjunction “or” rather than “and” shows that a license may not be granted if

⁵⁶ *Id.*

⁵⁷ Applicants’ Show Cause Response at 2.

⁵⁸ *Id.* at 7.

⁵⁹ *Id.* at 7-8.

⁶⁰ *Id.* at 8.

⁶¹ *Id.* at 11.

⁶² *Id.* at 9.

⁶³ 42 U.S.C. § 2133(d).

any of the three prohibitions is violated. The same proscription is reiterated in 10 C.F.R. § 50.38. As previously explained, the applicable regulations not only prohibit issuing a COL to a foreign-owned, -controlled, or -dominated entity, but they go as far as prohibiting such an entity from filing a COL application.

To be sure, neither the AEA nor the NRC's regulations define the percentage of foreign ownership that renders an applicant ineligible to apply for or receive a license. This suggests that the NRC has discretion in specifying the level of foreign ownership that would constitute a violation of the AEA.⁶⁴ Similarly, the NRC has discretion in interpreting the meaning of its own regulations.⁶⁵

But the agency's discretion in defining the meaning of "foreign ownership" in the AEA and in 10 C.F.R. § 50.38 is not unlimited. We must also keep in mind the "settled rule that a statute must, if possible, be construed in such fashion that every word has operative effect."⁶⁶ In doing so, a court "avoid[s] . . . any construction which implies that the legislature was ignorant of the meaning of the language it employed."⁶⁷ As the Supreme Court has cautioned, "no provision [of a statute] should be construed to be entirely redundant."⁶⁸

Thus, it would be impermissible to construe the prohibition of foreign ownership so as to make it redundant or otherwise deprive it of operative effect.⁶⁹ The language of AEA § 103(d) shows that Congress thought foreign ownership itself should be sufficient to require denial of a license in some circumstances. Although the AEA implicitly grants the NRC substantial discretion in determining the threshold percentage at which foreign ownership becomes too great, that threshold must at a minimum include 100% foreign ownership or the prohibition of foreign ownership in AEA § 103(d) would be rendered superfluous.⁷⁰ Congress might just as well have written a statute that prohibited only foreign control or

⁶⁴ See *United States v. Mead Corp.*, 533 U.S. 218, 226-27 (2001); *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984).

⁶⁵ Courts give controlling weight to an agency's interpretation of its own regulation unless it is "plainly erroneous or inconsistent with the regulation." *Auer v. Robbins*, 519 U.S. 452, 461 (1997) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 359 (1989) (quoting *Bowles v. Seminole Rock & Sand Co.*, 325 U.S. 410, 414 (1945))).

⁶⁶ *United States v. Nordic Village, Inc.*, 503 U.S. 30, 36 (1992) (citing *United States v. Menasche*, 348 U.S. 528, 538-39 (1955)). Courts must "give effect, if possible, to every clause and word of a statute." *Montclair Township v. Ramsdell*, 107 U.S. 147, 152 (1883).

⁶⁷ *Montclair Tp.*, 107 U.S. at 152.

⁶⁸ *Kungys v. United States*, 485 U.S. 759, 778 (1988). Similarly, the Supreme Court has also stated that it is "hesitant to adopt an interpretation of a congressional enactment which renders superfluous another portion of that same law." *Mackey v. Lanier Collection Agency*, 486 U.S. 825, 837 (1988).

⁶⁹ Cf. *Gersman v. Group Health Association, Inc.*, 975 F. 2d 886, 890 (D.C. Cir. 1992) (citing Supreme Court precedent stating that a statute should not be interpreted so as to render a provision of it redundant or superfluous).

⁷⁰ See 64 Fed. Reg. at 52,358.

domination. The prohibition of foreign ownership in 10 C.F.R. § 50.38 would also be rendered superfluous if 100% foreign ownership is acceptable. Therefore, section 103(d) of the AEA and 10 C.F.R. § 50.38 must be interpreted, at a minimum, as making a 100% foreign-owned applicant ineligible to receive a license.

This understanding is consistent with the SRP, which provides that when “an applicant that is seeking to acquire a 100% interest in the facility is wholly owned by a U.S. company that is wholly owned by a foreign corporation, the applicant will not be eligible for a license.”⁷¹ This interpretation mirrors that put forward by the NRC Staff: “one hundred percent ownership, anything else notwithstanding, would bar the issuance of a license.”⁷²

Consequently, no negation action plan would be sufficient to negate EDF’s 100% foreign ownership of UniStar, and thus it is unnecessary for the Board to review Applicants’ proposed Negation Action Plan or the NRC Staff’s analysis of its alleged inadequacies.⁷³ We therefore are not persuaded by Applicants’ argument that summary disposition is inappropriate because material facts remain in dispute.⁷⁴ On the contrary, the essential fact we require to decide this issue — that Applicants are 100% foreign-owned — is undisputed.

Furthermore, as the NRC Staff argues, the cases Applicants cite fail to support their claim that 100% foreign ownership is permissible. In their response to the Board’s Show Cause Order, Applicants stated that they “believe[] that 100 percent ownership of a licensee by a foreign entity can be acceptable under the Atomic Energy Act and NRC regulations (with appropriate negation of control), and that precedent exists to support that position.”⁷⁵ Applicants failed, however, to offer any such supporting precedent in that response.

In their reply to the Board’s Show Cause Order, Applicants again asserted that “the NRC has approved transfers of operating licenses to entities that are 100% owned by foreign companies” and thus that “precedent illustrates that, with appropriate negation measures, FOCD concerns can be addressed for licenses wholly owned by foreign parents or grandparents.”⁷⁶ In support of these claims,

⁷¹ *Id.* As stated previously, the SRP envisions only one situation in which 100% foreign ownership might be permissible — i.e., where the Commission knows that the foreign owner’s stock is “largely” owned by U.S. citizens. *Id.*; *supra* note 40 and accompanying text. There is no indication that such circumstances are present in this case.

⁷² Tr. at 198.

⁷³ See NRC Staff Affidavit.

⁷⁴ Applicants’ Response to Surreply at 2-3.

⁷⁵ Applicants’ Show Cause Response at 8.

⁷⁶ Applicants’ Show Cause Reply at 3.

Applicants cite *New England Electric System — National Grid Group PLC* (Seabrook Plant) and *PacificCorp* (Trojan Nuclear Plant).⁷⁷

However, as the NRC Staff points out, these two cases do not support the proposition that 100% foreign ownership of a licensee is acceptable where, as here, the licensee will be the sole license holder.⁷⁸ Rather, both cases cited by Applicants involved Commission approval of minority owners transferring non-operating licenses to foreign companies through mergers in which the minority owners became wholly owned subsidiaries of foreign companies.⁷⁹ In the case of *New England Electric System — National Grid Group PLC*, the resulting total foreign ownership was 9.9%, while in the case of *PacificCorp*, the resulting total foreign ownership amounted to a mere 2.5%.⁸⁰ While both cases involve minority owners that are wholly owned by foreign companies, their small overall ownership interests pale in comparison to the extent of foreign ownership present in this proceeding, where both applicants are owned by UniStar, a company that is in turn 100% owned by EDF.

We are also not persuaded by Applicants' claim that the issue is not ripe for review, and that any opinion on the issue would therefore amount to an impermissible advisory opinion.⁸¹ Ripeness is a justiciability doctrine designed to prevent Article III courts from premature judicial review of abstract controversies and to "protect the agencies from judicial interference until an administrative decision has been formalized and its effects felt in a concrete way by the challenging parties."⁸² The ripeness doctrine is "drawn both from Article III limitations on judicial power and from prudential reasons for refusing to exercise jurisdiction."⁸³ Thus, that doctrine was developed for, and is directly applicable only to, Article III courts, not to an administrative tribunal such as a licensing board. In our proceedings, unlike challenges to agency action in federal courts, intervenors are not only permitted but are required to file their contentions in response to the license application, rather than await a fully formalized administrative decision.⁸⁴ And licensing boards must resolve those claims during the administrative process, not after its conclusion.

⁷⁷ See *id.* at 3-4; see also "Order Approving Application Regarding Merger of New England Electric System and National Grid Group PLC," 64 Fed. Reg. 71,832 (Dec. 22, 1999) [hereinafter NEES Order]; "PacificCorp (Trojan Nuclear Plant); Order Approving Application Regarding Proposed Merger," 64 Fed. Reg. 63,060 (Nov. 18, 1999) [hereinafter PacificCorp Order].

⁷⁸ See NRC Staff Surreply at 2.

⁷⁹ See NEES Order; PacificCorp Order.

⁸⁰ *Id.*

⁸¹ Applicants' Show Cause Response at 8, 10, 13.

⁸² *Abbott Laboratories v. Gardner*, 387 U.S. 136, 148-49 (1967).

⁸³ *Reno v. Catholic Social Services, Inc.*, 509 U.S. 43, 57 n.18 (1993) (citations omitted).

⁸⁴ 10 C.F.R. § 2.309(f)(2).

Nevertheless, the Commission has indicated that licensing boards should not consider premature contentions. In *Crow Butte Resources*,⁸⁵ a petitioner, the Oglala Sioux Tribe, alleged that it had not been consulted concerning tribal cultural resources, in violation of the National Historic Preservation Act. The Commission held that the contention was premature because the NRC Staff, not the applicant, has the duty to consult with the Tribe under the Act, and the Staff had not completed its review process.⁸⁶ In the present case, however, the Applicant must demonstrate compliance with the foreign ownership limitations in section 103(d) of the AEA and 10 C.F.R. § 50.38. Moreover, the NRC Staff has already determined that the Applicants are not in compliance with the foreign ownership limitations. Thus, there is no prematurity problem in this case.

Furthermore, even were we to apply the formal ripeness test used by federal courts to this adjudicatory proceeding, the foreign ownership issue is ripe for decision. In determining whether an issue is ripe for judicial decision, a court must evaluate: “(1) the fitness of the issues for judicial decision and (2) the hardship to the parties of withholding court consideration.”⁸⁷ As to the first factor, Contention 1 is fit for judicial decision because no further factual development is needed in order for the Board to rule. Applicants concede that they are 100% owned by a foreign company, EDF.⁸⁸ As previously stated, 100% foreign ownership alone, notwithstanding any other factors such as a negation action plan, renders an applicant ineligible per se. Given that no material factual disputes exist as to Applicants’ 100% foreign ownership, and that Applicant has been consistently 100% foreign owned for almost 2 years, Contention 1 presents a fully developed issue on a pending application, and is thus suitable for decision.

As to the second factor, depriving Joint Intervenors of a ruling on Contention 1 would subject them to substantial unfairness and hardship. Joint Intervenors initially filed their foreign ownership contention in 2008, and the Board admitted the foreign ownership contention in its initial ruling on standing and contention admissibility in 2009. Moreover, roughly 2 years have already passed since Applicants became 100% foreign owned.⁸⁹ During that time, Joint Intervenors have been required to file monthly disclosures concerning Contention 1 and closely follow the Calvert Cliffs Unit 3 proceeding.⁹⁰ Refraining from ruling on Contention 1 until Applicants find an appropriate U.S. partner would force Joint

⁸⁵ *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 348 (2009).

⁸⁶ *Id.* at 348-51.

⁸⁷ *National Park Hospitality Association v. Department of the Interior*, 538 U.S. 803, 808 (2003) (citing *Abbott Laboratories*, 387 U.S. at 148-49).

⁸⁸ UniStar Letter at 1; NRC Determination Letter at 1.

⁸⁹ *Id.*

⁹⁰ Joint Intervenors’ Show Cause Response at 3-4.

Intervenors to continue to do so for an indefinite amount of time — even for decades, according to Applicants.⁹¹ In a situation such as this, forcing a *pro se* intervenor to file monthly disclosures and closely follow a proceeding indefinitely solely to obtain a ruling on the merits of its claim would constitute a significant unfairness and hardship. Having satisfied the NRC’s strict requirements for contention admissibility, and having complied with all other procedural requirements, Intervenors are entitled to a ruling on the merits of their claim without further delay.

Thus, even if we were to apply the ripeness doctrine, Contention 1 is ripe for decision. The Board’s decision on the issue is not a mere advisory opinion but will resolve the last remaining issue in this case.

At bottom, Applicants want the Board to defer its ruling indefinitely while they attempt to resolve the foreign ownership problem. Although we have allowed the Applicants substantial additional time to resolve the foreign ownership problem by deferring our ruling on Contention 1 until now, we could not grant them an unlimited amount of time to do so, even if we were so inclined, without violating Commission policy. As we previously noted,⁹² the Commission has repeatedly stressed, through both its policies and regulations, the importance of expediting adjudicatory proceedings. Both 10 C.F.R. §§ 2.329(b)(1) and 2.332(c)(1) reiterate that one of the fundamental purposes of the prehearing conference and the scheduling order is “[e]xpediting the disposition of the proceeding.”⁹³ The Commission’s Statement on the Conduct of Agency Adjudications reaffirmed the importance of expediting adjudications when it stated that “applicants for a license are . . . entitled to a prompt resolution of disputes concerning their applications” and thus that one of the Commission’s key objectives is “to avoid unnecessary delays in the NRC’s review and hearing process.”⁹⁴ Applicants themselves have repeatedly acknowledged such precedent in an effort to expedite this proceeding.⁹⁵ Consequently, while it is undeniable that substantial delays occurred in the proceedings cited by Applicants, such delays are contrary to the Commission’s stated policies and regulations, and thus should not be used as a model for this proceeding.⁹⁶

⁹¹ Applicants’ Show Cause Reply at 13-14. Applicants argue that it would be appropriate to hold the proceeding in abeyance based on Contention 1 for as long as 17 years. *Id.* at 14 (citing *Washington Public Power Supply System* (WPPSS Nuclear Project No. 1), LBP-00-18, 52 NRC 9 (2000)).

⁹² Order Deferring Ruling at 30.

⁹³ 10 C.F.R. §§ 2.329(b)(1), 2.332(c)(1).

⁹⁴ Policy on Conduct of Adjudicatory Proceedings; Policy Statement, 63 Fed. Reg. 41,872, 41,873 (Aug. 5, 1998). This statement does not differentiate between whether the dispute is resolved in favor of or against an applicant.

⁹⁵ Applicants’ Report on Schedule Discussions and Proposed Schedule at 3 (Apr. 15, 2009).

⁹⁶ *See* Applicants’ Show Cause Reply at 13-15.

Applicants have had roughly two years to remedy the foreign ownership problem. We do not doubt that Applicants have made substantial efforts to find U.S. partners, but they have thus far been unable to provide evidence to the Board indicating that a deal with an acceptable U.S. partner is imminent.⁹⁷ Applicants acknowledged at the July 7, 2011, oral argument that “we have nothing definite. I think that it’s a little more than open-ended. Discussions are ongoing and I think that’s an accurate statement, but we have no details that we can share.”⁹⁸ Further, Applicants themselves acknowledged that the current economic climate poses significant impediments to finding an acceptable U.S. partner: “there has been a significant deterioration in power market conditions These developments have significantly impaired the prospects, in the immediate term, for a financially viable nuclear development project — particularly in a merchant market such as PJM in which Calvert Cliffs would be constructed.”⁹⁹ Given the apparent lack of progress in finding potential U.S. partners, the amount of time that has elapsed since Applicants became 100% foreign owned, and the current economic climate, we are not willing to grant Applicants an indefinite amount of time to resolve this deficiency because doing so would be counter to the Commission’s policies and regulations.

The need to avoid open-ended proceedings is particularly important when, as in this proceeding, the Board is confronted with a contention addressing such a fundamental element of an applicant’s application. For, unlike other deficiencies that may impair an applicant’s ability to obtain a license, 10 C.F.R. § 50.38 and 10 C.F.R. § 52.75 clearly state that a foreign owned, controlled, or dominated entity is ineligible to apply for, let alone obtain, a COL.¹⁰⁰

Finally, the Board disagrees with Applicants’ assertion that Contention 1 is moot because Joint Intervenor failed to supplement or amend it after EDF’s foreign ownership increased to 100%.¹⁰¹ Contention 1 alleges that “[c]ontrary to the Atomic Energy Act and NRC Regulations, Calvert Cliffs-3 would be owned, dominated and controlled by foreign interests.”¹⁰² The only thing that has changed since the initial filing of Contention 1 is that the percentage of foreign ownership has increased: 100% now compared to 50% at the time Contention 1 was filed.

⁹⁷ See UniStar Letter.

⁹⁸ Tr. at 224-25.

⁹⁹ Applicants’ Show Cause Response at 6-7.

¹⁰⁰ 10 C.F.R. §§ 50.38, 52.75.

¹⁰¹ Applicants’ Show Cause Response at 9.

¹⁰² See Petition to Intervene in Docket No. 52-016, Calvert Cliffs-3 Nuclear Power Plant Combined Construction and License Application (Nov. 19, 2008) at 5. The Board has previously found that Joint Intervenor has standing and granted their request for a hearing. See LBP-09-4, 69 NRC 170 (2009).

If anything, this fact only bolsters the validity of Contention 1.¹⁰³ It in no way renders the contention moot.

Thus, because there are no material facts in dispute concerning Applicant's 100% foreign ownership, and because 100% foreign ownership necessarily renders an applicant ineligible under 10 C.F.R. § 50.38 and section 103(d) of the AEA, the Board GRANTS summary disposition as to Contention 1 in favor of Joint Intervenors.

C. Status of the Proceeding

Because this Order grants summary disposition of Contention 1 in favor of Joint Intervenors, there are no longer any admitted contentions pending before the Board. This is because the Board is today also issuing its Partial Initial Decision on Contention 10C, along with an Order declining to admit Joint Intervenors' proposed new Contention 11, and previously dismissed Joint Intervenors' admitted Contentions 2 and 7.¹⁰⁴

The initial intent of this Board was to leave this proceeding open until 30 days after the NRC Staff issued the Final SER. This would have allowed the Board to revisit the foreign ownership issue, if there had been a material change in the ownership situation, and would also have allowed Joint Intervenors to file new contentions based on any new information contained in upcoming Staff review documents. However, we are precluded from applying our preferred approach due to a recent Commission ruling in the *North Anna* proceeding that demonstrated that this approach, while reasonable, is not permitted. In *North Anna*, the Board elected not to close the proceeding, despite the fact that no pending contentions remained. The Board's intent was to permit their Intervenors the opportunity to submit contentions on upcoming NRC Staff review documents without forcing the Intervenors to meet the more difficult reopening standards.¹⁰⁵

The Commission ruled, however, that "the Board's ruling resolving the last pending contention (that is, LBP-11-10) amounted to a final board decision."¹⁰⁶ The Commission further stated that "[t]he Board's approach cannot be squared with the longstanding practice in our proceedings that, once all contentions have

¹⁰³ Further, if Applicants truly believed that EDF's acquisition of 100% ownership rendered Contention 1 moot, then they should have promptly filed a motion for summary disposition after EDF had acquired 100% ownership, as required by the agency's regulations. See 10 C.F.R. § 2.323(a). Given that neither Applicants nor NRC Staff have filed such a motion in the roughly 2 years since EDF acquired its 100% ownership, the Board is led to believe that neither party truly views Contention 1 as moot.

¹⁰⁴ LBP-12-17, 76 NRC 71 (2012); LBP-12-18, 76 NRC 127 (2012).

¹⁰⁵ See 10 C.F.R. § 2.326.

¹⁰⁶ *North Anna*, CLI-12-14, 75 NRC at 699.

been decided, the proceeding is terminated.”¹⁰⁷ Further, the Commission noted, “[t]he courts of appeals have repeatedly approved our practice of closing the hearing record after resolution of the last ‘live contention.’”¹⁰⁸ The decision did not differentiate between whether the last pending contention was resolved in favor of an applicant or in favor of an intervenor. Given that the Board has resolved the last contention in this proceeding, the *North Anna* decision thus leaves us no choice but to close this proceeding.

Applicants maintain that the Appeal Board’s ruling in *Commonwealth Edison Company*¹⁰⁹ precludes the Board from denying the license application without giving the Applicants the opportunity to resolve the deficiency. In *Commonwealth Edison*, an evidentiary hearing was held concerning the adequacy of the applicant’s quality assurance program. After finding the program inadequate, the Board denied the license and closed the proceeding. At the time the Board’s decision was issued, however, the applicant was “catching up” with the quality assurance violations by implementing a “massive reinspection program,” the final report on which was about to be issued.¹¹⁰ The Appeals Board found that the Licensing Board was not justified in rendering a “final judgment in the face of unfolding developments having a deciding bearing — and conceivably a crucial effect — upon the issue that shaped that judgment.”¹¹¹ The Appeals Board remanded the issue to the Licensing Board for a further evidentiary hearing to address the unfolding developments.

Here, by contrast, we have no comparable unfolding developments to consider. Unlike *Byron*, we have no evidence of any imminent action by the Applicants that would resolve the alleged violation in their favor, but only the Applicants’ hope that someday they may be able to find a U.S. partner and thereby may be able to rectify the foreign ownership violation. We have already given the Applicants ample opportunity to resolve the violation, but it has not been corrected. For the reasons we have already explained, we may not further delay our ruling on the merits of Contention 1 based on nothing more than a hope that the foreign ownership violation may someday be resolved. And, having resolved the merits of the last pending contention, we must follow the Commission’s clear command in *North Anna* to terminate the proceeding.

Although we cannot keep this proceeding open indefinitely, we do grant Applicants an additional 60 days from the issuance of this order to notify the Board of any change in the ownership situation sufficient to establish their

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* at 700.

¹⁰⁹ *Commonwealth Edison Co.* (Byron Nuclear Power Station, Units 1 and 2), ALAB-770, 19 NRC 1163 (1984).

¹¹⁰ *Id.* at 1169.

¹¹¹ *Id.*

qualifications to apply for a license from the NRC. Although 60 days may seem a short period of time in which to obtain a domestic partner for Calvert Cliffs Unit 3, Applicants have already had nearly 2 years to find such a partner. If after 60 days Applicants have not notified the Board of such a change in the ownership situation, this proceeding will be closed. If, alternatively, Applicants manage to find a domestic partner, and provide information to the Board that an agreement has been or will be in the immediate future concluded, then this proceeding will remain open.

For the next 60 days, therefore, this proceeding will remain open and the parties should continue to comply with our scheduling orders and all other requirements applicable to an open proceeding. If Applicants obtain a domestic partner within 60 days, this proceeding will continue to remain open and those requirements will continue to remain in effect. Joint Intervenors could, at that time, challenge the adequacy of Applicants' foreign ownership resolution. The Board would then resolve any dispute that may remain arising from Contention 1.

If, however, Applicants fail to obtain a domestic partner within 60 days, this proceeding will close. Once this proceeding is closed, Intervenors would no longer have an open proceeding in which to file proposed new contentions or make other filings, and we could not logically demand that they move to reopen a closed proceeding in which they have prevailed.¹¹² Therefore, while the proceeding is closed, Joint Intervenors need make no further filings. Joint Intervenors will not lose the right to propose new contentions if Applicants, at some future date, correct the foreign ownership violation and successfully move to reopen the proceeding.

In the event that Applicants obtain a domestic partner subsequent to the closing of this proceeding, they may then move to reopen the proceeding. Joint Intervenors will have 30 days from the filing of any such motion to respond. If the proceeding is thereafter reopened, Joint Intervenors will have 30 days from the reopening of the record to file timely new contentions based on new information that became available subsequent to the closing of the proceeding. That is, contentions filed within 30 days of reopening of the record that are based on information that became available after the close of the proceedings will be considered timely because of the good cause that until the time of reopening there had been no open proceeding in which to file the new contentions.

¹¹²To reopen a closed proceeding, Intervenors would have to file a motion demonstrating, among other things, that "a materially different result would be or would have been likely had the newly proffered evidence been considered initially." 10 C.F.R. § 2.326(a)(3). It would be nonsensical to demand that Joint Intervenors advance a new contention seeking a materially different result — i.e., granting of the license.

IV. CONCLUSION

For the aforementioned reasons, the Board grants summary disposition in favor of Joint Intervenors as to Contention 1 and finds Applicants currently ineligible to apply for or obtain a license. The license cannot be granted as long as the current ownership arrangement is in effect. As no contentions remain pending, the Board will terminate this proceeding 60 days after the issuance of this order unless, within that time, Applicants provide information to show that they have changed their ownership situation so as to satisfy foreign ownership, control, and domination requirements.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Ronald M. Spritzer, Chairman
ADMINISTRATIVE JUDGE

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

Dr. William W. Sager
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 30, 2012

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Allison M. Macfarlane, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of

Docket No. 52-017-COL

**VIRGINIA ELECTRIC AND POWER
COMPANY d/b/a DOMINION
VIRGINIA POWER and OLD
DOMINION ELECTRIC
COOPERATIVE**

(North Anna Power Station, Unit 3)

September 25, 2012

MOTIONS FOR RECONSIDERATION

Petitioners' request, though styled a "Petition for Review," asked the Commission to reconsider its own prior ruling, and was therefore properly considered according to the standards governing a motion for reconsideration.

MOTIONS FOR RECONSIDERATION

A petition for reconsideration may not be filed except upon leave of the adjudicatory body that rendered the decision. *See* 10 C.F.R. § 2.323(e). A party's failure to seek leave is sufficient grounds for denying the request, although the requesting party may seek leave simultaneously with filing its motion. *See Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-10-9, 71 NRC 245, 252 (2010).

MOTIONS FOR RECONSIDERATION

A motion for reconsideration must present a compelling argument, such as the existence of a clear and material error in a decision, which the movant could not reasonably have anticipated. *See* 10 C.F.R. § 2.345(b). Such a motion should be based on an “elaboration of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification,” rather than simply reasserting the arguments already made. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-05-19, 62 NRC 403, 410 (2005) (quoting *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-02-1, 55 NRC 1, 2 (2002)).

MEMORANDUM AND ORDER

On June 22, 2012, the Blue Ridge Environmental Defense League (BREDL) filed a “Petition for Review of CLI-12-14.”¹ For the reasons given below, we deny BREDL’s petition.

I. BACKGROUND

In April, 2011, the Licensing Board in this combined license (COL) matter issued LBP-11-10, in which it denied the admission of two proposed contentions relating to the applicant’s decision to change the reactor design referenced in its COL application.² At that point, no contentions remained pending in the proceeding. Noting this fact, the Board suspended the parties’ disclosure obligations, but did not close the record.³ The applicant, Virginia Electric and Power Company d/b/a Dominion Virginia Power and Old Dominion Electric Cooperative (Dominion) then filed a “motion for clarification” asking the Board to “clarify” that the proceeding had terminated. In a lengthy opinion, the Board declined to do so.⁴

In CLI-12-14, we reversed the Board’s decision, finding that, in accordance with our longstanding practice, the contested proceeding must end once all pending contentions have been resolved. At that time, we remanded the case to the Board to exercise jurisdiction solely for the limited purpose of considering whether to reopen the record and to assess the admissibility of a pending seismic

¹ *See* Petition for Review of CLI-12-14 (June 22, 2012) (BREDL Petition); CLI-12-14, 75 NRC 692 (2012).

² LBP-11-10, 73 NRC 424 (2011).

³ *Id.* at 453.

⁴ *See generally* LBP-11-22, 74 NRC 259 (2011).

contention.⁵ We also held expressly that the Board’s earlier interlocutory orders now were ripe for appellate review, and directed that any such petition be filed within 15 days of our decision. BREDL’s “petition for review” followed. The NRC Staff opposes the petition.⁶

II. DISCUSSION

BREDL seeks review of CLI-12-14, and, particularly, requests that we reverse that decision and reinstate the Board’s ruling under which it would retain jurisdiction and hold open the record. BREDL does not appeal earlier interlocutory rulings in the *North Anna* case. Rather, at bottom, it seeks reconsideration of our decision in CLI-12-14 to close the record of this proceeding, and to require BREDL to move to reopen the record to raise new contentions. In substance, BREDL’s “petition for review” is a petition for reconsideration, and we therefore treat it as such. Our rules of practice governing requests for reconsideration are found in 10 C.F.R. §§ 2.323(e), 2.345, and 2.341(d), and we consider BREDL’s request under those rules.

However it is styled, BREDL’s motion is deficient. A petition for reconsideration may not be filed except upon leave of the adjudicatory body that rendered the decision.⁷ If leave is granted, the motion must demonstrate “a compelling circumstance, such as the existence of a clear and material error in a decision, which could not have reasonably been anticipated, which renders the decision invalid.”⁸ Such a motion should be based on an “elaboration of an argument already made, an overlooked controlling decision or principle of law, or a fac-

⁵ CLI-12-14, 75 NRC at 701-02. That contention currently is being held in abeyance. *See generally* Order (Granting Consent Motion to Hold BREDL’s New Contention in Abeyance) (Oct. 20, 2011) (unpublished) (Order on Consent Motion).

⁶ NRC Staff Answer in Opposition to the Blue Ridge Environmental Defense League Petition for Review of CLI-12-14 (July 2, 2012) (Staff Answer). Dominion did not file an answer.

⁷ BREDL has not sought leave to file its request for reconsideration. *See* 10 C.F.R. § 2.323(e). As we recently held, this procedural deficiency is reason enough to deny the request. *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-10-9, 71 NRC 245, 252 (2010). We do not suggest that leave must be granted prior to filing the petition; leave may be sought simultaneously with the petition itself. We also observe that BREDL’s request is out of time. Our rules of practice provide that reconsideration motions must be filed within 10 days of the action for which reconsideration is requested. *See* 10 C.F.R. §§ 2.323(e); 2.345(a)(1). *Compare* 10 C.F.R. § 2.341(b)(1) (providing 15 days for filing a petition for review). Our decision in CLI-12-14 was issued on June 7, 2012, and any reconsideration motion should have been filed by Monday, June 18, 2012. BREDL filed its request 4 days later. Lateness also is a sufficient ground on which to deny the request. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-05-19, 62 NRC 403, 409 (2005).

⁸ 10 C.F.R. § 2.345(b).

tual clarification.”⁹ It should not simply reargue matters which we have already considered but rejected.¹⁰ Upon examination, BREDL’s motion does not make a compelling case for reconsideration, because it has not pointed to any fact or legal principle that we overlooked in our original decision.

BREDL first argues that our regulation in 10 C.F.R. § 2.318(a) describes the only circumstances where a Board’s jurisdiction terminates, and that the resolution of the last pending contention in a proceeding is not one of the listed circumstances.¹¹ Therefore, BREDL argues, the Board’s “jurisdiction” did not terminate and, by extension, the contested proceeding did not terminate. But the Board first raised this argument in LBP-11-22, and we rejected it for reasons given in CLI-12-14.¹² In short, we did not — and do not — view section 2.318(a) as providing “an exhaustive list of every situation where Board jurisdiction lapses.”¹³ BREDL reiterates this argument, but offers no new reasoning or support for it.

BREDL next argues that it is unfair to close the record of the proceeding at this point, when neither the application nor the Staff review is final. BREDL argues that the COL application has undergone significant revisions (including a change in the referenced reactor design) in the time since its initial filing. Dominion is now in the process of determining the effect that an August 23, 2011, earthquake in Mineral, Virginia, will have on its application. In addition, the Staff’s review schedule has also undergone significant delays, and the estimated release dates for the Staff’s review reports are being revised.¹⁴ Therefore, BREDL claims, a ruling closing the record of the adjudicatory proceeding at this point is “erroneous, premature, and unfair.”¹⁵ This argument — that the evolving application and the Staff’s ongoing review compel holding the proceeding open until the review is complete — is not new.

In CLI-12-14, we addressed and rejected the argument that fairness requires holding the proceeding open in case a new issue — one not initially recognized by the intervenor itself — should arise in the course of the Staff’s review. We stated that the intervening party is not entitled to the Staff’s review documents as

⁹ *Private Fuel Storage*, CLI-05-19, 62 NRC at 410 (quoting *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-02-1, 55 NRC 1, 2 (2002)).

¹⁰ *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-18, 58 NRC 433, 434 (2003).

¹¹ The rule provides that the presiding officer’s jurisdiction terminates when the time period for the Commission to direct certification expires, when the Commission renders a final decision, and when the presiding officer withdraws from the case upon disqualifying himself. 10 C.F.R. § 2.318(a).

¹² See LBP-11-22, 74 NRC at 272-73; CLI-12-14, 75 NRC at 701.

¹³ CLI-12-14, 75 NRC at 701.

¹⁴ See Application for Review Schedule for the Combined License Application for North Anna, Unit 3, available at <http://www.nrc.gov/reactors/new-reactors/col/north-anna/review-schedule.html> (updated Mar. 29, 2012).

¹⁵ BREDL Petition at 5.

a “discovery tool.”¹⁶ On the contrary, the intervenor has the burden to identify any claimed shortcoming in the application, and cannot wait for the Staff’s review to raise issues. We continue to reject the argument that the proceeding ought to be kept open for no other reason than that the Staff’s ongoing review could possibly turn up a new, litigable issue. As we pointed out in CLI-12-14, the reopening rule is intended to allow interested parties the opportunity to raise significant new safety and environmental issues, even when the information upon which they are based comes late in the review process.¹⁷ In sum, we addressed BREDL’s argument when we ruled on CLI-12-14, and BREDL provides no reason to revisit this determination.

BREDL next cites a particular issue that it claims is currently open for resolution before the Board. In particular, BREDL argues that the Board found an exemption request related to seismic issues, which BREDL challenged in its proposed Contention 13, to be a matter “open to further adjudication.”¹⁸ But BREDL misrepresents the Board’s ruling in LBP-11-10. While the Board did find that Dominion’s exemption request was within the scope of the proceeding, the Board rejected BREDL’s contention because the contention did “not say what [was] improper about [Dominion’s exemption] request.”¹⁹ Thus, while the Board acknowledged that the exemption request was still under Staff review, it did not find the matter currently “open” for further adjudication.²⁰ At bottom, BREDL reiterates arguments previously made, without providing any additional

¹⁶ CLI-12-14, 75 NRC at 700-01 (citing *Union of Concerned Scientists v. NRC*, 920 F.2d 50, 55 (D.C. Cir. 1990)).

¹⁷ *Id.* at 700-01.

¹⁸ See BREDL Petition at 5 (citing LBP-11-10, 73 NRC at 452). Proposed Contention 13 was one of two contentions rejected in LBP-11-10. BREDL claimed that a requested exemption from the U.S. Advanced Pressurized Water Reactor Design Control Document, that would allow an exceedance of the peak ground acceleration for the certified design, was improper.

¹⁹ LBP-11-10, 73 NRC at 452.

²⁰ With respect to the August 23, 2011 earthquake — which occurred after the Board’s ruling — we recognized in CLI-12-14 that BREDL intends to propose a new contention relating to seismic issues after Dominion completes its ongoing analysis of the earthquake’s effect on its pending application. We directed the Board to rule on any motion to reopen to admit a new contention on that subject. CLI-12-14, 75 NRC at 701-02. By agreement of the parties, the Board has placed BREDL’s proposed contention concerning the August 2011 earthquake in abeyance until Dominion completes its analysis. Order on Consent Motion at 2. Dominion recently provided an update to the Board and parties on the expected schedule for its seismic assessment. See Lewis, David R., Counsel for Dominion, Letter to the Administrative Judges (June 19, 2012) (informing the Board that revisions to the Final Safety Analysis Report are expected to be complete by May 2013). Thereafter, BREDL will have 60 days to submit a motion to reopen the proceeding, as well as address the requirements of 10 C.F.R. § 2.309(c) and (f). Order (Setting Time for Filing Motion to Reopen the Proceeding) (July 26, 2012) (unpublished).

justification. BREDL therefore has not demonstrated compelling circumstances that render our decision in CLI-12-14 invalid.

Two other matters merit mention. BREDL argues that the question of spent fuel storage is unresolved in this proceeding.²¹ BREDL points to a petition filed in various proceedings — including this one — following a recent decision by the U.S. Court of Appeals for the District of Columbia Circuit, vacating our recently amended Waste Confidence Decision and associated Temporary Storage Rule.²² In June, several petitioners, including BREDL in this case, filed a petition asking (among other things) that we suspend issuance of any new or renewed operating licenses until the NRC has resolved the deficiencies in the waste confidence rule identified by the court.²³ We recently granted the relief requested in part, and denied it in part, finding, as relevant here, that “we will not issue licenses dependent upon the Waste Confidence Decision or the Temporary Storage Rule until the court’s remand is appropriately addressed.”²⁴

In a related vein, subsequent to filing the instant request BREDL moved to reopen the record of this proceeding to admit a new contention. BREDL argues that the environmental report associated with the COL application is inadequate, in that it does not discuss the environmental impacts of spent fuel storage after cessation of plant operations, nor does it discuss “[the failure] to establish a spent fuel repository,” in light of the court’s ruling in *State of New York v. NRC*.²⁵ Similar requests were filed on a number of dockets. We have held these requests in abeyance, pending our further direction.²⁶ We observe, however, that whatever our ultimate direction with respect to BREDL’s motion to reopen, a ruling reopening a proceeding with respect to a specific issue would not have the effect of reopening the proceeding for adjudication on unrelated matters — once a record is closed, each new issue is subject to consideration under the

²¹ BREDL Petition at 6.

²² *Id.* (citing *State of New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012)). The court rendered its decision on June 8, 2012 — the day after we decided CLI-12-14.

²³ See Petition to Suspend Final Decisions in All Pending Reactor Licensing Proceedings Pending Completion of Remanded Waste Confidence Proceedings (filed by BREDL on this docket June 18, 2012).

²⁴ *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63, 67 (2012).

²⁵ See generally Motion to Reopen the Record for North Anna Unit 3 and Intervenors’ Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at North Anna Unit 3 (July 9, 2012); Zeller, Louis A., Letter to the Secretary of the Commission (July 10, 2012).

²⁶ *Calvert Cliffs*, CLI-12-16, 76 NRC at 68-69.

reopening standards.²⁷ The pendency of the motion to reopen is not a basis for us to reconsider our ruling in CLI-12-14 today.

III. CONCLUSION

For the reasons discussed above, we *deny* BREDL's petition.
IT IS SO ORDERED.

For the Commission²⁸

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 25th day of September 2012.

²⁷ See, e.g., *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-02-22, 56 NRC 213, 227-28 (2002).

²⁸ Section 201 of the Energy Reorganization Act, 42 U.S.C. § 5841, provides that action of the Commission shall be determined by a "majority vote of the members present." Commissioner Apostolakis was not present when this item was affirmed. Accordingly the formal vote of the Commission was 4-0 in favor of the decision. Commissioner Apostolakis, however, previously had indicated that he would approve this Order.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Michael M. Gibson, Chairman
Dr. Anthony J. Baratta
Dr. Mark O. Barnett

In the Matter of

Docket No. 52-042
(ASLBP No. 11-908-01-ESP-BD01)

EXELON NUCLEAR TEXAS
HOLDINGS, LLC
(Victoria County Station Site)

September 5, 2012

In this Order, the Board granted Exelon Nuclear Texas Holdings, LLC's motion to withdraw its pending early site permit application without prejudice or imposition of any additional terms. Intervenor, Texans for a Sound Energy Policy, and the NRC Staff did not oppose the motion.

WITHDRAWAL

Withdrawal of an application after a notice of hearing is permitted on such terms as the presiding officer may prescribe.

WITHDRAWAL

When a motion to withdraw an application is unopposed and the withdrawal causes no apparent harm to the public or any party, it is appropriate to grant the motion without prejudice or imposition of additional terms.

ORDER
(Granting Unopposed Motion to Withdraw Application
Without Prejudice and Terminating the Proceeding)

On August 29, 2012, Exelon Nuclear Texas Holdings, LLC (Exelon) moved, pursuant to 10 C.F.R. §§ 2.107(a) and 2.323(a), to withdraw its pending early site permit (ESP) application for its proposed Victoria County Station Site.¹ Exelon requested that dismissal be granted without prejudice and without the imposition of additional terms.² Neither the sole intervenor, Texans for a Sound Energy Policy (TSEP), nor the NRC Staff opposes the motion.³

Our regulations state that “[w]ithdrawal of an application after the issuance of a notice of hearing⁴ shall be on such terms as the presiding officer may prescribe.”⁵ Because the motion is unopposed, and because nothing in the record before us suggests that any party, or the public interest in general, has sustained any harm as a consequence of the pendency of, or Exelons prosecution of, the Victoria Station ESP application,⁶ we GRANT Exelons unopposed motion to withdraw its application without prejudice and impose no additional terms. This proceeding is hereby terminated.

¹ Unopposed Motion to Withdraw Application Without Prejudice (Aug. 29, 2012).

² *Id.* at 1.

³ *Id.* at 2.

⁴ TSEP filled a petition to intervene in response to the Commissions November 23, 2010 Notice of Hearing and Opportunity to Petition for Leave to Intervene. 75 Fed. Reg. 71,467 (Nov. 23, 2010).

⁵ 10 C.F.R. § 2.107(a).

⁶ See *Philadelphia Electric Co.* (Fulton Generating Station, Units 1 and 2), ALAB-657, 14 NRC 967, 978-79 (1981); see also *Puerto Rico Electric Power Authority* (North Coast Nuclear Plant, Unit 1), ALAB-662, 14 NRC 1125, 1133 (1981).

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Michael M. Gibson, Chairman
ADMINISTRATIVE JUDGE

Dr. Anthony J. Baratta
ADMINISTRATIVE JUDGE

Dr. Mark O. Barnett
ADMINISTRATIVE JUDGE

Rockville, Maryland
September 5, 2012

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Paul S. Ryerson, Chairman
Dr. James F. Jackson
Dr. Michael O. Garcia

In the Matter of

Docket No. 70-7016-ML
(ASLBP No. 10-901-03-ML-BD01)

GE-HITACHI GLOBAL LASER
ENRICHMENT LLC
(GLE Commercial Facility)

September 19, 2012

In this Initial Decision, the Atomic Safety and Licensing Board (the Board) determines that the NRC Staff conducted an adequate review of GE-Hitachi Global Laser Enrichment, LLC's (GLE's) application for a license to possess and use source, byproduct, and special nuclear material and to enrich natural uranium to a maximum of 8% ²³⁵U by a laser-based enrichment process. The Board was directed to conduct a mandatory hearing pursuant to section 193b(1) of the Atomic Energy Act, which was conducted in several stages and allowed the Board to probe issues of concern throughout the proceeding. The Board concluded that the application and record contained sufficient information to support issuance of GLE's requested license and that the Staff's review of the application was adequate to support its independent safety and environmental findings. The Board also independently considered the final balance among conflicting environmental costs and benefits and found the proposed action preferable. Thus, the Board authorizes the Directors of the Office of Nuclear Materials Safety and Safeguards and of the Office of Federal and State Materials and Environmental Management Programs to license the GLE facility when each makes all required findings not within the scope of the Board's decision.

ATOMIC ENERGY ACT

Section 193b(1) of the Atomic Energy Act states that the Commission shall conduct a single adjudicatory hearing on the record with regard to the licensing of the construction and operation of a uranium enrichment facility.

MANDATORY HEARINGS

Licensing boards conducting mandatory hearings on uncontested issues must take an independent hard look at NRC Staff safety and environmental findings without replicating the NRC Staff's work.

MANDATORY HEARINGS

Licensing boards conducting mandatory hearings should conduct a sufficiency review of uncontested issues, not a *de novo* review.

MANDATORY HEARINGS

Licensing boards conducting mandatory hearings should not second-guess the underlying technical or factual findings by the NRC Staff.

MANDATORY HEARINGS

While safety issues are reviewed under the adequacy and sufficiency standard, licensing boards conducting mandatory hearings must independently consider the final balance among the conflicting costs and benefits when reviewing National Environmental Policy Act (NEPA) issues.

DESIGN

The level of detail required for a licensing decision does not require a final facility design or an absolutely complete identification of all items relied on for safety and accident sequences, but instead sufficient information must be provided to understand the process and functions of items relied on for safety and to afford reasonable assurance that the integrated safety analysis is complete.

ATOMIC ENERGY ACT

Nuclear proliferation and terrorism are addressed in very specific ways by the NRC. The Atomic Energy Act grants the NRC broad regulatory authority to address issues of defense, security, unauthorized disclosure of protected informa-

tion, diversion of nuclear materials, and materials control as part of its delegation of licensing authority. Although the Act does not grant express nonproliferation authority, key NRC regulations, such as 10 C.F.R. Parts 73, 74, and 95, clearly have nonproliferation, security, and terrorism objectives.

NATIONAL ENVIRONMENTAL POLICY ACT

NEPA requires a reasonably close causal relationship between an environmental effect and the alleged cause. The Commission has determined there is no such relationship between NRC licensing actions and terrorism.

NATIONAL ENVIRONMENTAL POLICY ACT

In the NEPA context, the Commission has determined that nuclear nonproliferation issues are far removed from the NRC's decision to license a uranium enrichment facility.

WASTE CONFIDENCE RULE

The Waste Confidence Rule facially does not apply to uranium enrichment facilities.

MANDATORY HEARINGS

The Atomic Energy Act does not prescribe a specific structure for mandatory hearings, and the Commission has granted licensing boards considerable flexibility to select the most appropriate approach in the circumstances of each individual case.

MANDATORY HEARINGS

Licensing boards should concentrate on a relatively thorough examination of selected issues of concern, rather than undertake a comparatively shallow analysis of all possible issues.

EVIDENCE

Formal rules of evidence rarely have a useful role in licensing board proceedings. NRC regulations state that strict rules of evidence do not apply to written submissions.

EVIDENCE

In licensing board cases, written prefiled testimony and exhibits are typically submitted well in advance of the evidentiary hearing, and in the most common types of hearings, the licensing boards themselves — not the parties — orally examine the witnesses. Therefore, rulings excluding evidence have little effect in eliminating delay, waste of time, or the needless presentation of cumulative evidence in the record.

EVIDENCE

If a licensing board deems prefiled evidence to be of little or no value, it simply need not ask about it at the evidentiary hearing and is free to accord such evidence little or no weight.

WITNESSES

A licensing board may exclude witness from the hearing room during the testimony of other witnesses testifying on the same topic.

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LIST OF ACRONYMS AND ABBREVIATIONS¹

ADAMS	Agencywide Documents Access and Management System
ALARA	as low as is reasonably achievable
ASLB(P)	Atomic Safety and Licensing Board (Panel)

¹In an effort to comply with the Plain Language Act of 2010 and in recognition of the Court of Appeals for the D.C. Circuit's admonition against "abbreviating every conceivable agency and statute involved, familiar or not," we have attempted to limit our use of acronyms and abbreviations and have strived to use only those likely to be familiar to our readers. *See National Association of Regulatory Utility Commissioners v. Department of Energy*, 680 F.3d 819, 820 n.1 (D.C. Cir. 2012).

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DPO	differing professional opinion
ER	environmental report
ERI Report	A Detailed Review of the Need for Future Enrichment Capability — Response to ASLB 5A (Energy Resources International, Inc.)
°F	degrees Fahrenheit
FEIS	final environmental impact statement
GLE	GE-Hitachi Global Laser Enrichment, LLC
GNF-A	Global Nuclear Fuel — Americas
GWe	gigawatt-electric
HF	hydrogen fluoride
IROFS	items relied on for safety
ISA/ISA Summary	integrated safety analysis/integrated safety analysis summary
k_{eff}	effective neutron multiplication factor
MOX	mixed oxide
mph	miles per hour
NaF	sodium fluoride
NEPA	National Environmental Policy Act
NRC	U.S. Nuclear Regulatory Commission
NUREG-1520	NUREG-1520, “Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility”
pH	measure of the molar concentration of hydrogen ions
rem	roentgen equivalent man
SER	safety evaluation report
SWU	separative work unit
$^{235}\text{U}/\text{U}-235$	uranium-235
$\text{UF}_6/\text{UF}-6$	uranium hexafluoride
UO_2F_2	uranyl fluoride
USEC	United States Enrichment Corporation
USGS	U.S. Geological Survey

INITIAL DECISION

Before the Atomic Safety and Licensing Board (the Board) is an application from GE-Hitachi Global Laser Enrichment LLC (GLE or the Applicant) for a license to possess and use source, byproduct, and special nuclear material and to

enrich natural uranium to a maximum of 8% ²³⁵U by a laser-based enrichment process at a facility that would be located near the City of Wilmington in New Hanover County, North Carolina.² GLE's proposed facility would occupy approximately 100 acres on a 1621-acre site owned by GLE's affiliate General Electric Company.³ The Wilmington site, which is zoned for heavy industrial use, is currently the location of other General Electric manufacturing facilities, including a nuclear fuel fabrication facility.⁴ Using a first-of-a-kind laser process, the proposed GLE facility would enrich uranium for use in commercial power reactors.

Pursuant to section 193b(1) of the Atomic Energy Act, this Board was constituted to conduct a mandatory hearing concerning GLE's proposed facility.⁵ As explained *infra*,⁶ licensing boards have an "important but limited role" in such proceedings.⁷ The Commission expects "licensing boards conducting mandatory hearings on uncontested issues to take an independent 'hard look' at NRC Staff safety and environmental findings."⁸ However, licensing boards are "not to replicate NRC Staff work."⁹ The Commission has directed that licensing boards "should conduct a simple 'sufficiency' review of uncontested issues, not a *de novo* review."¹⁰

Likewise, as directed by the Commission, our review is limited to safety and environmental issues that are specific to the proposed facility. This Board's review does not broadly extend to other issues, such as national and international nuclear nonproliferation policy, that are unrelated to the NRC's licensing criteria.

After reviewing the Final Environmental Impact Statement (FEIS) and Safety Evaluation Report (SER) prepared by the NRC Staff (including the license conditions imposed by the Staff), the prefiled testimony and exhibits filed by the Staff and the Applicant, the oral testimony heard over the course of a 2-day evidentiary hearing, and the complete record of this proceeding, the Board finds that the application and record of this proceeding contain sufficient information to support issuance of GLE's requested license and that the Staff's review of the application has been adequate to support its independent safety and environmental findings. We have also independently considered the final balance

² 75 Fed. Reg. 1819, 1820 (Jan. 13, 2010).

³ Ex. NRC003A at 2-2.

⁴ *Id.* at xxviii, 2-2.

⁵ Establishment of Atomic Safety and Licensing Board (Apr. 20, 2010); *see also* 75 Fed. Reg. 21,660 (Apr. 26, 2010).

⁶ *See infra* Section II.A.

⁷ *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-17, 62 NRC 5, 41 (2005).

⁸ *Id.* at 34.

⁹ *Id.*

¹⁰ *Id.* at 39.

among conflicting environmental and other factors with a view to determining the appropriate action to be taken. Therefore, pursuant to 10 C.F.R. § 2.340(k), we authorize the Directors of the Office of Nuclear Materials Safety and Safeguards and of the Office of Federal and State Materials and Environmental Management Programs to license construction and operation of GLE's proposed facility when each has made all findings necessary for license issuance that are not within the scope of this Initial Decision.¹¹

I. BACKGROUND

GLE, in which both Japanese and Canadian corporations hold indirect minority interests, is an indirect subsidiary of American corporation General Electric Company.¹² On January 30, 2009, pursuant to an exemption allowing it to file its environmental report (ER) in advance of its license application, GLE submitted its ER to the NRC.¹³ On June 26, 2009, GLE submitted the remainder of its application.¹⁴

The Commission published a Notice of Hearing in the *Federal Register* on January 13, 2010.¹⁵ No petitions to intervene under 10 C.F.R. § 2.309, petitions to participate as an interested governmental entity under 10 C.F.R. § 2.309(d)(2),

¹¹ For example, we received testimony at the evidentiary hearing that GLE was missing a consistency determination from the State of North Carolina concerning GLE's compliance with the Coastal Zone Management Act, and that the NRC could not issue a license until that (and all other) permitting issues had been resolved. Tr. at 37-38 (7/12/12 Hearing). *See also* 10 C.F.R. § 2.340(k)(1). Subsequently, the Board was informed that GLE had received the consistency determination from the North Carolina Department of Environment and Natural Resources. Letter from Marcia J. Simon, Counsel for the NRC Staff, to the Licensing Board (Aug. 21, 2012).

¹² Specifically, GLE is a Delaware limited liability company and is a subsidiary of majority owner and Delaware limited liability company GE-Hitachi Nuclear Energy Americas LLC, which is a wholly owned subsidiary of GE-Hitachi Nuclear Energy Holdings LLC. GE-Hitachi Nuclear Energy Holdings LLC is a subsidiary of majority owner GENE Holding LLC and minority owner Hitachi America, Ltd. GENE Holding LLC, also a Delaware limited liability company, is wholly owned by General Electric Company, a United States corporation incorporated in New York. Hitachi America is a wholly owned subsidiary of Hitachi Ltd., a Japanese corporation. GLE also has two minority owners, GENE Holding LLC and Cameco Enrichment Holdings, LLC, a Delaware limited liability company wholly owned by Cameco US Holdings, Inc., a Nevada corporation, which is in turn wholly owned by Cameco Corporation, a Canadian corporation. General Electric Company, through its wholly owned and majority-owned subsidiaries, has a 51% indirect interest in GLE. GLE's minority owners Hitachi Ltd. and Cameco Corporation have indirect interests of 25% and 24%, respectively. 75 Fed. Reg. at 1820.

¹³ *See* Ex. GLE0006A-H; Ex. NRC075; Ex. NRC076. GLE submitted a supplement to its ER on July 13, 2009. *See* Exs. GLE008, GLE009.

¹⁴ *See* Exs. GLE004A-D & GLE005.

¹⁵ *See* 75 Fed. Reg. at 1819.

or requests to make a limited appearance pursuant to 10 C.F.R. § 2.315(a) were submitted.¹⁶ On April 15, 2010, the Commission referred this matter to the Atomic Safety and Licensing Board Panel for an uncontested, mandatory hearing,¹⁷ and on April 20, 2010, this Board was established.¹⁸

A. Hearing Schedule and NRC Staff Delays

The Commission's Notice of Hearing stated that "[t]he Licensing Board's initial decision with respect to either a contested adjudicatory hearing or an uncontested, mandatory hearing should be issued no later than 28½ months from the date of this Order [Jan. 7, 2010]."¹⁹ Because of a series of delays by the Staff of the expected issuance dates for the SER and FEIS, however, meeting that milestone was not possible. Collectively, the Staff's delays extended issuance of these documents by more than a year.

On May 11, 2010, we asked the Staff to notify the Board of its best estimates of the Staff's projected schedule for issuing its FEIS and SER.²⁰ On May 27, 2010, the Staff replied, estimating that "it will issue the final environmental impact statement (FEIS) in February 2011, and the final safety evaluation report (SER) in December 2010."²¹

Based on suggestions from the parties,²² on September 13, 2010, the Board issued an initial scheduling order.²³ The Board contemplated an evidentiary hearing in early August 2011 and issuance of an initial decision on October 31, 2011 — well within the deadline set by the Commission.²⁴ In November 2010, however, the Staff submitted the first of several notifications that its license review schedule had been delayed — notifying the Board that the SER would now

¹⁶ *Id.* at 1821.

¹⁷ Memorandum from Annette L. Vietti-Cook to E. Roy Hawken, Chief Administrative Judge, Atomic Safety and Licensing Board Panel (Apr. 15, 2010) (referring this matter to the Atomic Safety and Licensing Board Panel for hearing).

¹⁸ Establishment of Atomic Safety and Licensing Board (Apr. 20, 2010).

¹⁹ 75 Fed. Reg. at 1824.

²⁰ Licensing Board Order (Concerning Scheduling) (May 11, 2010) at 1 (unpublished).

²¹ Letter from Carrie M. Safford, Counsel for the NRC Staff, to the Licensing Board (May 27, 2010).

²² The Applicant proposed a schedule that called for an initial decision by October 18, 2011. Applicant's Proposed Hearing Schedule (Aug. 24, 2010) at 4. The Staff did not object. NRC Staff's Comments on Applicant's Proposed Hearing Schedule (Sept. 2, 2010) at 1 (commenting that the Staff's proposed schedule only diverged with the Applicant in that the Staff was in favor of the parties having the opportunity to file Proposed Findings of Fact and Conclusions of Law).

²³ Licensing Board Initial Scheduling Order (Sept. 13, 2010) at 6 (unpublished) [hereinafter Initial Scheduling Order].

²⁴ *Id.*

be issued in February 2011.²⁵ On January 14, 2011, the Board received another such notification — this time stating that both the SER and the FEIS would be issued in April 2011.²⁶

After consulting the parties,²⁷ the Board issued a First Revised Scheduling Order that contemplated a hearing to be held in November 2011 and the Board's Initial Decision to be issued on January 31, 2012.²⁸ On April 14, 2011, the Staff again notified the Board of a delay — both the SER and FEIS would now be issued in June 2011.²⁹ In response, the Board issued a Second Revised Scheduling Order, delaying the schedule set forth in the First Revised Scheduling Order by approximately 2 months, and observing that this adjustment “should still allow the Board to issue its Initial Decision more than a month in advance of the deadline set by the Commission.”³⁰ On May 31, 2011, the Staff notified the Board of another delay — this time extending the date of issuance for the SER and FEIS to September 7, 2011.³¹ In light of this notification, the Board again revised the schedule — reducing the time periods for several interim milestones in order to ensure compliance with the Commission's 28 1/2-month deadline for an Initial Decision.³²

On September 6, 2011, one day before the Staff's environmental and safety documents were promised, the Board received another notification from the Staff — announcing that the SER and FEIS issuance would be delayed until February 29, 2012.³³ In light of this fifth announcement of delay, by which the Staff had extended expected issuance of the SER by 14 months and of the FEIS by 12 months from the Staff's initial estimates, the Board issued a Notice to the Commission, stating that “the Board's initial decision with respect to this uncontested, mandatory hearing will likely not be issued within 28 1/2

²⁵ Letter from Carrie M. Safford, Counsel for the NRC Staff, to the Licensing Board (Nov. 23, 2010).

²⁶ Letter from Molly Barkman Marsh, Counsel for the NRC Staff, to the Licensing Board (Jan. 14, 2011). In a January 2011 teleconference, the Staff told the Board that the April 2011 release dates were “reasonably firm.” Tr. at 5 (1/20/11 Teleconference).

²⁷ Tr. at 8-13 (1/20/11 Teleconference); Applicant's Revised Proposed Hearing Schedule (Jan. 26, 2010); NRC Staff's Comments on Applicant's Revised Proposed Hearing Schedule (Feb. 2, 2011).

²⁸ Licensing Board First Revised Scheduling Order (Feb. 9, 2011) at 7 (unpublished) [hereinafter First Revised Scheduling Order].

²⁹ Letter from Marcia J. Simon, Counsel for the NRC Staff, to the Licensing Board (Apr. 14, 2011).

³⁰ Licensing Board Order (Second Revised Scheduling Order) (May 4, 2011) at 1 (unpublished) [hereinafter Second Revised Scheduling Order].

³¹ Letter from Marcia J. Simon, Counsel for the NRC Staff, to the Licensing Board (May 31, 2011).

³² Licensing Board Third Revised Scheduling Order (June 6, 2011) at 3 (unpublished) [hereinafter Third Revised Scheduling Order]. This schedule proposed a hearing in February 2012, and an Initial Decision to be issued by the Board by May 10, 2012. *Id.* at 7.

³³ Letter from Carrie M. Safford, Counsel for the NRC Staff, to the Licensing Board (Sept. 6, 2011).

months from the date of [the Notice of Hearing].”³⁴ As the Board explained in its Notice, because of the NRC Staff’s repeated delays, compliance with the Commission’s original deadline “would require the Board to review the SER and FEIS, conduct a mandatory hearing, and issue our initial decision approximately ten weeks after the Staff documents first become available.”³⁵ In the Board’s view, such an abbreviated schedule would make it impossible to comply with the Commission’s direction to take “an independent ‘hard look’ at NRC Staff safety and environmental findings,”³⁶ and thereby undertake “the kind of ‘truly independent review’ that Congress anticipated when it established the mandatory hearing requirement.”³⁷

On October 5, 2011, the Board issued a Fourth Revised Scheduling Order, which further compressed the schedule initially agreed upon by the parties and established an aggressive schedule that now contemplated an evidentiary hearing in mid-July 2012 and an Initial Decision by August 31, 2012.³⁸

On February 28, 2012, the Staff finally issued both the SER and the FEIS.³⁹ In the SER, the NRC Staff determined that, subject to certain license conditions identified by the Staff, the application provided an adequate basis for concluding that operation of the proposed facility would not pose an undue risk to worker and public health and safety.⁴⁰ In the FEIS, the NRC Staff concluded that the overall benefits of the proposed facility outweigh the environmental disadvantages and costs, and recommended (unless safety issues mandate otherwise) that the proposed license be issued to GLE.⁴¹

B. Other Events Prior to Issuance of the SER and FEIS

Meanwhile, the Board was aware of the importance of properly handling the classified information and other nonpublic information involved in this proceeding. On August 25, 2010, the Board asked the Commission to designate a representative to advise and assist the Board “with respect to security classifica-

³⁴ Licensing Board Notice to the Commission (Expected Date for Initial Decision) (Sept. 9, 2011) at 1 (unpublished).

³⁵ *Id.* at 2.

³⁶ *National Enrichment Facility*, CLI-05-17, 62 NRC at 34.

³⁷ *Id.* at 40 (internal citation omitted).

³⁸ Licensing Board Fourth Revised Scheduling Order (Oct. 5, 2011) at 4, 8 (unpublished) [hereinafter Fourth Revised Scheduling Order].

³⁹ See Ex. NRC001 [Public SER] & Ex. NRC003A-B. The Staff also released a nonpublic SER, which the Board reviewed. See Ex. NRC002.

⁴⁰ Ex. NRC001, at iii, xvii.

⁴¹ Ex. NRC003A, at 2-65.

tion of information and safeguards to be observed,”⁴² and on September 10, 2010, the Commission did so.⁴³

At the suggestion of the Applicant,⁴⁴ the Board arranged to visit the site of the proposed Wilmington facility. The purpose of the visit, which took place on September 28, 2011,⁴⁵ was “to allow the Board to view the technology, the test loop, and the site area set aside for the commercial facility” and was “conducted in accordance with General Electric-Hitachi’s normal site security and safety procedures.”⁴⁶ The NRC Staff also participated.⁴⁷

C. Events Subsequent to Issuance of the FEIS and SER

Upon receipt of the FEIS and SER, the Board began its review of both documents in March 2012. On April 4, 2012, the Board issued its Board Initial Questions Order, which asked of the parties seventy-four questions that were raised by the Staff documents.⁴⁸ The Board also indicated its expectation that the Board would address the issues of “criticality, radiological and chemical safety in some detail” at the evidentiary hearing.⁴⁹ On May 2, 2012, in accordance with the Board’s Initial Questions Order, the parties responded to the Board’s initial written questions.⁵⁰

⁴² Licensing Board Request to Commission (Seeking Designation of Representative to Advise and Assist Licensing Board with Respect to Classification of Information and Safeguards to Be Observed) (Aug. 25, 2010) at 1-2 (unpublished).

⁴³ Commission Order (Sept. 10, 2010) (unpublished).

⁴⁴ Tr. at 21 (8/19/10 Teleconference).

⁴⁵ The site visit was first scheduled for May 24, 2011, but was delayed twice in light of the repeated delays to the scheduled issuance of the FEIS and SER, which the Board initially hoped to review prior to the visit. Licensing Board Order (Scheduling Site Visit) (Mar. 30, 2011) at 1 (unpublished) [hereinafter Initial Site Visit Order]. See also First Revised Scheduling Order at 4; Second Revised Scheduling Order at 2; Third Revised Scheduling Order at 5; Tr. at 17-18 (9/22/11 Teleconference).

⁴⁶ Initial Site Visit Order at 1.

⁴⁷ Fourth Revised Scheduling Order at 6.

⁴⁸ Licensing Board Memorandum and Order (Initial Board Questions and Associated Administrative Directives) (Apr. 4, 2012), Attach. A & B (unpublished) [hereinafter Board Initial Questions Order]. The Staff later requested clarification of several of the Board’s questions. See NRC Staff’s Request for Clarification Regarding Initial Board Questions (Apr. 11, 2012). The Board granted that request. See Licensing Board Order (Granting the NRC Staff’s Request for Clarification) (Apr. 13, 2012) (unpublished).

⁴⁹ Board Initial Questions Order at 2.

⁵⁰ NRC Staff Response to the Licensing Board’s Initial Questions (May 2, 2012) [hereinafter Staff Initial Question Responses — Public]; NRC Staff Non-Publicly Available Response to Licensing Board’s Questions Regarding the SER (May 2, 2012) [hereinafter Staff Initial Question Responses — Nonpublic]; GE-Hitachi Global Laser Enrichment Responses to Initial Board Questions (Public) (Continued)

After reviewing the parties' answers to the Board's initial written questions, the Board concluded that many of the parties' answers resolved its concerns on a given issue and established an adequate record.⁵¹ As contemplated by the Fourth Revised Scheduling Order,⁵² the Board identified issues on which it still had questions and wished to review "more detailed and integrated prefiled testimony and exhibits."⁵³ The six major topics identified by the Board were: (1) Criticality Safety and Chemical/Radiological Hazard Evaluation; (2) Licensing an Evolving Design; (3) Safety Impact of External Hazards; (4) Tracking and Implementation of Applicant Commitments; (5) Need/Alternatives/Environmental Cost-Benefit Analysis; and (6) Environmental Monitoring Program.⁵⁴ The Board also encouraged the parties to supplement their formal prefiled written testimony with brief summaries to provide the Board with broad overviews of areas of remaining concern.⁵⁵

Between June 19 and June 25, 2012, the Staff and Applicant filed their prefiled written testimony, exhibits, and summaries as directed by the Board's Prefiled Testimony Order.⁵⁶ On June 28, 2012, the Board conducted a prehearing teleconference (for which "listen only" lines were made available to members of the public and to the press) to discuss administrative details concerning the evidentiary hearing, including security protocols and logistics.⁵⁷

An especially important issue addressed at the prehearing conference was whether to allow the public to attend the evidentiary hearing. Throughout the proceeding, the Board has handled all classified and other nonpublic information in accordance with 10 C.F.R. Part 2, Subpart I and other applicable provisions.⁵⁸

Version) (May 2, 2012) [hereinafter GLE Initial Question Responses — Public]; GE-Hitachi Global Laser Enrichment Responses to Initial Board Questions (Non-Public Version) (May 2, 2012) [hereinafter GLE Initial Question Responses — Nonpublic].

⁵¹ Licensing Board Memorandum and Order (Identifying Areas for Prefiled Testimony) (May 16, 2012) at 2 (unpublished) [hereinafter Prefiled Testimony Order].

⁵² Fourth Revised Scheduling Order at 6-7.

⁵³ Prefiled Testimony Order at 2.

⁵⁴ *Id.* at 2-6 (highlighting subquestions on which the parties should focus their testimony for each topic heading).

⁵⁵ *Id.* at 7. On May 21, 2012, GLE filed a motion for extension of time to file written testimony, exhibits, and proposed findings. GE-Hitachi Global Laser Enrichment's Motion for Extension of Time to File Written Testimony, Exhibits and Proposed Findings (May 21, 2012). The Board granted the request as to the extension of the prefiled written testimony and supporting exhibits, which extended the filing date by 1 week to June 25, 2012. This change did not affect the hearing dates. Licensing Board Order (Granting in Part and Denying in Part Motion for Extension of Time) (May 22, 2012) at 1-2 (unpublished).

⁵⁶ Prefiled Testimony Order at 6-8.

⁵⁷ Licensing Board Order (Setting Prehearing Teleconference) at 1-2 (June 15, 2012) (unpublished).

⁵⁸ First Revised Scheduling Order at 3.

Additionally, the Board entertained suggestions from the parties on how best to navigate the complexities of the classified and nonpublic information in the context of a public proceeding.⁵⁹ Despite a desire to hold at least part of the hearing in North Carolina (and open to the public) and after discussions with the parties on how that might have been feasible,⁶⁰ the Board had nonetheless previously concluded that the hearing should be held in the Atomic Safety and Licensing Board Panel's Hearing Room in NRC's headquarters in Rockville, Maryland, due to the need to thoroughly examine the safety issues presented by this first-of-a-kind facility.⁶¹ After receiving testimony and exhibits that contained classified information, in accordance with the wishes of both the Applicant and the NRC Staff, the Board determined, pursuant to 10 C.F.R. § 2.328 and §§ 2.900 to 2.913, that the oral portion of the proceeding should be closed to the public to allow for the free-ranging and thorough examination of witnesses and to ensure the effective safeguard and prevention from disclosure of Restricted Data as mandated by section 181 of the Atomic Energy Act.⁶²

During the prehearing conference, the Board also asked the parties to submit legal briefs concerning the significance to this proceeding, if any, of the recent decision of the United States Court of Appeals for the District of Columbia Circuit in *New York v. NRC*.⁶³ In response, the parties submitted briefs on July 10 and 11, 2012.⁶⁴

On July 6, 2012, a request was submitted to the Board by e-mail, on behalf of the Alliance for Nuclear Accountability in Columbia, South Carolina, to open

⁵⁹ *Id.* at 4. See also Proposed Procedures for Hearing Involving Classified Information (Apr. 11, 2012); Licensing Board Order (Concerning GLE's Proposed Procedures for Hearing) (Apr. 17, 2012) (unpublished); Proposed Procedures for Submitting Documents Containing Export Controlled Information (Apr. 26, 2012); Licensing Board Order (Concerning the NRC Staff's Proposed Procedures for Submitting Documents) (Apr. 27, 2012) (unpublished).

⁶⁰ See Initial Scheduling Order at 5; First Revised Scheduling Order at 5-6; Third Revised Scheduling Order at 6; Tr. at 10-11 (9/22/11 Teleconference); Fourth Revised Scheduling Order at 7.

⁶¹ Licensing Board Fifth Revised Scheduling Order (Apr. 4, 2012) at 1 (unpublished).

⁶² 42 U.S.C. § 2231.

⁶³ *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012). See *infra* Section II.D.

⁶⁴ GE-Hitachi Global Laser Enrichment, LLC's Brief on the Applicability to the Above Captioned Proceeding of the D.C. Circuit's Decision in *New York v. NRC*, No. 11-1045 (D.C. Cir. June 8, 2012) (July 10, 2012) [hereinafter GLE WCD Brief]; NRC Staff Response to Board Question Regarding the Recent D.C. Circuit Order Vacating the 2010 Waste Confidence Rule (July 11, 2012) [hereinafter Staff WCD Brief].

portions of the oral evidentiary hearing to the public.⁶⁵ For reasons explained *infra*,⁶⁶ the Board denied the request at the outset of the evidentiary hearing.⁶⁷

The Board conducted the evidentiary hearing on July 11 and 12, 2012. All twenty-four witnesses who had submitted prefiled testimony were present and available to answer the Board's questions. As confirmed in a subsequent order,⁶⁸ the Board admitted in substance and without objection all prefiled exhibits submitted by either party.

Thereafter, on July 27, 2012, the Applicant submitted followup responses to certain Board questions at the hearing,⁶⁹ and the Applicant and the NRC Staff submitted a joint motion for proposed transcript corrections.⁷⁰ On July 30, 2012, the Board accepted the proposed transcript corrections and closed the evidentiary record.⁷¹ On August 27, 2012, the Board provided notice that its Initial Decision would issue in September 2012.⁷²

II. LEGAL STANDARDS

As amended in 1990, section 193b(1) of the Atomic Energy Act states that “[t]he Commission shall conduct a single adjudicatory hearing on the record with regard to the licensing of the construction and operation of a uranium enrichment

⁶⁵ E-mail from Tom Clements, Nonproliferation Policy Director, Alliance for Nuclear Accountability to Judge Paul S. Ryerson, Chair, Judge James F. Jackson, and Judge Michael O. Garcia, Atomic Safety and Licensing Board (July 6, 2012, 15:04 EST) (copied to the service list and posted on the Electronic Hearing Docket).

⁶⁶ See *infra* Section III (explaining the Board's reasons for closing the evidentiary hearing to the public).

⁶⁷ In addition to having sound reasons for closing the evidentiary hearing in its entirety, which are more fully explained *infra*, the Board also notes that the request to open the hearing was submitted 3 business days before the hearing was scheduled to begin, on behalf of a party that had never previously elected to participate in this proceeding in any capacity, despite ample opportunity to do so. 75 Fed. Reg. at 1821-22.

⁶⁸ Licensing Board Order (Concerning Evidence Admitted During Hearing) (July 18, 2012) at 1-2 (unpublished). See also Licensing Board Order (Admitting Revised Board Exhibit) (July 30, 2012) at 1 (unpublished).

⁶⁹ GE-Hitachi Global Laser Enrichment's Follow-Up Responses to Board Inquiries (July 27, 2012) [hereinafter GLE Follow-Up].

⁷⁰ Joint GE-Hitachi Global Laser Enrichment and NRC Staff Motion for Proposed Transcript Corrections (July 27, 2012).

⁷¹ Licensing Board Order (Granting Joint Motion for Proposed Transcript Corrections) (July 30, 2012) at 1 (unpublished).

⁷² Licensing Board Notice of Expected Date of Initial Decision (Aug. 27, 2012) (unpublished).

facility. . . .”⁷³ NRC regulations have implemented this provision through 10 C.F.R. §§ 70.23a and 70.31(e). Section 70.23a reads:

The Commission will hold a hearing under 10 CFR part 2, subparts A, C, G, and I, on each application for issuance of a license for construction and operation of a uranium enrichment facility. The Commission will publish public notice of the hearing in the Federal Register at least thirty (30) days before the hearing.⁷⁴

Section 70.31(e) states that “[n]o license to construct and operate a uranium enrichment facility may be issued until a hearing pursuant to 10 CFR part 2, subparts G and I, is completed and decision issued on the application.”⁷⁵

While Part 70 of title 10 of the Code of Federal Regulation establishes the general regulatory framework applicable to the licensing, construction, and operation of a uranium enrichment facility, the Commission noted that many regulations in 10 C.F.R. Chapter I are applicable to the proposed GLE license, including “10 C.F.R. parts 19, 20, 21, 25, 30, 40, 51, 70, 71, 73, 74, 95, 140, 170, and 171 for the licensing and regulation of byproduct, source, and special nuclear material, including requirements for notices to workers, reporting of defects, radiation protection, waste disposal, decommissioning funding, and insurance.”⁷⁶ The Commission also noted that this is the fifth proceeding involving the licensing of an enrichment facility, and several of those prior decisions resolve relevant issues and may be relied upon as precedent.⁷⁷ As a result of those decisions, the recent licensing board mandatory review of the proposed AREVA Eagle Rock Enrichment Facility,⁷⁸ and mandatory hearings conducted by licensing boards in

⁷³ 42 U.S.C. § 2243(b)(1). Specifically, the 1990 Amendments provide that enrichment facilities are to be licensed pursuant to sections 53 and 63 of the AEA, 42 U.S.C. §§ 2073, 2093. For a more extensive history, see *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 296-97 (1997).

⁷⁴ 10 C.F.R. § 70.23a.

⁷⁵ 10 C.F.R. § 70.31(e).

⁷⁶ 75 Fed. Reg. at 1824.

⁷⁷ *Id.* See also *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-92-7, 35 NRC 93 (1992); *Claiborne*, CLI-97-15, 46 NRC at 294; *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77 (1998); *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-5, 61 NRC 22, 36 (2005); *National Enrichment Facility*, CLI-05-17, 62 NRC at 5; *USEC Inc.* (American Centrifuge Plant), CLI-07-5, 65 NRC 109 (2007).

⁷⁸ *AREVA Enrichment Services, LLC* (Eagle Rock Enrichment Facility), LBP-11-11, 73 NRC 455 (2011); *AREVA Enrichment Services, LLC* (Eagle Rock Enrichment Facility), LBP-11-26, 74 NRC 499 (2011), *Commission review declined*, Memorandum from Annette L. Vietti-Cook, NRC Secretary, to Board and Parties (Nov. 17, 2011) (ADAMS Accession No. ML11321A227).

four 10 C.F.R. Part 52 early site permit proceedings,⁷⁹ there is considerable recent guidance on the role of licensing boards in mandatory proceedings such as this.

A. The Role of the Board and Issues for Determination

Because this is a mandatory, uncontested hearing, this Board's review is a limited one.⁸⁰ The Applicant and the NRC Staff agree that the Commission has directed this Board to determine five issues:⁸¹

1. General Issue 1: "[T]he Licensing Board will determine the following without conducting a de novo evaluation of the application: (1) Whether the application and record of the proceeding contain sufficient information to support license issuance and whether the NRC staff's review of the application has been adequate to support findings to be made by the Director of the Office of Nuclear Materials Safety and Safeguards with respect to the matters set forth in paragraph C of this section."⁸²
2. General Issue 2: "[T]he Licensing Board will determine the following without conducting a de novo evaluation of the application . . . (2) whether the review conducted by the NRC staff pursuant to 10 CFR part 51 has been adequate."
3. NEPA Baseline Issue 1: "[T]he Licensing Board will, in the initial decision, in accordance with Subpart A of 10 CFR part 51: Determine whether the requirements of sections 102(2)(A), (C) and (E) of NEPA and subpart A of 10 CFR part 51 have been complied with in the proceeding."
4. NEPA Baseline Issue 2: "[T]he Licensing Board will, in the initial decision, in accordance with Subpart A of 10 CFR part 51: . . . independently consider the final

⁷⁹ See *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-09-19, 70 NRC 433 (2009), *Commission review declined*, Memorandum from Annette L. Vietti-Cook, NRC Secretary, to Board and Parties (Jan. 4, 2010) (ADAMS Accession No. ML100040233); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-07-9, 65 NRC 539 (2007), *permit issuance authorized*, CLI-07-27, 66 NRC 215 (2007); *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-07-1, 65 NRC 27 (2007), *permit issuance authorized*, CLI-07-14, 65 NRC 216 (2007); *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), LBP-06-28, 64 NRC 460 (2006), *permit issuance authorized*, CLI-07-12, 65 NRC 203 (2007).

⁸⁰ The hearing's uncontested status is defined indirectly by 10 C.F.R. § 2.4, which defines a "contested proceeding."

⁸¹ Tr. at 14-15 (8/19/10 Teleconference).

⁸² Subpart C states: "The matters of fact and law to be considered are whether the application satisfies the standards set forth in this Notice and Commission Order and the applicable standards in 10 CFR parts 30, 40, and 70, and whether the requirements of NEPA and the NRC's implementing regulations in 10 CFR part 51 have been met." Licensing Board Order (Scheduling Initial Scheduling Conference), Attach. A (July 12, 2010) (unpublished) (citing 75 Fed. Reg. at 1821).

balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken.”

5. NEPA Baseline Issue 3: “[T]he Licensing Board will, in the initial decision, in accordance with Subpart A of 10 CFR part 51: . . . determine, after weighing the environmental, economic, technical, and other benefits against the environmental and other costs, and considering reasonable alternatives, whether a license should be issued, denied, or appropriately conditioned to protect environmental values.”⁸³

When addressing these questions, licensing boards are not expected to conduct a *de novo* review of safety or environmental issues, but rather “a simple ‘sufficiency’ review of uncontested issues.”⁸⁴ Licensing boards must “take an independent ‘hard look’ at NRC Staff safety and environmental findings, but not . . . replicate NRC Staff work. Giving appropriate deference to NRC Staff technical expertise, boards are to probe the logic and evidence supporting NRC Staff findings and decide whether those findings are sufficient to support license issuance.”⁸⁵

While our review under General Issues 1 and 2 calls for us to examine whether the Staff’s review is “adequate” or “sufficient,” our responsibility in addressing the three NEPA Baseline Issues calls for a somewhat more active role. As the United States Court of Appeals for the District of Columbia Circuit has explained, the National Environmental Policy Act (NEPA):

requires that agencies consider the environmental impact of their actions “to the fullest extent possible.” . . . Compliance to the “*fullest*” possible extent would seem to demand that environmental issues be considered at every important stage in the decision making process concerning a particular action — at every stage where an overall balancing of environmental and nonenvironmental factors is appropriate and where alterations might be made in the proposed action to minimize environmental costs. Of course, consideration which is entirely duplicative is not necessarily required. But independent review of staff proposals by hearing boards is hardly a duplicative function. A truly independent review provides a crucial check on the staff’s recommendations. The Commission’s hearing boards automatically consider nonenvironmental factors, even though they have been previously studied by the staff. Clearly, the review process is an appropriate stage at which to balance conflicting factors against one another. And, just as clearly, it provides an important opportunity to reject or significantly modify the staff’s recommended action.⁸⁶

⁸³ *Id.* (citing 75 Fed. Reg. at 1821).

⁸⁴ *National Enrichment Facility*, CLI-05-17, 62 NRC at 39.

⁸⁵ *Id.* at 34.

⁸⁶ *Calvert Cliffs’ Coordinating Committee, Inc. v. AEC*, 449 F.2d 1109, 1118 (D.C. Cir. 1971)
(Continued)

The court emphasized that, after a licensing board in an uncontested proceeding determines the Staff's NEPA review is adequate, it must then "independently consider the final balance among conflicting factors that is struck in the staff's recommendation."⁸⁷

In reaching our independent judgment on the NEPA Baseline Issues, licensing boards walk a fine line — our role is not to "second-guess underlying technical or factual findings by the NRC Staff"⁸⁸ but to ensure that the demands of NEPA and our regulations are met through "independent environmental judgments by NRC licensing boards."⁸⁹ Even a licensing board's NEPA review "must not be so intrusive or detailed as to involve the board in 'independent basic research' or a 'duplicat[ion of] the analysis previously performed by the staff.'"⁹⁰

For these reasons, although we summarize in detail in Section IV, *infra*, the hearing evidence upon which we rely, this Board does not make detailed factual findings of its own. Rather, our role is to examine the sufficiency of the Staff's findings and to confirm that those findings have "reasonable support in logic and fact."⁹¹

B. Adequacy of Facility Design Detail

The level of design completeness and detail required for the NRC Staff to conduct its review, and for the Board to evaluate the Staff's work, was of particular concern to the Board. Because the proposed GLE uranium enrichment plant would be a first-of-its-kind facility, there is no direct full-scale operational experience to inform many of the risks involved.

Part 70 of the NRC's regulations outlines the regulatory requirements associated with facility design and the level of detail required in the license application and related documents. For example, 10 C.F.R. § 70.22(a) sets forth the requirements for license applications, including that the application must contain "the place at which the activity is to be performed and the general plan for carrying out the activity" as well as "[a] description of equipment and facilities which will be used by the applicant to protect health and minimize danger to

(citations omitted, emphasis in the original). The Commission has directed "boards to follow the approach spelled out in the D.C. Circuit's seminal *Calvert Cliffs* decision." *National Enrichment Facility*, CLI-05-17, 62 NRC at 44.

⁸⁷ *Calvert Cliffs' Coordinating Comm., Inc.*, 449 F.2d at 1118.

⁸⁸ *National Enrichment Facility*, CLI-05-17, 62 NRC at 45 (stating "[t]he only exceptions to this would be if the reviewing board found the Staff review to be incomplete or the Staff findings to be insufficiently explained in the record.").

⁸⁹ *Id.* at 44.

⁹⁰ *Id.* at 45 (footnote omitted).

⁹¹ *Id.* at 39-40.

life or property.”⁹² Sections 70.61 and 70.62 describe the requirements of the integrated safety analysis (ISA), including that the ISA “is of appropriate detail for the complexity of the process” and “identifies (i) radiological hazards . . . ; (ii) chemical hazards . . . ; (iii) facility hazards that could affect the safety of licensed materials and thus present an increased radiological risk; (iv) [p]otential accident sequences caused by process deviations or other events internal to the facility and credible external events . . . ; (v) [t]he consequence and likelihood of occurrence of each potential accident sequence . . . ; and (vi) [e]ach item relied on for safety.”⁹³ Section 70.65 requires, *inter alia*, that an ISA Summary accompany the license application and contain a general description of the site and the facility with emphasis on those factors that could affect safety, as well as a description of each process analyzed in the ISA “in sufficient detail to understand the theory of operation; and, for each process, the hazards that were identified in the integrated safety analysis.”⁹⁴ Section 70.64 outlines the requirements for new facilities, including that the “design must provide for adequate protection against” natural phenomena, fires and explosions, “chemical risks produced from licensed material, facility conditions . . . , and hazardous chemicals produced from licensed material.”⁹⁵ It also requires that the design provide for emergency planning, continued operation of essential utility services, the inspection, testing, and maintenance of items relied on for safety (IROFS), and criticality control including adherence to the double contingency principle.⁹⁶

NUREG-1520, “Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility” (NUREG-1520) expands upon these regulatory requirements and is used by applicants and by the NRC Staff to guide the preparation and review of applications for fuel cycle facilities so as to meet the requirements of the regulations and provide an adequate level of design for the Staff to conduct its review.⁹⁷ While we recognize that guidance documents do not have the force of law,⁹⁸ NUREG-1520 has benefited from extensive consideration within the agency, with which the Commission has never expressed disagreement.

Specifically, in 2006, the NRC Staff grappled with the question of whether NUREG-1520 correctly specified the level of design detail required by the Part 70 regulations when reviewing United States Enrichment Corporation’s (USEC’s) application for its American Centrifuge Plant. On August 4, 2006, Robert Pierson,

⁹² 10 C.F.R. § 70.22(a)(2), (7).

⁹³ *Id.* § 70.62(c).

⁹⁴ *Id.* § 70.65(b).

⁹⁵ *Id.* § 70.64(a).

⁹⁶ *Id.*

⁹⁷ Ex. NRC005.

⁹⁸ See *Natural Resources Defense Council, Inc. v. Environmental Protection Agency*, 643 F.3d 311 (D.C. Cir. 2011).

then the Director of the Division of Fuel Cycle Safety and Safeguards in the Office of Nuclear Material Safety and Safeguards, issued a memorandum (the Pierson Memorandum) that discussed how the Staff should review license applications for level of design detail.⁹⁹ The Pierson Memorandum discussed the procedures in place to ensure that a finalized facility meets all regulatory requirements, despite the fact that “changes to the plant are to be expected.”¹⁰⁰ Citing NUREG-1520 as reflective of the regulations, an enclosure to the Pierson Memorandum entitled “Level of Information Needed for 10 CFR Part 70 Licensing” stated:

[T]he licensing review needs to focus on the applicant’s programmatic commitments and, consequently, the licensing decision is ultimately based on a sufficient level of detail to understand process system functions and functionally how items relied on for safety can perform their intended function and be reliable. The reasonable assurance standard is applied such that the staff decision pertains to a reasonable assurance that the integrated safety analysis summary is complete and the licensee will follow its integrated safety analysis approach and maintain it consistent with the regulations. The level of detail required for a licensing decision, therefore, does not require a final facility design or an absolutely complete identification of all items relied on for safety and accident sequences, but instead sufficient information has to be provided to understand the process and functions of items relied on for safety and reasonable assurance that the integrated safety analysis summary is complete.¹⁰¹

Highlighting the 10 C.F.R. § 70.72 change process, the enclosure stated that “it was anticipated that, in the future, changes will be made to the facility design and processes and, therefore, a process for addressing these changes is described in 10 CFR 70.72.”¹⁰²

In November 2006, four members of the NRC Staff issued a Differing Professional Opinion (DPO) concerning the guidance set forth in the Pierson Memorandum.¹⁰³ The four individuals asserted that the current “level of design is not sufficient to meet the regulatory requirements for issuing a license” and that the Pierson Memorandum “does not consider all the applicable portions of the regulation [10 C.F.R. Part 70], and as a result draws an erroneous regulatory conclusion.”¹⁰⁴ The DPO stated that “[d]uring the USEC [American Centrifuge Plant] licensing review, only roughly 15% of the instrumentation and control design was completed. It is our position that this represents a design that is not sufficiently complete and was not enough to determine that the instrumentation

⁹⁹ Ex. NRC021.

¹⁰⁰ *Id.* at 1-2.

¹⁰¹ *Id.*, Enclosure at 2.

¹⁰² *Id.*

¹⁰³ Ex. NRC022.

¹⁰⁴ *Id.* at 1.

and control design was adequate to protect health and minimize danger to life or property.”¹⁰⁵ Concerning the ISA Summary, the four Staff members stated that, based on NRC regulations, “the applicant must have performed a complete ISA Summary” and concluded that “reasonable assurance cannot be achieved without a sufficiently complete facility design.”¹⁰⁶

The USEC American Centrifuge Plant hearing board (the USEC Board) was notified of the dispute and questioned witnesses on the level of detail utilized by the Staff in its review of the proposed plant’s safety.¹⁰⁷ The USEC Board determined that the prevailing Staff view that there was reasonable assurance that all credible accident sequences were identified and that all IROFS and necessary safety controls were identified in the ISA Summary was credible.¹⁰⁸ The Board agreed with the Staff that the DPO did “not preclude the agency from conducting licensing reviews or making licensing decisions” and issued a decision prior to a resolution of the DPO by the NRC Staff.¹⁰⁹

The DPO was reviewed through the normal course by a DPO Ad Hoc Review Panel and by Michael Weber, the then-new Director of the Office of Nuclear Material Safety and Safeguards.¹¹⁰ Mr. Weber and the Ad Hoc Review Panel agreed “that a programmatic review . . . is consistent with the requirements of Part 70.”¹¹¹ However, both the Ad Hoc Review Panel and Mr. Weber agreed that NUREG-1520 should be revised to “address, among other aspects, what constitutes the licensing basis for fuel cycle facilities.”¹¹² The four Staff members then appealed to the Executive Director of Operations, who supported the determination of the DPO Ad Hoc Review Panel in his final determination.¹¹³ He stated that the intent of the regulation “was to create a performance based rule to allow flexibility and lessen the burden on affected internal and external stakeholders by providing the necessary design and ISA information commensurate with the risk of the facility.”¹¹⁴ He added that in the case of USEC’s American Centrifuge Plant, the USEC Board “thoughtfully considered [the] DPO” and “the Commission, the final arbiter in the decision when called upon, was cognizant of and considered

¹⁰⁵ *Id.* at 4.

¹⁰⁶ *Id.* at 5.

¹⁰⁷ *USEC Inc. (American Centrifuge Plant)*, LBP-07-6, 65 NRC 429, 464 (2007) (publicly available version).

¹⁰⁸ *Id.* at 465-66.

¹⁰⁹ *Id.* at 466.

¹¹⁰ Ex. NRC023.

¹¹¹ *Id.* at 2.

¹¹² *Id.*

¹¹³ Ex. NRC024.

¹¹⁴ *Id.* at 5.

[the] DPO during ASLBP deliberations and did not interject or object to the ASLBP's ruling on the matter."¹¹⁵

NUREG-1520, Revision 1, was issued in May 2010 to address the level-of-detail issue more effectively.¹¹⁶ Because GLE's application was submitted prior to the Revision's adoption, the Staff applied NUREG-1520, Revision 0 to its review, but the reviewers "had knowledge of the proposed guidance in Revision 1 and the review of the GLE application was informed by this information."¹¹⁷

In light of this history, the Board accepted as reasonable the NRC Staff's determination that the level of design detail necessary for a licensing decision does not require a final facility design. Additionally, even where compliance with our regulations cannot be determined without more complete information, in a limited number of appropriate circumstances the Staff may exempt an applicant from regulatory requirements subject to license conditions that will ensure compliance before a facility becomes operational.¹¹⁸

For example, GLE's application described a program for precluding and detecting unauthorized production of enriched uranium, including monitoring of the enrichment within the process system and monitoring of material quantities against possession limits.¹¹⁹ Because the design of the facility is not final, however, GLE has not yet analyzed potentially credible diversion scenarios by which unauthorized enrichment activities could take place.¹²⁰ Accordingly, the Staff granted — reasonably in the Board's view — an exemption from applicable regulatory requirements,¹²¹ subject to license conditions that require GLE to submit, for the Staff's prior review and approval, detailed analyses of such potentially credible diversion scenarios and the processes and management measures best suited to address them.¹²²

¹¹⁵ *Id.*

¹¹⁶ Ex. NRC120, at 5.

¹¹⁷ *Id.*

¹¹⁸ See 10 C.F.R. § 70.17(a) (stating that "[t]he Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.").

¹¹⁹ Ex. NRC001, at 12-1.

¹²⁰ *Id.* at 12-1 to 12-2.

¹²¹ See 10 C.F.R. § 74.33(c)(5).

¹²² Ex. NRC001, at 12-2. The Staff approved a similar exemption regarding criticality alarm systems, for which there is not yet sufficient design detail. See *id.* at 1-22. When contentions in contested hearings are purportedly resolved by license conditions, the Commission has stated that such conditions must be drawn very precisely. See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-13, 52 NRC 23, 34-35 (2000). Here, we review the Staff's approach for adequacy.

Application of the pertinent legal standards to particular safety concerns is further discussed in Section V, *infra*.

C. Nuclear Proliferation and Terrorism

Nuclear proliferation and terrorism are addressed in very specific ways by the NRC and thus by this Board. The Atomic Energy Act grants the NRC broad regulatory authority to address issues of defense, security, unauthorized disclosure of protected information, diversion of nuclear materials, and materials control as part of its delegation of licensing authority.¹²³ Although the Act does not grant express nonproliferation authority, key NRC regulations, such as 10 C.F.R. Parts 73, 74, and 95, clearly have nonproliferation, security, and terrorism objectives.¹²⁴ The Staff examined many of those objectives in its SER as mandated by the Atomic Energy Act.¹²⁵

Nuclear proliferation and hypothetical terrorist attacks, however, are not analyzed by the Staff as part of its environmental review.¹²⁶ The Supreme Court has held that “NEPA requires a reasonably close causal relationship between the environmental effect and the alleged cause.”¹²⁷ The Commission has determined that there is no such relationship between NRC licensing actions and terrorism.¹²⁸ Likewise, the Commission has determined that nuclear nonproliferation issues “span a host of factors far removed from” and “far afield from” the NRC’s decision whether to license a uranium enrichment facility.¹²⁹ Rather, such issues are dependent “upon the actions and decisions of the President, Congress, international organizations, and officials of other nations,” and constitute “issues

¹²³ Ex. NRC003A, at 1-14.

¹²⁴ See *id.* at 1-14 to 1-15.

¹²⁵ See, e.g., Ex. NRC001, at 11.A-12, 12-1 to 12-3, 13-1, 14-1, 16-1 to 16-2.

¹²⁶ Ex. NRC003A, at 1-15.

¹²⁷ *Department of Transportation v. Public Citizen*, 54 U.S. 752, 767 (2004) (internal quotations omitted).

¹²⁸ *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124 (2007); *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-28, 62 NRC 721, 724-25 (2005). With regard to facilities located in the Ninth Circuit the NRC is required to analyze potential terrorist attacks as part of its NEPA review. See *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016 (9th Cir. 2006). One former Commissioner expressed concern that terrorism would not be addressed in the NEPA context by the Staff in this case. 75 Fed. Reg. at 1828 (“I believe that the Commission should have a consistent, nationwide approach to NEPA and should discontinue the practice of addressing terrorism only for facilities within the jurisdiction of the Ninth Circuit. This practice creates a disparity in the public information we provide concerning the potential impacts of a terrorist attack on our nuclear facilities based on the arbitrary criteria of geographic location.”) (separate statement of Jaczko, Chairman).

¹²⁹ *National Enrichment Facility*, CLI-05-28, 62 NRC at 724.

of international policy unrelated to the NRC's licensing criteria."¹³⁰ Thus, the Staff was not required to analyze proliferation or terrorism issues as part of its environmental review in this case.

D. Inapplicability of the Waste Confidence Rule

On June 8, 2012, the United States Court of Appeals for the District of Columbia Circuit issued a decision in *New York v. NRC*.¹³¹ In that decision, the court vacated the Commission's current rule concerning the storage and disposal of high-level waste (the Waste Confidence Rule) and remanded the issue to the Commission to generate either a generic analysis that is "forward looking" and has "enough breadth to support the Commission's conclusions"¹³² or site-specific environmental impact statements in all relevant proceedings.¹³³ Because the NRC Staff had indicated before other boards that a license could not issue in nuclear reactor cases until the Commission resolved the issues in *New York v. NRC*, the Board asked the parties to comment on what, if any, impact the court's decision has on this proceeding, recognizing that an enrichment facility is "two steps removed in the fuel cycle" from power reactors that produce high-level waste.¹³⁴ (The Commission has subsequently confirmed that it will not, in fact, issue final licenses dependent upon the Waste Confidence Rule until the court's remand is appropriately addressed.¹³⁵)

Responding on July 10 and 11, 2012, respectively, GLE and the Staff submitted briefs addressing the Board's concerns.¹³⁶ Both parties contend that the court's decision has no impact on this case because the waste produced at the GLE facility will be considered low-level waste, which has designated long-term storage, and because the Waste Confidence Rule focused solely on spent nuclear fuel and high-level waste generated by nuclear reactors and on independent spent fuel storage installations.¹³⁷

The Board agrees. The Waste Confidence Rule facially does not apply to uranium enrichment facilities, as it refers directly to waste "generated in any reactor."¹³⁸ Although the parties cite the FEIS as evidence that only low-level

¹³⁰ *USEC Inc. (American Centrifuge Plant)*, CLI-06-9, 63 NRC 433, 463 (2006).

¹³¹ *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012).

¹³² *Id.* at 483.

¹³³ *Id.*

¹³⁴ Tr. at 27-29 (6/28/12 Teleconference).

¹³⁵ *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63, 66-67 (2012).

¹³⁶ GLE WCD Brief; Staff WCD Brief.

¹³⁷ GE WCD Brief at 4, 5; Staff WCD Brief at 2.

¹³⁸ Waste Confidence Decision Update, 75 Fed. Reg. 81,037, 81,060-76 (Dec. 23, 2010).

waste would be generated by the proposed facility,¹³⁹ the Commission itself addressed waste production at a uranium enrichment facility in a 2005 decision cited in the hearing notice for this proceeding.¹⁴⁰ As the Commission explained, “[l]ow-level waste traditionally has been defined by what it is not.”¹⁴¹ Because depleted uranium and the other waste generated by uranium enrichment facilities are not “spent fuel, transuranic waste, or 11e(2) byproduct material” or “specific kinds of wastes such as irradiated fuel and the liquid and solid wastes resulting from the processing of irradiated fuel,” those wastes are necessarily classified as low-level waste.¹⁴²

The Board’s primary concern was therefore not with the waste that will be generated by GLE, but rather with potential, less direct impacts. For example, did the Staff’s acknowledgment that nuclear plant licenses could not issue prior to resolution of this issue impact GLE’s and the Staff’s needs assessment? While the parties did not address this question, the written and oral testimony of Mr. Schwartz, discussed in Section IV, *infra*, illustrated a clear need for the facility despite multiple future uncertainties. The Board also was concerned with GLE’s potential role of placing a product into commerce that becomes high-level waste. However, the Board agrees with the Staff’s assessment that the relationship between the GLE product and the production of high-level waste is too attenuated to show the “requirement of a reasonably close causal relationship” required by NEPA.¹⁴³ Therefore, the Board is satisfied that the court’s recent decision in *New York v. NRC* should not affect the outcome of this proceeding.

III. APPROACH TO EVIDENTIARY HEARING

The Atomic Energy Act does not prescribe a specific structure for the mandatory hearing requirement, and the Commission has granted licensing boards considerable flexibility to select the most appropriate approach in the circumstances of each individual case.¹⁴⁴ As the Commission has explained:

As for the actual procedure to be followed at mandatory hearings, licensing boards have considerable flexibility. The AEA’s mandatory hearing requirements in sections 189a and 193b(1) are phrased generally. “[T]he Act itself nowhere prescribes the content of a hearing or prescribes the manner in which this ‘hearing’

¹³⁹ GLE WCD Brief at 4 n.17; Staff WCD Brief at 4 n.12.

¹⁴⁰ 75 Fed. Reg. at 1824-25.

¹⁴¹ *National Enrichment Facility*, CLI-05-5, 61 NRC at 34.

¹⁴² *Id.* at 34-35.

¹⁴³ Staff WCD Brief at 3-4 (citing *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 774 (1983)).

¹⁴⁴ See *National Enrichment Facility*, CLI-05-17, 62 NRC at 42-43.

is to be run.” The word “hearing” can refer to any of a number of events, including trial-type evidentiary hearings, “paper hearings,” paper hearings accompanied by oral arguments, hearings employing a mixture of procedural rules, and legislative hearings. The AEA’s hearing requirement does not demand a “one size fits all” approach. Thus, we do not dictate any particular procedure in the current cases, but we would expect the boards to select the most appropriate and expeditious approach given the specific circumstances of a case.¹⁴⁵

In determining what structure may best serve the needs of this hearing, the Board heeded the Commission’s advice to sharpen our focus by narrowing it:

A “mandatory hearing” board must narrow its inquiry to those topics or sections in Staff documents that it deems most important and should concentrate on portions of the documents that do not on their face adequately explain the logic, underlying facts, and applicable regulations and guidance. It serves no purpose for the Staff to produce volumes of documents and information supporting facts and conclusions that are of small importance and are beyond dispute. It likewise serves no purpose for the Staff to produce copies of every document used in its review when the Board cannot possibly read through every one, let alone scrutinize them.¹⁴⁶

Therefore, rather than undertake a comparatively shallow analysis of all possible issues, the Board focused on a relatively thorough examination of selected issues of concern by instituting a multistep process that narrowed as the Staff and Applicant responded to the questions and concerns of the Board.

First, the Board members reviewed the SER and the FEIS. In themselves, these lengthy analyses satisfied the Board that the Staff’s consideration of many issues had been appropriately thorough. For example, in the SER, the Staff identified a number of license conditions that it determined would provide enhanced assurance of safe operation in areas where the applicant’s design or procedures should be supplemented.¹⁴⁷ In the FEIS, among other things, the Staff carefully examined numerous potential impacts and concluded that they would generally be small and, taken in combination with the Applicant’s environmental monitoring program and proposed mitigation measures, would eliminate or substantially lessen any potential adverse environmental impacts associated with the proposed facility.¹⁴⁸

Second, on April 4, 2012, the Board set forth seventy-four detailed written questions arising from the SER and the FEIS, to which it directed the parties

¹⁴⁵ *Id.* (footnotes omitted).

¹⁴⁶ *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-06-20, 64 NRC 15, 21-22 (2006).

¹⁴⁷ For example, GLE must provide at least 60 days’ notice to the NRC before initial product withdrawal of licensed material exceeding 5% by weight ²³⁵U. Ex. NRC001, at 1-9.

¹⁴⁸ See Ex. NRC003A, at 8-1 to 8-6.

to respond.¹⁴⁹ More specifically, we directed that “[t]he parties’ written answers shall, for each question, identify the responding subject matter expert(s) or individuals(s), and shall be submitted in exhibit form, under oath, so that they are suitable for receipt into evidence without the necessity of the personal appearance of each expert or individual.”¹⁵⁰ In other words, we directed the parties to respond under oath to our initial written questions, so that the Board could accord the responses as much weight as we would give sworn testimony presented in person at an evidentiary hearing.

The parties responded to the Board’s initial written questions on May 2, 2012.¹⁵¹ Collectively, the parties’ public and nonpublic sworn responses totaled some 175 pages, exclusive of the supporting affidavits and resumes of the forty-one responding individuals.¹⁵² Because the parties provided substantial and, for the most part, directly responsive answers to the Board’s initial questions, the need for written or oral testimony at the evidentiary hearing was reduced to the extent that the parties’ sworn answers resolved many of the Board’s concerns.

For example, the following illustrate a few of the numerous instances in which the Board’s preliminary concerns were adequately addressed by the parties’ responses to the Board’s initial written questions:¹⁵³

1. Because the use of lasers in the GLE separations process is unique for a fuel cycle facility, the Board was interested in how laser safety had been addressed. We posed two written questions in this area. The first asked whether the facility’s Industrial Safety Manager would be required to have specific laser safety training and experience.¹⁵⁴ The second asked whether the guidance in NUREG-1520 covered laser safety and, if not, whether the NRC Staff used any additionally guidance in reviewing the Applicant’s laser safety program.¹⁵⁵ In response, the Staff pointed out that laser safety is under the jurisdiction of the North Carolina Department of Labor, as part of the Department’s enforcement activities regarding the Occupational Safety and Health Act of North Carolina. Because regulatory jurisdiction lies with the State of North Carolina, the NRC Staff neither reviewed the Applicant’s program for laser safety nor required

¹⁴⁹ Board Initial Questions Order Attachs. A & B.

¹⁵⁰ *Id.* at 1 (citing Fourth Revised Scheduling Order at 6).

¹⁵¹ Staff Initial Question Responses — Public; Staff Initial Question Responses — Nonpublic; GLE Initial Question Responses — Public; GLE Initial Question Responses — Nonpublic.

¹⁵² Staff Initial Question Responses — Public; Staff Initial Question Responses — Nonpublic; GLE Initial Question Responses — Public; GLE Initial Question Responses — Nonpublic.

¹⁵³ Additionally, as discussed in Section V, *infra*, in other instances the parties’ initial written responses — while not necessarily fully satisfactory by themselves — were adequate when considered together with subsequent prefiled and oral testimony that the Board received on related topics.

¹⁵⁴ Board Initial Questions Order, Attach. A at 2.

¹⁵⁵ *Id.*

the Industrial Safety Manager to have specific training and experience in laser safety.¹⁵⁶ On this basis, the Board did not pursue further the adequacy of the NRC Staff's consideration of laser safety.

2. Fire safety was another area where the Board was able to resolve its concerns at the outset. The Board's primary concern arose from the fact that the fire protection review in the SER did not specify the Cascade/Gas Handling area as one for which fire events had been postulated in the ISA Summary.¹⁵⁷ The Board inquired whether the Cascade/Gas Handling area had in fact been evaluated and, if so, what the results of that evaluation were.¹⁵⁸ Both the NRC Staff and the Applicant submitted nonpublic responses to this question.¹⁵⁹ Based on its review of these responses and related referenced material, the Board was satisfied that this area had been adequately reviewed and appropriate IROFS had been identified.

3. The Board had another fire protection-related question that arose from its review of criticality safety. We asked how the Applicant would ensure that offsite fire departments would not employ water-based fire suppression in areas where that would not be appropriate from the standpoint of criticality safety.¹⁶⁰ Based on the responses from both the Applicant and the NRC Staff,¹⁶¹ the Board was assured that adequate plans and controls would be in place, and the Board's concerns in this area were thereby resolved.

4. Because the FEIS discusses noise level impacts only in terms of decibels above ambient levels,¹⁶² the Board was concerned whether machinery to be used during construction or operation of the proposed facility might produce sound at frequencies outside the range of human hearing that could cause discomfort to wildlife.¹⁶³ On the basis of the Staff's response,¹⁶⁴ the Board was satisfied that would not be the case.

5. The Board wondered why wind-speed data used in the FEIS to calculate

¹⁵⁶ Staff Initial Question Responses — Public Attach. A at 20-22.

¹⁵⁷ Ex. NRC001, at 3-40, 7-8.

¹⁵⁸ Board Initial Questions Order, Attach. A at 3.

¹⁵⁹ Staff Initial Question Responses — Nonpublic Attach. A at 5; GLE Initial Question Responses — Nonpublic at 13.

¹⁶⁰ Board Initial Questions Order, Attach. A at 4.

¹⁶¹ Staff Initial Question Responses — Public Attach. A at 36; GLE Initial Question Responses — Nonpublic at 18-19.

¹⁶² See Ex. NRC003A, at 4-57 to 4-62.

¹⁶³ Board Initial Questions Order, Attach. B at 3.

¹⁶⁴ Staff Initial Question Responses — Public Attach. B at 48-49.

potential radiation dosages was no more recent than 1992.¹⁶⁵ Through the Staff's response, the Board learned that the Staff used the most recent data available from the Wilmington airport in a format that could be used in the applicable modeling program, thereby resolving that concern.¹⁶⁶

Third, after reviewing the parties' responses to its initial questions, the Board nonetheless determined that it still wished to receive more detailed and integrated sworn prefiled testimony and exhibits concerning six key topics: (1) evaluation of criticality safety, focusing in particular on whether unique design features of the proposed facility pose potential safety hazards that differ from those in other uranium enrichment facilities, as well as evaluation of chemical and radiological hazards; (2) the NRC Staff's regulatory approach to reviewing a facility design that has not yet been finalized; (3) evaluation of external hazards related to flooding (including hurricanes and tsunamis), high winds and tornados, and earthquakes; (4) the process for implementing and tracking the Applicant's commitments (both mandatory and voluntary); (5) the need for the proposed facility and the related environmental cost-benefit analysis; and (6) the Applicant's environmental monitoring program.¹⁶⁷ Again, we directed the parties to provide written testimony under oath, so that the Board could accord sworn prefiled testimony as much weight as we would give sworn testimony presented in person at the evidentiary hearing, without having to engage in the formality of asking witnesses at the hearing to "adopt" their prior written testimony.¹⁶⁸

In response, collectively the parties submitted several hundred pages of prefiled written testimony from twenty-four witnesses, as well as 136 exhibits.¹⁶⁹

Fourth, at a 2-day evidentiary hearing, the Board members heard presentations from many of the witnesses and had the opportunity to question in person each of the twenty-four witnesses who submitted prefiled written testimony. All prefiled testimony and exhibits were admitted into evidence without objection. The Board also received supplemental sworn written responses to some of the questions posed at the hearing after the oral portion of the evidentiary hearing had concluded.¹⁷⁰

In other words, the Board's process was a continuing one, which allowed consideration of various kinds of information at various times. The sworn oral testimony at the evidentiary hearing constituted only a portion of the sworn

¹⁶⁵ See Ex. NRC003A, at 4-82; Board Initial Questions Order, Attach. B. at 4.

¹⁶⁶ Staff Initial Question Responses — Public Attach. B at 53-56.

¹⁶⁷ Prefiled Testimony Order at 2-6.

¹⁶⁸ *Id.* at 6.

¹⁶⁹ See Ex. BRD001-R; Ex. BRD002; Ex. GLE001; Ex. GLE012; Ex. GLE019; Ex. GLE021-R; Ex. GLE023; Ex. NRC118; Ex. NRC119; Ex. NRC120; Ex. NRC121; Ex. NRC122; Ex. NRC123-R; Ex. NRC124.

¹⁷⁰ See GLE Follow-Up.

testimony available to the Board — which included both prefiled testimony and responses under oath to the Board’s initial written questions — and addressed only a portion of all the information (including the application itself) that we began to examine as soon as the Board was constituted. Also, absent objection in an uncontested case such as this, the Board saw no purpose in applying formal rules of evidence to exclude opinion testimony or other evidence that might be objectionable in a court of law.¹⁷¹ Rather, in addressing the issues before it, the Board considered all available facts — recognizing that some sources of information may be more reliable than others.

Therefore, despite our desire to be as transparent as possible, the Board was satisfied that the proper course was to conduct the oral portion of this proceeding in a closed session, which the public was not able to observe. In practice, classified and other nonpublic information was closely intertwined with the unique aspects of the proposed facility that were of the greatest interest. Not only was the Board concerned that it might not be possible in real time to separate public and

¹⁷¹ Although somewhat different considerations may apply in contested cases, formal rules of evidence rarely have a useful role in licensing board proceedings. Our rules state that “strict rules of evidence do not apply to written submissions.” 10 C.F.R. § 2.319(d). Otherwise, they merely set forth the broad admonition (in language that has remained unchanged since the era of the Atomic Energy Commission and before enactment of the Federal Rules of Evidence) that “[o]nly relevant, material, and reliable evidence which is not unduly repetitious will be admitted.” *Id.* § 2.337(a). In practice, while the Federal Rules of Evidence are not directly applicable to NRC proceedings, NRC adjudicatory boards often look to those rules for guidance. *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-717, 17 NRC 346, 365 n.32 (1983). The bedrock principle that underlies much of the modern law of evidence is set forth in Fed. R. Evid. 403: “The court may exclude relevant evidence if its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence.” In licensing board cases, however, excluding evidence will seldom achieve these objectives. Written prefiled testimony and exhibits are typically submitted well in advance of the evidentiary hearing, and in our most common types of hearings, the licensing boards themselves — not the parties — orally examine the witnesses. 10 C.F.R. § 2.1207. Therefore, rulings excluding evidence have, as a practical matter, little effect in eliminating delay, waste of time, or the needless presentation of cumulative evidence in the record. On the contrary, briefing and consideration of motions to exclude evidence may result in considerable delay and wasted time. If a licensing board deems prefiled evidence to be of little or no value, it simply need not ask about it at the evidentiary hearing, and is free to accord such evidence little or no weight. Likewise, because the members of the licensing boards themselves must read challenged testimony to determine whether its probative value is substantially outweighed by the danger of unfair prejudice or confusion of the issues, excluding evidence on this ground also seems to have little practical effect. In a jury trial, the presiding judge reviews the evidence to determine whether the ultimate fact finder — the jury — should see it at all. A similar process in NRC proceedings would require creating one licensing board to review the evidence for purposes of admissibility and a second licensing board to weigh the admitted evidence for the purpose of ruling on the merits. No such elaborate protocol, it is well recognized, is necessary in administrative proceedings. See 2 Robert J. Pierce Jr., *Administrative Law Treatise* § 10.1, at 910 (5th ed. 2010).

nonpublic responses to the Board's questions, but doing so would necessitate constantly directing members of the public in and out of the hearing room in an unmanageable way. At the same time, nearly the entirety of the written factual material on which the Board relies — the application, the NRC Staff's SER and FEIS, the bulk of the parties' sworn responses to the Board's initial written questions, and most of the prefiled testimony and exhibits — has been and remains publicly available through the Agencywide Documents Access and Management System (ADAMS), accessible through the NRC's public website. Subject to necessary redactions, the Board's decision is also publicly available (except for the classified appendix), as are every one of the Board's previous orders. Moreover, in due course a full transcript of the evidentiary hearing (with classified and other nonpublic information removed or redacted) will be publicly available as well.¹⁷²

The Board chose to exclude witnesses from the hearing room during the testimony of other witnesses testifying on the same issues. In part the Board's objective was to minimize the number of witnesses who might hear classified testimony, and to restrict such testimony solely to properly cleared personnel with the requisite need to know. Additionally, however, the Board was mindful of the policies underlying Rule 615 of the Federal Rules of Evidence.

Rule 615 provides (subject to limited exceptions) that at the request of any party a court "must" order witnesses excluded so that they cannot hear other witnesses' testimony.¹⁷³ Or, Rule 615 provides, "the court may do so on its own."¹⁷⁴ In contrast to the practices followed by some licensing boards, courts therefore routinely exclude witnesses prior to their testimony. They do so, as the Supreme Court has recognized, not only to discourage or expose outright fabrication (which we hope should rarely be an issue in NRC proceedings), but also to exercise a restraint on the natural tendency of witnesses to "tailor" their testimony to that of earlier witnesses.¹⁷⁵ Indeed, although in many respects the Federal Rules of Evidence liberalized prior practice, Rule 615 departs from the common law in that, whenever a party requests it, exclusion of witnesses is now

¹⁷² Other Boards have closed their hearings even though they were concerned with less sensitive (i.e., nonpublic but unclassified) types of information (see *Shaw AREVA MOX Services* (Mixed Oxide Fuel Fabrication Facility), LBP-12-2, 75 NRC 159 (2012); *Shaw AREVA MOX Services* (Mixed Oxide Fuel Fabrication Facility), Licensing Board Memorandum and Order (Requesting Further Information from the Applicant) (June 29, 2012) (unpublished) (marked "SUNSI — withhold from public disclosure")).

¹⁷³ Fed. R. Evid. 615.

¹⁷⁴ *Id.*

¹⁷⁵ *Geders v. United States*, 425 U.S. 80, 87 (1976).

mandatory rather than a matter of discretion.¹⁷⁶ Clearly, the drafters of the Federal Rules of Evidence thought exclusion of witnesses to be useful, and in conducting the evidentiary hearing in this proceeding, we found that the practice encouraged exceptionally candid responses from the witnesses.

IV. SUMMARY OF TESTIMONY

A. Topic 1: Criticality Safety and Chemical/Radiological Hazard Evaluation

1. GLE Witness

a. Steven M. Painter

Mr. Painter is currently employed by Nuclear Safety Associates, LLC, as a Senior Nuclear Safety Engineer, and as the ISA Lead for implementation of GLE's safety program.¹⁷⁷ He has a B.S. in Physics and a B.S. in Applied Mathematics from California State Polytechnic University, Pomona.¹⁷⁸ Upon entering the U.S. Navy, he completed training at the Nuclear Power School and a Nuclear Reactor Prototype in preparation for his role as a Navy Nuclear Propulsion Officer.¹⁷⁹ He has also taken Master's level courses on relevant topics, including Basic and Advanced Nuclear Criticality Safety.¹⁸⁰ He previously worked as a Nuclear Criticality Safety Engineer at the Y-12 National Security Complex, a peer reviewer for Safety Analysis at the Waste Isolation Pilot Plant, a Nuclear Criticality Safety Engineer at the former Oak Ridge, the Paducah, and the Portsmouth Gaseous Diffusion uranium enrichment facilities, and a Navy Nuclear Propulsion Engineering Officer of the Watch and Engineering Duty Officer during the new construction and testing of a Naval Nuclear Submarine Propulsion Plant.¹⁸¹

Mr. Painter's written and oral testimony is summarized in the classified appendix.

¹⁷⁶ See 29 Charles Alan Wright & Victor James Gold, Federal Practice and Procedure: Evidence § 6241 (1st ed. 1997).

¹⁷⁷ Ex. GLE001, at 2.

¹⁷⁸ *Id.* at 1.

¹⁷⁹ *Id.* at 1-2.

¹⁸⁰ *Id.* at 2.

¹⁸¹ *Id.*

2. NRC Staff Witnesses

a. Christopher S. Tripp

Dr. Tripp is a Senior Nuclear Process Engineer (Criticality) in the NRC's Office of Nuclear Material Safety and Safeguards, Division of Fuel Cycle Safety and Safeguards.¹⁸² He received his B.S., M.S., and Ph.D. in Physics from Rensselaer Polytechnic Institute.¹⁸³ Dr. Tripp has NRC qualifications as a Nuclear Criticality Safety Inspector and a Nuclear Criticality Safety Technical Reviewer and has specialized in nuclear criticality safety.¹⁸⁴ In his more than 16 years with the NRC, his inspection experience has included routine and reactive inspections at both low-enriched and high-enriched fuel fabrication facilities and enrichment facilities.¹⁸⁵ His licensing experience includes a range of new enrichment facilities.¹⁸⁶ Dr. Tripp has also participated on teams that have reviewed and written regulatory guidance, and he has independently authored or co-authored numerous papers presented at national and international meetings.¹⁸⁷

Dr. Tripp's written and oral testimony is summarized in the classified appendix.

b. Blake A. Purnell

Mr. Purnell is a Project Manager in the NRC's Office of Nuclear Reactor Regulation, Division of Policy and Rulemaking.¹⁸⁸ He has his B.S. in Physics and Chemistry from Western Washington University and his M.A. in Physics from the University of California, Santa Barbara.¹⁸⁹ Mr. Purnell has worked at the NRC for 7 years, including 5 years as a nuclear criticality safety specialist in the Division of Fuel Cycle Safety and Safeguards in the Office of Nuclear Material Safety and Safeguards.¹⁹⁰ He has three NRC qualifications, including as a Nuclear Criticality Safety Reviewer and Nuclear Criticality Safety Inspector, and has participated in the Nuclear Safety Professional Development Program.¹⁹¹ His inspection experience includes routine and supplemental inspections, including all currently operating low- and high-enrichment fuel fabrication facilities

¹⁸² Ex. NRC118, at 1.

¹⁸³ *Id.*, Attach. (Christopher S. Tripp Statement of Professional Qualifications).

¹⁸⁴ *Id.*

¹⁸⁵ *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ *Id.*

¹⁸⁸ *Id.* at 1.

¹⁸⁹ *Id.*, Attach. (Blake A. Purnell Statement of Professional Qualifications).

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

and the Paducah Gaseous Diffusion Plant.¹⁹² He also assisted the lead inspector for the operational readiness review of the National Enrichment Facility.¹⁹³ His experience in licensing has included nuclear criticality safety reviews of applications for new enrichment facilities, license renewals, and new processes.¹⁹⁴ Mr. Purnell has assisted in developing NRC and American Nuclear Society guidance documents.¹⁹⁵

Mr. Purnell's written and oral testimony is summarized in the classified appendix.

c. Merritt N. Baker

Mr. Baker is a Senior Project Manager in the NRC's Office of Nuclear Material Safety and Safeguards, Division of Fuel Cycle Safety and Safeguards.¹⁹⁶ He received his B.S. in Mechanical Engineering from Clarkson College of Technology and is a Professional Engineer in Pennsylvania.¹⁹⁷ Mr. Baker has over 35 years of experience in various private and government facilities and has been working in fuel facility licensing and inspection since 1997.¹⁹⁸ In his current position, Mr. Baker is the NRC's point of contact for virtually all actions related to applicants or licensees within his cognizance, beginning with the initial submittal of an application or request for amendment, and he has served as the lead or backup project manager for fuel manufacturing facilities.¹⁹⁹ As a licensed reviewer, Mr. Baker is also responsible for reviewing fuel cycle applications and amendment requests, primarily in the areas of Chemical Safety and ISA methods.²⁰⁰ As a certified fuel cycle safety inspector, Mr. Baker has been responsible for execution of inspection modules, primarily in Chemical Safety and Fire Protection.²⁰¹ Prior to his role at the NRC, Mr. Baker was a Senior Engineer and managing contractor in the private sector.²⁰² Mr. Baker has written numerous technical papers and presentations, and currently is a presenter at a multiagency course on nuclear awareness and technical response to nuclear threats.²⁰³

¹⁹² *Id.*

¹⁹³ *Id.*

¹⁹⁴ *Id.*

¹⁹⁵ *Id.*

¹⁹⁶ Ex. NRC119, at 1.

¹⁹⁷ *Id.*, Attach. (Merritt N. Baker Statement of Professional Qualifications).

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ *Id.*

²⁰¹ *Id.*

²⁰² *Id.*

²⁰³ *Id.*

Mr. Baker's written and oral testimony is summarized in the classified appendix.

B. Topic 2: Licensing an Evolving Design

1. GLE Witness

a. Julie Anne Olivier

Ms. Olivier has a B.S. in Chemistry from the University of New Orleans and an M.S. in Environmental Science and Engineering from Virginia Polytechnic Institute and State University.²⁰⁴ In addition, she has taken postgraduate doctoral courses in Environmental Systems Engineering at Clemson University.²⁰⁵ From 1999 to 2007, Ms. Olivier was employed by the NRC, where she served as a project manager in connection with licensing various fuel fabrication, uranium enrichment, and other facilities.²⁰⁶ Ms. Olivier also served as a Special Assistant to the Chairman for Materials and Security from 2005 to 2006.²⁰⁷ Since 2007, she has worked for GLE, currently serving as GLE's Licensing and Regulatory Affairs Manager.²⁰⁸

In her written testimony on Topic 2, Ms. Olivier testified as follows:

Ms. Olivier addressed the extent to which GLE's design for the proposed facility is likely to change, and how GLE will determine whether any such design changes could impact safety.²⁰⁹ In summary, aspects of the design are still evolving, but Ms. Olivier does not believe these will impact the safety of the facility.²¹⁰ Changes to the design will be evaluated, implemented, and tracked based on GLE's Configuration Management system and applicable change management processes.²¹¹ Changes within the existing safety basis will not affect the safety of the facility.²¹² Other changes will require NRC approval before the change can be made.²¹³

Specifically, a level of design detail for the facility was established that was sufficient to enable GLE to perform an effective safety review and to

²⁰⁴ Ex. GLE019, at 1.

²⁰⁵ *Id.*

²⁰⁶ *Id.*

²⁰⁷ *Id.*, App. A.

²⁰⁸ *Id.* at 2.

²⁰⁹ *Id.*

²¹⁰ *Id.*

²¹¹ *Id.* at 6.

²¹² *Id.*

²¹³ *Id.*

create the ISA.²¹⁴ The design used for that purpose was based on conservative and anticipated bounding assumptions, including system descriptions, system interfaces, materials of construction, environmental conditions, handling devices, working area descriptions, measuring and monitoring instruments, devices for disposal of radioactive effluents and wastes, storage facilities, criticality accident alarm systems, fire safety systems, and maximum amounts of material-at-risk.²¹⁵ In addition to being sufficient to perform an ISA, the level of design was sufficient to develop a safety basis for the facility that includes, among other things, analysis of accident sequences, identification of IROFS, implementation of Management Measures to ensure the IROFS are available and reliable when needed, application of defense-in-depth measures, and commitment to codes and standards to support ongoing design and construction to satisfy 10 C.F.R. § 70.62.²¹⁶

In accordance with 10 C.F.R. § 70.72(a), GLE has established and maintains a Configuration Management system to evaluate, implement, and track changes to the site, structures, processes, systems, equipment, components, computer programs, and activities of personnel.²¹⁷ The Configuration Management program ensures that, before implementing any change, the following matters, among others, are addressed: (1) impact of the change on safety and health or control of licensed material; (2) authorization requirements for the change; and (3) impacts of the change on the ISA, ISA Summary, or other safety program developed in accordance with 10 C.F.R. § 70.62.²¹⁸ Before implementing a change, including design changes, a Change Request is prepared.²¹⁹ Every Change Request is reviewed against the criteria in section 1.2.5.5 of the license application and the criteria in 10 C.F.R. § 70.72 to determine whether NRC approval is required prior to implementing the change.²²⁰ When a Change Request is submitted, the ISA Manager conducts an ISA review against the approved ISA safety basis to determine if there are any impacts requiring prior NRC approval.²²¹ In addition, the Licensing Manager reviews the changes against the license application, in accordance with section 1.2.5.5, to determine whether the changes “decrease the effectiveness of the license commitments.”²²² If the changes trigger the criteria in either 10 C.F.R. § 70.72 or section 1.2.5.5, GLE will submit to the NRC, for review and approval, an application to amend the license, which will include, as

²¹⁴ *Id.* at 2-3.

²¹⁵ *Id.* at 3.

²¹⁶ *Id.* at 4.

²¹⁷ *Id.*

²¹⁸ *Id.*

²¹⁹ *Id.*

²²⁰ *Id.*

²²¹ *Id.* at 4-5.

²²² *Id.* at 5.

required, supporting documentation and revisions to the ISA Summary.²²³ Such changes will not be implemented until NRC approval is granted.²²⁴

GLE also may make changes in the facility or process as described in the license application, or conduct tests or activities not discussed in the license application, without prior NRC approval, but only subject to the following conditions: (1) there is no degradation in the safety commitments in the license; (2) the change, test, or activity does not conflict with any condition specifically stated in the license application; and (3) the change does not meet the criteria for a license amendment set forth in 10 C.F.R. § 70.72.²²⁵ Records of such changes must be maintained at the facility, including technical justification and management approval to enable NRC inspection upon request.²²⁶ Any changes to the ISA not requiring NRC approval are submitted to the NRC on an annual basis.²²⁷ Additionally, GLE performs periodic and independent assessments of the Configuration Management system's effectiveness, conducted by individuals not involved in the area being assessed.²²⁸

In her oral testimony on Topic 2, Ms. Olivier testified as follows:

The level of design submitted to the NRC was consistent with the guidance in NUREG-1520, "which meant that the design was sufficient to perform the safety basis, develop the integrated safety analysis, and provide a definition of a safety basis for the facility."²²⁹ The design "was at the component level for safety systems, and at the process level for non-safety systems."²³⁰ Changes can only be implemented without NRC approval if there are no safety implications; however, if the change alters the safety basis, prior to implementation, GLE must get NRC approval.²³¹

A design needs to be complete enough to establish the safety basis and ensure that all accident sequences are identified.²³² According to Ms. Olivier, the design submitted by GLE with the license application in 2009 has not evolved; "today the design that we intend to build is the design that is described in our commercial facility license application."²³³ However, GLE is "looking at some optimization

²²³ *Id.*

²²⁴ *Id.*

²²⁵ *Id.*

²²⁶ *Id.*

²²⁷ *Id.*

²²⁸ *Id.* at 6.

²²⁹ Tr. at 158 (7/11/12 Hearing). The slides associated with Ms. Olivier's presentation to the Board can be viewed in Ex. GLE020.

²³⁰ Tr. at 158 (7/11/12 Hearing).

²³¹ *See* Tr. at 160.

²³² Tr. at 162.

²³³ Tr. at 163.

of the process,” including improvement of the lasers and optimization of the separation technology, but it has not been determined whether or not those will be incorporated into the design.²³⁴

Ms. Olivier could not “quantify what level the design is at” but in looking toward other facilities that have been recently licensed, Ms. Olivier stated that “the level of design that we’ve submitted is about the equivalent to what USEC submitted in their ACP [American Centrifuge Plant] application.”²³⁵ This design is considered a “baseline design” and there are several steps before a final design can be created.²³⁶ GLE still needs a conceptual and then a final design before the facility is constructed.²³⁷ GLE is looking at what other facilities are experiencing and is trying to incorporate those lessons into its facility.²³⁸ Ms. Olivier stated she “would be surprised if it was fewer than ten” changes that were required, but “surprised if we had over 100 changes.”²³⁹ Changes that require NRC approval must be made through license amendment.²⁴⁰ The license amendment process requires notice and an opportunity to request a hearing by members of the public.²⁴¹

2. NRC Staff Witnesses

a. Timothy C. Johnson

Mr. Johnson is a Senior Project Manager in the NRC’s Office of Nuclear Material Safety and Safeguards, Division of Fuel Cycle Safety and Safeguards.²⁴² Mr. Johnson has a B.S. in Mechanical Engineering from Worcester Polytechnic Institute and an M.S. in Nuclear Engineering from Ohio State University.²⁴³ He is a nuclear engineer with over 39 years of work experience in industry and in the federal government.²⁴⁴ He is a member of the American Nuclear Society, the American Society of Mechanical Engineers, and the American Society for Testing and Materials.²⁴⁵ Mr. Johnson has been with the NRC since 1977, where he has held various roles, including Section Leader of the Materials Engineering

²³⁴ Tr. at 164.

²³⁵ Tr. at 164-65.

²³⁶ Tr. at 165.

²³⁷ *Id.*

²³⁸ Tr. at 167.

²³⁹ Tr. at 168.

²⁴⁰ *Id.*

²⁴¹ Tr. at 169 (as supplemented by Mr. Silverman on Ms. Olivier’s behalf).

²⁴² Ex. NRC120, at 1.

²⁴³ *Id.*, Attach. (Timothy C. Johnson Statement of Professional Qualifications).

²⁴⁴ *Id.*

²⁴⁵ *Id.*

Section in the Division of Waste Management, Section Leader of the Special Projects Section in the Division of Waste Management, and Section Chief of Decommissioning Sections in the Division of Waste Management, before joining the Division of Fuel Cycle Safety and Safeguards where he holds his current position.²⁴⁶

In his written testimony on Topic 2, Mr. Johnson testified as follows:

Mr. Johnson has been the licensing Project Manager for the proposed GLE facility since October 2006.²⁴⁷ As the Project Manager for the GLE project, he oversaw the Staff's review of the license application and the preparation of the SER.²⁴⁸ Mr. Johnson explained the Staff's approach to its review of the design of the proposed GLE facility and the regulatory basis for that approach, focusing on (1) how the Staff determined the level of design detail and finality needed to conduct a safety review and make a licensing decision; (2) significant aspects of the design of the proposed GLE facility that are still evolving and that could impact the safety of the facility; and (3) if a license is granted, how the Staff will ensure that any future changes to the design of the proposed GLE facility will fall within the parameters of a license issued on the basis of the current design.²⁴⁹

To evaluate the design of the proposed GLE facility, the NRC Staff primarily used NUREG-1520.²⁵⁰ NUREG-1520 provides generic guidance for reviewing and evaluating the health, safety, and environmental protection aspects of applications for licenses to possess and use special nuclear material in nuclear fuel cycle facilities.²⁵¹ The principal purpose of NUREG-1520 is to ensure the quality and uniformity of reviews conducted by the Staff.²⁵² NUREG-1520, which describes the scope, level of detail, and acceptance criteria for reviews, was developed to ensure that all necessary safety and environmental issues are addressed.²⁵³

NUREG-1520 was developed as a generic document for licensing fuel cycle facilities under 10 C.F.R. Part 70, including fuel fabrication facilities and uranium enrichment facilities.²⁵⁴ Although there are differences among fuel cycle facilities, hazards that would exist at the proposed GLE facility are similar to the types of hazards at other fuel cycle facilities for which NUREG-1520 was prepared.²⁵⁵ These hazards include handling of uranium hexafluoride (UF₆) cylinders, pro-

²⁴⁶ *Id.*

²⁴⁷ *Id.* at 1.

²⁴⁸ *Id.* at 2 (citing Ex. NRC001).

²⁴⁹ *Id.*

²⁵⁰ *Id.* at 5. NUREG-1520 can be viewed in Ex. NRC005.

²⁵¹ Ex. NRC120, at 5.

²⁵² *Id.*

²⁵³ *Id.* at 5-6.

²⁵⁴ *Id.* at 6.

²⁵⁵ *Id.*

cessing of UF₆ as a gas and sometimes as a liquid, use of autoclaves for feeding and sampling uranium, nuclear criticality, equipment decontamination operations, and laboratory activities.²⁵⁶

The Staff adapts the prescriptions of NUREG-1520 to different types of 10 C.F.R. Part 70 facilities on the basis of relative risk and the specific types of hazards associated with the particular technology.²⁵⁷ Based on the processes performed at each type of facility, the proposed GLE facility has the lowest level of potential hazards, fuel fabrication facilities have the next level of hazard, and the Mixed Oxide (MOX) fabrication facility has the highest level of hazard of all 10 C.F.R. Part 70 fuel cycle facilities.²⁵⁸

Excluding a spent fuel reprocessing plant or a MOX facility that processes weapons-grade plutonium, the main hazard in other fuel cycle facilities is chemical exposure associated with a loss of material confinement.²⁵⁹ The primary chemical hazards include soluble uranium compounds, which present a heavy metal toxicity concern, and hydrogen fluoride (HF), which is a product of the chemical reaction between UF₆ and water (moisture from the air).²⁶⁰ Qualitatively, the chemical risks posed by these enrichment facilities are far below those found at a typical chemical plant.²⁶¹ The external radiological dose rates are minimal, and the chemical toxicological effects on individuals constitute the predominant hazard until about 18% by weight ²³⁵U enrichment, at which point internal radiation dose becomes the primary hazard.²⁶²

In 10 C.F.R. Part 70 licensing, the Staff uses a reasonable assurance standard and focuses on the programmatic provisions of the applicant's proposed activities.²⁶³ The level of detail required for a licensing decision, therefore, does not require a final detailed facility design, an absolutely complete identification of all supporting IROFS and accident sequences, or a review of the detailed implementing procedures.²⁶⁴ Rather, applicants must provide sufficient information to understand the process and functions of IROFS and to provide reasonable assurance that the ISA Summary is complete.²⁶⁵

There are no significant differences between the proposed GLE facility and gas centrifuge facilities that would warrant a different level of design detail for

²⁵⁶ *Id.*

²⁵⁷ *Id.* at 7.

²⁵⁸ *Id.*

²⁵⁹ *Id.*

²⁶⁰ *Id.*

²⁶¹ *Id.*

²⁶² *Id.*

²⁶³ *Id.* at 8.

²⁶⁴ *Id.* at 9.

²⁶⁵ *Id.*

the proposed GLE facility because the hazards at the GLE facility and the gas centrifuge plants are similar.²⁶⁶ At both facility types, the only significant chemical hazard is from UF₆.²⁶⁷ In contrast, fuel fabrication facilities use other hazardous chemicals in their processes that may present exposure hazards to workers and to the public.²⁶⁸

The NRC Staff recognizes that GLE is continuing to conduct design testing and studies on the laser-based enrichment process.²⁶⁹ The primary developmental area that could affect safety is the final design of the separators, where GLE efforts are focused on optimizing uranium separation and material handling.²⁷⁰ GLE is also furthering the designs of the remainder of the facility, including the feed, withdrawal, blending, and sampling systems.²⁷¹ However, the baseline designs for the remainder of the plant, as described in the ISA Summary, are not expected to undergo significant changes.²⁷²

The NRC Staff expects that the principal hazards in the facility will be the same as in other licensed uranium enrichment plants.²⁷³ That is, the most important facility hazard is in the liquid sampling system, where product cylinders are heated to conditions that cause the UF₆ to become a liquid so that it is possible to obtain representative samples of the product.²⁷⁴ The Staff does not expect that GLE will make significant changes to the design of the liquid sampling system.²⁷⁵ Although the design of the separators is expected to change the most, the changes are not expected to impact safety, because the separator operating conditions and absence of moderation will remain constant.²⁷⁶

As GLE completes its design, any deviations from the original design would have to be evaluated against the criteria in 10 C.F.R. § 70.72 to determine if a license amendment is required or if GLE could make the change without NRC approval.²⁷⁷ Additionally, before the proposed GLE facility can begin operations, pursuant to 10 C.F.R. §§ 40.41(g) and 70.32(k) the NRC would be required to

²⁶⁶ *Id.* at 13.

²⁶⁷ *Id.*

²⁶⁸ *Id.*

²⁶⁹ *Id.* at 15.

²⁷⁰ *Id.*

²⁷¹ *Id.*

²⁷² *Id.* The ISA Summary can be viewed in Ex. GLE010.

²⁷³ Ex. NRC120, at 15.

²⁷⁴ *Id.*

²⁷⁵ *Id.*

²⁷⁶ *Id.*

²⁷⁷ *Id.* at 16.

verify through inspection that the facility has been constructed in accordance with the requirements of the license.²⁷⁸

In his oral testimony on Topic 2, Mr. Johnson testified as follows:

The ISA “was never intended to be a static document, but[] over the course of construction and operating period, there would likely be changes based on new technology, for example, or new information that becomes known to the applicant or licensee or the NRC.”²⁷⁹ Mr. Johnson emphasized that “the process for change is one that is expected for the facility, and that there was never any expectation when Part 70 regulations were promulgated that this integrated safety analysis would be a static document.”²⁸⁰ The principal guidance document used by the Staff was NUREG-1520, which guides the Staff on the scope of the review, the areas to review, and the acceptance criteria to be used for licensing a fuel cycle facility.²⁸¹ The Staff believed application of NUREG-1520 was appropriate in this case because the proposed GLE facility shares similar hazards and structures with other fuel cycle facilities.²⁸² If the Staff finds a proposed facility to be of higher risk, then the Staff will “inform the review with respect to the overall hazards and the specific activities that are being proposed by an applicant.”²⁸³ This approach has been used in facilities that handle highly enriched uranium, which is higher risk, and the Staff created a separate standard review plan for the MOX fuel fabrication facility due to the significant difference in hazards.²⁸⁴

Because enrichment facility licenses are combined construction and operational licenses, the Staff does not “expect the final level of design detail to be available prior to the construction and, therefore, prior to licensing.”²⁸⁵ The Staff requires “a sufficient level of detail . . . to understand the processes, the process hazards, and enough detail . . . to understand the function of IROFS with respect to their use in meeting performance requirements.”²⁸⁶ Commitments to well-established codes and standards also are an important part of the Staff’s review.²⁸⁷ If an applicant commits to well-known codes and standards, the final design details of sizing or

²⁷⁸ *Id.* at 17.

²⁷⁹ Tr. at 175-76 (7/11/12 Hearing). The slides associated with Mr. Johnson’s presentation to the Board on Topic 2 can be viewed in Ex. NRC112.

²⁸⁰ Tr. at 176 (7/11/12 Hearing).

²⁸¹ *Id.*

²⁸² Tr. at 177.

²⁸³ Tr. at 178.

²⁸⁴ Tr. at 177-78.

²⁸⁵ Tr. at 179.

²⁸⁶ *Id.*

²⁸⁷ *See* Tr. at 180.

selection of specific models is not necessary because the Staff is “assured that an appropriate design code and standard is being applied to those components.”²⁸⁸

In addition to the Staff’s preliminary review of facility design safety, enrichment facilities are also required to undergo a construction inspection after the facility is constructed but before operations are authorized “to insure that the construction has been done in accordance with the requirements of the license.”²⁸⁹ Through the inspection process, the Staff confirms that the facility has been built in accordance with all of the commitments made in the license application.²⁹⁰

This approach to the level of design required has been used for evaluating the three more recently approved enrichment facilities.²⁹¹ However, as discussed earlier, the approach was questioned during the USEC American Centrifuge Plant licensing through the DPO process.²⁹² After appeals through the Executive Director of Operations, the approach was affirmed, though recommendations were made to revise NUREG-1520 to incorporate some guidance on the level of detail, which occurred in 2010.²⁹³

In the cascade area, the Staff believed the design was sufficient because the regulatory requirements were met.²⁹⁴ Enough detail was presented to understand the processes, hazards, and IROFS.²⁹⁵ The Staff also focused on the commitments to particular codes and standards, which gives “confidence that the facility can be constructed and operated safely.”²⁹⁶ The codes and standards are key aspects of cascade safety because they are promulgated to ensure that the cascade will be leak-tight and to prevent moderator from entering.²⁹⁷

The NRC encourages reviewers to participate in future inspections, so the Staff has “a fairly good confidence that the people that understand the criticality issues are going to be the same ones that do the inspections.”²⁹⁸

Mr. Johnson estimated that the current design is “probably at maybe a 40 percent level” of completion.²⁹⁹ He added that “[t]here’s substantially a lot of detail design left to do,” and “a great deal of work is still left for the engineers

²⁸⁸ Tr. at 181.

²⁸⁹ *Id.*

²⁹⁰ Tr. at 182.

²⁹¹ Tr. at 182-83.

²⁹² Tr. at 183.

²⁹³ *Id.*

²⁹⁴ Tr. at 189-90.

²⁹⁵ Tr. at 189.

²⁹⁶ *Id.*

²⁹⁷ Tr. at 191.

²⁹⁸ Tr. at 194-95.

²⁹⁹ Tr. at 199.

at GLE in order to complete this.”³⁰⁰ However, he emphasized that enough information was provided to understand the processes and hazards.³⁰¹ The Staff expects “changes to be primarily focused on the cascade design itself, which we feel really isn’t the riskiest part of the facility.”³⁰² Mr. Johnson did not know whether those changes would be done by amendment or without review, but he suspected “that the changes will be similar to what we’re seeing with Louisiana Energy Services where most of the changes that are done do not require submittal of an amendment.”³⁰³ Using the Louisiana Energy Services facility as an example, Mr. Johnson stated that they were making “several hundred changes over the course of a year” with maybe fifty changes that required an amendment.³⁰⁴ Although changes are generally public documents, he suspects “that the changes related to the cascade system would be primarily classified and would not be subject to public disclosure.”³⁰⁵ The license also discusses the qualifications of those GLE officials who will be making change determinations — so the Staff assumes “that they are going to have qualified people in accordance with their commitments . . . to manage this program and to carry it out in accordance with the regulation[s].”³⁰⁶ If a change is made inappropriately, it becomes an enforcement matter beginning with a notice of violation.³⁰⁷

b. Brian W. Smith

Since 2003, Mr. Smith has been Chief of the Uranium Enrichment Branch in the NRC’s Office of Nuclear Material Safety and Safeguards.³⁰⁸ He has a B.S. in Nuclear Engineering from North Carolina State University.³⁰⁹ As Branch Chief, he has been the first-line manager responsible for the oversight of the technical review performed on the GLE Application and preparation of the SER.³¹⁰ He has provided similar oversight in connection with license applications for other uranium enrichment facilities.³¹¹ Prior to his current position, Mr. Smith served as a Senior Assistant in the Office of the Executive Director for Operations and

³⁰⁰ *Id.*

³⁰¹ *Id.*

³⁰² Tr. at 200.

³⁰³ Tr. at 200-01.

³⁰⁴ Tr. at 201.

³⁰⁵ Tr. at 202.

³⁰⁶ Tr. at 204.

³⁰⁷ Tr. at 205.

³⁰⁸ Ex. NRC120, at 1.

³⁰⁹ *Id.*, Attach. (Brian W. Smith Statement of Professional Qualifications).

³¹⁰ *Id.* at 2. The SER can be viewed in Ex. NRC001.

³¹¹ Ex. NRC120, at 1.

as a Health Physicist and Regional Program Coordinator in the Office of Nuclear Material Safety and Safeguards.³¹²

In his written testimony, Mr. Smith testified to the same matters as Mr. Johnson. Additionally, he described the process by which other uranium enrichment facility licensees have made significant changes in the designs of their plants, pursuant to NRC-approved license amendments.³¹³

In his oral testimony, Mr. Smith testified as follows:

The Staff expects all licensees to make changes over time, and the regulations account for these changes.³¹⁴ The Staff has “seen some licensees evaluate hundreds of changes each year through this process.”³¹⁵ The Staff believes the cascade will be the area of likely change in this facility.³¹⁶ However, Mr. Smith stated, “[b]ecause of the fundamentals of the design as we know it now, we don’t believe that any changes will have a significant impact on safety.”³¹⁷ In addition, he emphasized that the primary facility hazard is in the sampling system, and no significant changes are expected in that area.³¹⁸

All licensees must have a Configuration Management system to evaluate and track changes.³¹⁹ The system contains the criteria by which licensees evaluate changes and assess whether an amendment is required to be submitted to the NRC for approval.³²⁰ If an amendment is required, no change can be made until NRC approval is granted.³²¹ All previously unreviewed changes must be submitted annually to the NRC, which the Staff then reviews and the Regional Office uses to perform its annual inspection.³²² The Staff review includes an examination of all changes, with a selected sampling reviewed in more detail.³²³ GLE requested separate authorization to utilize a similar process to change its license application — if a proposed change creates a decrease in the effectiveness of any requirement, the change must be submitted in the form of an amendment request to the NRC.³²⁴

The inspection process prior to operation verifies not only proper construction,

³¹² *Id.*, Attach. (Brian W. Smith Statement of Professional Qualifications).

³¹³ *Id.* at 19-20.

³¹⁴ Tr. at 183-84 (7/11/12 Hearing). The slides associated with Mr. Smith’s presentation to the Board can be viewed in Ex. NRC112.

³¹⁵ Tr. at 184 (7/11/12 Hearing).

³¹⁶ *Id.*

³¹⁷ Tr. at 184-85.

³¹⁸ Tr. at 185.

³¹⁹ Tr. at 186.

³²⁰ *Id.*

³²¹ *Id.*

³²² Tr. at 186-87.

³²³ Tr. at 203.

³²⁴ Tr. at 187.

but also programs that ensure “the safety of facility, including the criticality safety program, the radiation safety program, the emergency preparedness program, [and] the transportation of materials.”³²⁵ Further, during the operational readiness review inspection, revisions of Staff guidance have recognized the need to have some of the technical reviewers involved.³²⁶ Consequently, the Staff budgets additional funding to allow for technical staff to assist in inspections.³²⁷ Region II will be primarily responsible for the inspections and authorization of operations; however, these will be done in conjunction with NRC Headquarters office.³²⁸ This type of collaboration has already occurred in relation to the MOX and Louisiana Energy Services facilities, and has been built into the budget to allow for Headquarters participation in inspections going forward.³²⁹ This inspection process is rigorous and is planned in detail in advance in collaboration with Region II.³³⁰

C. Topic 3: Safety Impact of External Hazards

1. NRC Staff Witnesses

a. John A. Stamatakos

Dr. Stamatakos is the Director of Technical Programs at the Center for Nuclear Waste Regulatory Analyses, Geosciences and Engineering Division, Southwest Research Institute.³³¹ He received his B.A. in Geology from Franklin and Marshall College and his M.S. and Ph.D. in Geology from Lehigh University.³³² Dr. Stamatakos is a structural geologist and geophysicist with expertise in paleomagnetism, magnetostratigraphy, paleogeography, exploration geophysics, neotectonics, and earthquake seismology.³³³ He is experienced in applications of this expertise to the evaluation of seismic hazards at nuclear facilities, the development of tectonic models, and the evaluation of earthquake and volcanic risks at critical nuclear facilities.³³⁴ Prior to joining the Center for Nuclear Waste Regulatory Analyses, he held various teaching positions in his field, wrote or

³²⁵ Tr. at 192-93.

³²⁶ Tr. at 195.

³²⁷ *Id.*

³²⁸ Tr. at 196.

³²⁹ *Id.*

³³⁰ Tr. at 196-97.

³³¹ Ex. NRC121, at 1.

³³² *Id.*, Attach. (John Stamatakos Statement of Professional Qualifications).

³³³ *Id.*

³³⁴ *Id.*

collaborated on more than sixty papers, and made presentations on geological issues at various international conferences.³³⁵

In his written testimony, Dr. Stamatakos testified as follows:

Dr. Stamatakos was the primary reviewer of GLE's seismic hazard assessment, as contained in GLE's ISA Summary section 2.5.1.³³⁶ His evaluation of GLE's seismic hazard assessment is contained in sections 1.2.2.4.1 (Seismic Hazards) and 3.3.4.10 (Geology and Seismic Events) of the SER.³³⁷ Dr. Stamatakos also supported the reviews documented in sections 3.3.4.2 (Hurricane and Tsunami), 1.2.2.4.1 (Seismic Hazards), 3.3.4.10 (Geology and Seismic Events), and 3.3.12 (IROFS Structures Review) of the SER as they pertained to reviews of GLE's evaluation of hazards related to other natural phenomena and GLE's seismic hazard and design evaluations.³³⁸

Dr. Stamatakos explained that external hazards are those natural and human-induced events that originate offsite and over which the facility operator has little or no control.³³⁹ These events "can be safety-significant contributors to the risk of facility operations."³⁴⁰ Substantial regulatory and guidance documents guided the Staff review of these hazards. For example, 10 C.F.R. § 70.61(a) required GLE to evaluate and reduce the risk of events that could have significant impacts on workers or the public. Further, 10 C.F.R. § 70.61(b), (c) require high-consequence events to be highly unlikely and intermediate-consequence events to be unlikely.³⁴¹ The ISA Summary must assess potential accidents caused by credible external events and design the facility to protect against natural phenomena.³⁴² NRC regulations require that these requirements are met and that the Staff determine that the proposed facility and equipment are adequate to protect health and minimize danger to life or property before a license may issue.³⁴³ Section 3.4.3.2(1)(c) of NUREG-1520,³⁴⁴ Interim Staff Guidance Document FCSS-ISG-08,³⁴⁵ Regulatory

³³⁵ *Id.*

³³⁶ *Id.* at 1. GLE's seismic hazard assessment can be found in Ex. GLE010, at 2-18 to 2-22.

³³⁷ See Ex. NRC121, at 1-2. See also Ex. NRC001, at 1-39 to 1-41, 3-17 to 3-21. Notwithstanding Dr. Stamatakos' written testimony, the Seismic Hazard Evaluation and Staff Evaluation of Seismic Hazard Assessment are contained in section 1.3.3.4.1. Because there is no section 1.2.2.4.1 in either the public or nonpublic SER documents, the Board assumes Dr. Stamatakos intended to claim credit for section 1.3.3.4.1.

³³⁸ Ex. NRC121, at 2. See also Ex. NRC001, at 3-10 to 3-11, 1-39 to 1-41, 3-17 to 3-21, 3-38 to 3-41. As was noted *supra*, Seismic Hazards is contained in SER § 1.3.3.4.1, not section 1.2.2.4.1.

³³⁹ Ex. NRC121, at 3.

³⁴⁰ *Id.*

³⁴¹ *Id.* at 4.

³⁴² *Id.* (citing 10 C.F.R. §§ 70.62(c)(iv) & 70.64(a)(2)).

³⁴³ *Id.* at 4-5 (citing 10 C.F.R. §§ 70.23(a)(4), 70.66(a)).

³⁴⁴ Ex. NRC005, at 3-12.

³⁴⁵ Ex. NRC036.

Guide 1.59,³⁴⁶ and NUREG/CR-4461³⁴⁷ provided further guidance to reviewers on external hazard issues, including assessing whether GLE identified all design basis natural events and characterized hazards with sufficient detail to support GLE's assessment of impacts on facility safety and likelihood of occurrence; allowed for utilization of alternative data sources when historical data were insufficient or unavailable; and provided specialized guidance for reviewing flooding, high winds, tornados, and earthquakes.³⁴⁸ The Staff also used well-established codes and standards from external sources, including those of the American Society of Civil Engineers, the American Institute of Steel Construction, and the American Concrete Institute, to review GLE's proposed design.³⁴⁹

The flooding hazard at the proposed GLE site was evaluated on the basis of rainfall in the Northeast Cape Fear River and the Cape Fear River watersheds, locally heavy site rainfall, and a hurricane surge.³⁵⁰ GLE calculated these numbers using the probable maximum flood in the river watersheds, the probable maximum precipitation, and the probable maximum hurricane surge.³⁵¹ Tsunamis were assessed in accordance with the distance to the coastline and site elevation relative to mean sea level.³⁵² Flood analysis indicated that both rivers could potentially impact the GLE site.³⁵³ The proposed facility is located 10 miles inland from the Atlantic Ocean at 25 feet above mean sea level.³⁵⁴ The surrounding area is relatively flat, so a flood above mean sea level would occur slowly due to the large flat region that would accommodate flood water.³⁵⁵ GLE indicated that a probable maximum flood is 28 feet above mean sea level for the proposed site, which is 3 feet above the facility floor.³⁵⁶ Because the rise in water during a probable maximum flood would occur slowly, personnel would have ample time to take necessary mitigating steps.³⁵⁷ While a seismically-induced dam failure on the Cape Fear River could cause flooding of the proposed site, GLE determined and the Staff agreed that a dam flood would not exceed the flooding level of the probable maximum flood.³⁵⁸ The maximum rainfall in the area was recorded

³⁴⁶ Ex. NRC029.

³⁴⁷ Ex. NRC030.

³⁴⁸ Ex. NRC121, at 5-6.

³⁴⁹ *Id.* at 6.

³⁵⁰ *Id.* at 6-7.

³⁵¹ *Id.* at 7.

³⁵² *Id.*

³⁵³ *Id.*

³⁵⁴ *Id.*

³⁵⁵ *Id.*

³⁵⁶ *Id.* at 7-8.

³⁵⁷ *Id.* at 8.

³⁵⁸ *Id.*

in September 1999 during Hurricane Floyd. At that rainfall level, the Northeast Cape Fear River Basin would not flood the site, and because the proposed facility is located at a relative high point, high rainfall accumulations will drain to lower elevations.³⁵⁹

GLE's approach of using the probable maximum flood to estimate design basis flood is acceptable because FCSS-ISG-08 states that the probable maximum flood can be applied to 10 C.F.R. Part 70 facilities as "highly unlikely" events.³⁶⁰ Applying the guidance of FCSS-ISG-08, the approach of using the probable maximum flood, the probable maximum precipitation, and the probable maximum hurricane surge were acceptable. Because there is a large flat region to accommodate a flood, it also is very unlikely that the probable maximum flood would reach an elevation greater than 25 feet. For those reasons, the Staff found that GLE's design basis flood level was conservative.³⁶¹

The estimated probable maximum hurricane surge at the open-coast shoreline of North Carolina is 21.9 feet using the probable maximum hurricane required by RG 1.59.³⁶² Adding additional conservatism to this estimate is the assumption that a surge of this height could reach the facility without considering possible dissipation and the facility's distance from water sources.³⁶³ Nonetheless, the design basis flood water level of 28 feet for the site bounds the flooding for a hurricane, leading Dr. Stamatakos to conclude that the design basis is conservative relative to any flooding hazards from hurricanes.³⁶⁴

The probability that a large tsunami would reach the facility site is highly unlikely because the Atlantic seaboard is not conducive to forming large earthquake-generated tsunamis and there are no historical records of tsunamis along the North Carolina coast since colonial settlement.³⁶⁵ Fractures discovered along a stretch of the continental shelf could trigger a tsunami with a surge similar to a storm surge from a Category 3 or 4 hurricane.³⁶⁶ Therefore, Dr. Stamatakos concluded that a tsunami wave size similar to a Category 3 or 4 hurricane is bounded by the maximum hurricane surge. Because the design basis flood was conservative relative to the probable maximum hurricane surge, it is also adequately conservative to the

³⁵⁹ *Id.*

³⁶⁰ *Id.* In fact, Dr. Stamatakos testified that FCSS-ISG-08 states that using the probable maximum flood may even be preferable to the use of historical data, depending on the quality of historical data available. *Id.* (citing Ex. NRC036, at 16).

³⁶¹ *Id.* at 9.

³⁶² *Id.* (citing Ex. NRC029). Dr. Stamatakos also noted this approach was consistent with that outlined in FCSS-ISG-08. *Id.*

³⁶³ *Id.* at 9-10.

³⁶⁴ *Id.* at 10.

³⁶⁵ *Id.*

³⁶⁶ *Id.* (citing Ex. NRC038, at 410).

flooding hazard from tsunamis.³⁶⁷ Operational safety is enhanced by GLE's plan to evacuate and shut down prior to any flood threat and because GLE has opted to use established codes AISC N690, ASCE 7-05 and ACI-349 when designing IROFS structures to mitigate flooding hazards which would provide significant reserve strength associated with the analysis, load combinations, and design of steel and reinforced concrete structures.³⁶⁸

GLE discussed its earthquake hazard analysis in the ISA Summary § 2.5.1, which consisted of three parts: (1) the historical seismic record; (2) a United States Geologic Survey (USGS) probabilistic seismic hazard assessment, and (3) the response of the earthquake energy to site soil conditions.³⁶⁹ First, GLE discussed the historical earthquake record and identified the largest historical local and regional earthquakes.³⁷⁰ Second, GLE provided the probabilistic ground motions for the site based on the 2008 USGS National Seismic Hazard Maps.³⁷¹ GLE cited the USGS maps for a return period of 2500 years or an annual probability of 4×10^{-4} .³⁷² Building code requirements in the 2006 International Building Code specify that the building should withstand 2500-year return-period ground motions.³⁷³ The USGS ground motions predicted for the site exceed those that resulted from any known historical earthquake.³⁷⁴ With this seismic design basis, GLE then must design the facility to provide adequate assurance that IROFS will maintain their safety functions under the earthquake ground motions predicted by the USGS model.³⁷⁵ GLE and the Staff found that the design methods outlined in DOE-STD-1020 and ASCE 43-05 provide sufficient margins that the IROFS will maintain their safety functions for the 10,000-year return-period ground motions predicted by the USGS model.³⁷⁶ Finally, GLE provided an assessment of the site soil conditions and determined that the site was Class C, according to the USGS soil classification system.³⁷⁷ To account for the impacts to potential group motions of these softer soil conditions at the site, GLE applied the site amplification coefficients from the International Building Code.³⁷⁸

³⁶⁷ *Id.*

³⁶⁸ *Id.* at 10-11.

³⁶⁹ *Id.* at 13 (citing Ex. GLE010, at 2-18 to 2-22).

³⁷⁰ *Id.*

³⁷¹ *Id.* at 14.

³⁷² *Id.*

³⁷³ *Id.* (citing Ex. NRC034).

³⁷⁴ *Id.*

³⁷⁵ *Id.*

³⁷⁶ *Id.*

³⁷⁷ *Id.* at 15.

³⁷⁸ *Id.*

In fact, GLE's approach to seismic hazard assessment and seismic design was more conservative than the one described in FCSS-ISG-08.³⁷⁹ It was appropriate for GLE to use the approach it had utilized in the ISA Summary rather than the deterministic approach developed in FCSS-ISG-08.³⁸⁰ An FCSS-ISG-08 approach would have led to a seismic design roughly equivalent to the 1000-year return-period earthquake, rather than the 10,000-year return-period earthquake GLE's approach now encompasses.³⁸¹ Further, GLE will conduct seismic analyses of the IROFS structures using one or more of the seismic analysis methods permitted by ASCE 7-05. By using design methods drawn from these proposed codes and standards, the IROFS structures will be constructed to withstand ground motions from earthquakes that are substantially less likely than the design basis ground motions.³⁸² Finally, Dr. Stamatakos testified that if a highly unlikely earthquake (one that exceeds design basis) occurs, it may cause non-elastic damage, like cracking or tilting, without actual building collapse. Accordingly, exceeding the design basis (already highly unlikely) may lead to building damage without damage to the IROFS in the building.³⁸³

In his oral testimony, Dr. Stamatakos testified as follows:

Dr. Stamatakos explained in greater detail why, when it assessed the earthquake hazard, GLE adopted an approach other than the FCSS-ISG-08 approach it used to assess other hazard risks.³⁸⁴ GLE adopted a more probability-based approach and defined a failure probability of 10^{-4} as a highly unlikely performance objective for seismic design.³⁸⁵ GLE's use of USGS 2500-year return-period ground motions and appropriate design analysis and methodology to construct the facility ensures that the facility will be built with an earthquake failure probability of 10^{-4} .³⁸⁶ While the ISG-08 approach looks at the largest local and the largest regional earthquakes and would have resulted in only about a 1000-year return period, the approach GLE adopted ensures that structural IROFS will be able to withstand ground motions at least equal to the 10,000-year return-period earthquake.³⁸⁷

Dr. Stamatakos explained that historical earthquakes under the ISG-08 approach were estimates since there were no recordings of the largest regional

³⁷⁹ *Id.*

³⁸⁰ *Id.*

³⁸¹ *Id.* at 15-16.

³⁸² *Id.* at 16.

³⁸³ *Id.*

³⁸⁴ The slides associated with Dr. Stamatakos's oral presentation to the Board can be viewed in Ex. NRC113.

³⁸⁵ Tr. at 224-25 (7/11/12 Hearing).

³⁸⁶ Tr. at 225.

³⁸⁷ Tr. at 225-26.

earthquake.³⁸⁸ Historical evidence indicates that a similar earthquake had occurred several thousand years prior, but there was no evidence of significantly larger events.³⁸⁹ Dr. Stamatakos also explained the difficulty in identifying local earthquake sources and history — stating that there is often “not a good understanding of what the sources are, especially for those small earthquakes.”³⁹⁰ The USGS model provides substantial benefits when the historical record, as here, contains insufficient data on which to base analysis. In addition to accounting for higher and lower magnitude events, the model accounts for long time lags between major events. Dr. Stamatakos asserted that “the USGS model incorporates lower term period, high-magnitude events, up to magnitude 7.5 in there, and they randomly float that earthquake in their probabilistic analysis. . . . It’s probably one of the reasons why the USGS curve is significantly higher than the hazard you get by simply looking at historical events.”³⁹¹

The local source for tsunamis in the Wilmington area would be submarine landslides from sediment off of the continental shelf.³⁹² While landslide-generated tsunamis could cause quite severe localized damage, the likelihood of a landslide-generated tsunami affecting the proposed site is “so small that [it] would fall well below the highly unlikely.”³⁹³ However, Dr. Stamatakos acknowledged that a locally generated tsunami from a local landslide or earthquake would give minutes warning, at best, to plant operators.³⁹⁴ He also discussed the low likelihood of effects from a subduction-related tsunami. Referring to analysis in NUREG/CR-6966,³⁹⁵ Dr. Stamatakos explained that newer studies indicate that changes to water depth greatly affect the analysis, leading to “greater dispersion of the waves and effects . . . mitigated substantially by the time the tsunami could reach the Atlantic seaboard.”³⁹⁶ He concluded that “in reference to either the local or distant tsunamis, there’s not a very strong record on the Atlantic Seaboard for geologic . . . tsunamis,”³⁹⁷ confirming his earlier testimony that large tsunami reaching the proposed site “is highly unlikely.”³⁹⁸

³⁸⁸ Tr. at 228.

³⁸⁹ Tr. at 229-30.

³⁹⁰ Tr. at 231.

³⁹¹ Tr. at 231-32.

³⁹² Tr. at 236.

³⁹³ Tr. at 237.

³⁹⁴ Tr. at 242.

³⁹⁵ While this document is excerpted in Ex. NRC093, the parts discussed at hearing were not included in the Staff’s exhibit.

³⁹⁶ Tr. at 240-41 (7/11/12 Hearing).

³⁹⁷ Tr. at 241.

³⁹⁸ Ex. NRC121, at 10.

b. Asadul H. Chowdhury

Dr. Chowdhury is currently a Staff Engineer at the Center for Nuclear Waste Regulatory Analyses, Geosciences and Engineering Division, Southwest Research Institute.³⁹⁹ He received his B.S. in Civil Engineering at East Pakistan University of Engineering & Technology (now Bangladesh University of Engineering & Technology) and his M.S. and Ph.D. in Structural Mechanics from Cornell University.⁴⁰⁰ Dr. Chowdhury is a structural engineer, specializing in structural and geotechnical engineering, and is experienced in evaluating the analysis, design, and operations of various nuclear facilities dealing with the enrichment of uranium; fabrication of nuclear fuel; spent fuel storage; and the storage, handling, and disposal of high-level radioactive waste.⁴⁰¹ He also is experienced with design codes and standards for the design of structural and foundation systems of nuclear facilities, with special emphasis on seismic design.⁴⁰² Prior to his current role assisting the NRC Staff in its seismic review, Dr. Chowdhury worked in the nuclear industry, conducting analyses and technical support in several specialized areas.⁴⁰³ He has written or cowritten over 125 technical papers and reports.⁴⁰⁴

In his written testimony, Dr. Chowdhury testified as follows:

Dr. Chowdhury was the primary reviewer of GLE's IROFS structural analysis and design. His review and evaluation are located in section 3.3.12 (IROFS Structures Review) of the SER.⁴⁰⁵ He also supported reviews of GLE's evaluation of external hazards due to seismic activity, high winds and tornados, and flooding, including hurricanes and tsunamis — ensuring “that the external hazards information was used appropriately and consistently to develop the design bases.”⁴⁰⁶ Staff reviews in these areas are located in sections 1.2.2.4.1 (Seismic Hazards), 3.3.4.10 (Geology and Seismic Events), 1.3.3.3.1 (Tornado Hazard), 1.3.3.3.2 (High Winds and Hurricanes), 1.3.3.3.7 (Floods), 1.3.3.3.8 (Tsunami), 3.3.4.1 (High Wind and Tornado Hazards), 3.3.4.2 (Hurricane and Tsunami), and 3.3.4.4 (Flooding) of the SER.⁴⁰⁷

³⁹⁹ *Id.* at 1.

⁴⁰⁰ *Id.*, Attach. (Asadul H. Chowdhury Statement of Professional Qualifications).

⁴⁰¹ *Id.*

⁴⁰² *Id.*

⁴⁰³ *Id.*

⁴⁰⁴ *Id.*

⁴⁰⁵ *Id.* at 2. Section 3.3.12 (IROFS Structures Review) is located in Ex. NRC001, at 3-38 to 3-41.

⁴⁰⁶ *Id.* at 2.

⁴⁰⁷ *Id.* Sections 3.3.4.10 (Geology and Seismic Events), 1.3.3.3.1 (Tornado Hazard), 1.3.3.3.2 (High Winds and Hurricanes), 1.3.3.3.7 (Floods), 1.3.3.3.8 (Tsunami), 3.3.4.1 (High Wind and Tornado Hazards), 3.3.4.2 (Hurricane and Tsunami), and 3.3.4.4 (Flooding) can be found in Ex. NRC001, at 3-17 to 3-21, 1-34 to 1-35, 1-35 to 1-36, 1-38 to 1-39, 1-39, 3-9 to 3-10, 3-10 to 3-11, and 3-12 to 3-13,

(Continued)

Dr. Chowdhury reviewed many of same seismic and flooding issues covered by Dr. Stamatakos, and using the same analysis, he drew the same conclusions. In addition, he reviewed GLE's high-wind and tornado hazard evaluation and discussed the Staff's evaluation thereof.⁴⁰⁸ GLE reviewed high-wind and tornado hazards in the ISA Summary §§ 2.5.5 (Hurricanes) and 2.5.6 (Tornados).⁴⁰⁹ The highest 3-second wind gust recorded in the area of the facility was 107 mph. Based on this information, GLE determined that hurricane winds define the design basis wind speed, as they exceed the highest reported wind gust.⁴¹⁰ Because no Category 4 hurricanes have been reported in the vicinity of the proposed facility, GLE selected a Category 4 hurricane with a 3-second wind gust speed of 157.5 mph as the deterministically "highly unlikely" event.⁴¹¹ Historical data justified this as the highly unlikely event. For example, only six Category 4 and six Category 5 hurricanes have been recorded with wind speeds greater than 157.5 mph at landfall — and none occurred within 500 miles of the proposed site.⁴¹² The more severe hurricanes that made landfall on the Carolina coast recorded wind speeds below the 157.5-mph threshold.⁴¹³

Reviewing this analysis, Dr. Chowdhury testified "the design basis wind speed is adequately conservative for hurricane, high wind, and tornado hazards."⁴¹⁴ In support of this view, Dr. Chowdhury explained that only fifteen tornados have been recorded between 1950 and 2004 in New Hanover County, all at the F1 or F0 level on the Fujita Scale.⁴¹⁵ The strongest tornado in the area was an F2 in the neighboring Brunswick County, and no F4 or F5 tornados have ever been recorded in North Carolina.⁴¹⁶ NUREG/CR-4461⁴¹⁷ recommends a design wind speed of 112 mph for a "highly unlikely" tornado with an annual probability of 10^{-5} . This is less than 157.5 mph, the design basis wind speed for the "highly unlikely" Category 4 hurricane windspeed.⁴¹⁸

The design basis wind speed of 157.5 mph based on the wind speed of a

respectively. Section 1.2.2.4.1 (Seismic Hazards) was also identified incorrectly by Dr. Stamatakos. The proper section, 1.3.3.4.1, is located in Ex. NRC001, at 1-39 to 1-40.

⁴⁰⁸ Ex. NRC121, at 11-13.

⁴⁰⁹ *Id.* at 11 (citing Ex. GLE010, at 2-26 to 2-30, 2-30 to 2-32 respectively).

⁴¹⁰ *Id.*

⁴¹¹ *Id.*

⁴¹² *Id.*

⁴¹³ *Id.* Those hurricanes were Hurricane Hugo in 1989 with a 152-mph gust reported, and Hurricane Hazel in 1954, with an estimated wind speed gust of 140 mph. *Id.*

⁴¹⁴ *Id.* at 13.

⁴¹⁵ *Id.* at 12.

⁴¹⁶ *Id.*

⁴¹⁷ Ex. NRC030, at 8-1.

⁴¹⁸ Ex. NRC121, at 12.

Category 4 hurricane is sufficiently conservative for several reasons.⁴¹⁹ First, this design basis is greater than the upper-bound wind speed for a Category 3 hurricane (131-155 mph), and no Category 3 or 4 winds have ever been reported in the area.⁴²⁰ Second, hurricane wind speed decreases as a hurricane moves inland — and GLE’s proposed site is about 10 miles inland.⁴²¹ Third, the highly unlikely tornado event has a wind speed of 112 mph — so the facility is adequately conservative for hurricane, high wind, and tornado hazards and will be designed to exceed the winds of the “highly unlikely” tornado event.⁴²² Finally, GLE will convert these design bases to applied loads to the IROFS structures in accordance with established codes, ASCE 7-05, AISC N690, and ACI 349. Utilizing these codes and standards builds in an “inherent design margin.”⁴²³

In his oral testimony, Dr. Chowdhury testified as follows:

Liquefaction concerns on the GLE site were limited to soil, not rock. Because liquefaction appears to be a localized phenomenon, it “could be mitigated through the design of the foundation.”⁴²⁴ While the seismic design of the cascade hall had not been detailed, GLE committed to parallel DOE and ASC design standards, which are “used extensively for new facilities” and “are consensus standards.”⁴²⁵ GLE has also committed to using the established design code ACI-349 for concrete structures and the American Institute of Steel Construction Standard N-690 for steel structures which means IROFS buildings are structured with a “steel frame structure with a concrete foundation system” in accordance with these codes and standards.⁴²⁶

c. Sui-Min (Simon) Hsiung

Dr. Hsiung is currently a Staff Engineer at the Center for Nuclear Waste Regulatory Analyses, Geosciences and Engineering Division, Southwest Research Institute.⁴²⁷ He received his B.S. in Mining Engineering from National Cheng Kung University, his M.S. in Rock Mechanics from National Cheng Kung University, and his Ph.D. in Mining Engineering from West Virginia University.⁴²⁸ He is a mining engineer with experience in geotechnical engineering, ISA, and hazard

⁴¹⁹ *Id.*

⁴²⁰ *Id.*

⁴²¹ *Id.*

⁴²² *Id.* at 13.

⁴²³ *Id.*

⁴²⁴ Tr. at 233-34 (7/11/12 Hearing).

⁴²⁵ Tr. at 246-47.

⁴²⁶ Tr. at 247, 249.

⁴²⁷ Ex. NRC121, at 1.

⁴²⁸ *Id.*, Attach. (Sui-Min (Simon) Hsiung Statement of Professional Qualifications).

assessments.⁴²⁹ Dr. Hsiung has substantial experience in providing technical support to the NRC on license application reviews of fuel cycle facilities of various types, including MOX, gas centrifuge, laser enrichment, and independent fuel storage installation facilities, and assessing their hazards analyses and structural designs.⁴³⁰ Dr. Hsiung has authored over 130 technical papers and reports.⁴³¹

In his written testimony, Dr. Hsiung testified as follows:

Dr. Hsiung was the primary reviewer of GLE's assessment of external hazards for the proposed GLE Facility in areas other than seismic hazards.⁴³² His review included the assessment of hazards due to flooding, hurricanes, tsunamis, high winds, and tornados. Dr. Hsiung testified that his analysis of GLE's assessment of those hazards is found in sections 1.3.3.3.1 (Tornado), 1.3.3.3.2 (High Winds and Hurricanes), 1.3.3.3.7 (Floods), 1.3.3.3.8 (Tsunami), 3.3.4.1 (High Wind and Tornado Hazards), 3.3.4.2 (Hurricane and Tsunami), and 3.3.4.4 (Flooding) of the SER.⁴³³

The details of Dr. Hsiung's written testimony addressed the same external hazard assessment issues discussed by Drs. Stamatakos and Chowdhury, *supra*.⁴³⁴

In his oral testimony, Dr. Hsiung testified as follows:

The Staff's external hazard evaluation focused on determining whether the relevant regulatory requirements have been met.⁴³⁵ These regulations require the identification of potential accident sequences involving credible external events and a design that provides adequate protection against natural hazards, with consideration of the most severe historical documented events for the site.⁴³⁶ The ultimate goal of the Staff's review was "to ensure that the applicant's assessment complies with the performance requirements in [§] 70.61(b) and (c) to review the risk of events that could have significant impacts on workers and the public."⁴³⁷ Using NUREG-1520, the Staff assessed whether GLE had characterized hazards with sufficient detail; whether GLE accurately classified the likelihood of hazards and provided adequate bases for that determination; and whether GLE identified

⁴²⁹ *Id.*

⁴³⁰ *Id.*

⁴³¹ *Id.*

⁴³² *Id.* at 2.

⁴³³ *Id.* Those sections can be found at NRC001, at 1-34 to 1-35 (Tornado Hazard); 1-35 to 1-36 (High Winds and Hurricanes); 1-38 to 1-39 (Floods); 1-39 (Tsunami); 3-9 to 3-10 (High Wind and Tornado Hazards); 3-10 to 3-11 (Hurricane and Tsunami); and 3-12 to 3-13 (Flooding).

⁴³⁴ *See* Ex. NRC121, at 3-16.

⁴³⁵ The slides associated with Dr. Hsiung's oral presentation to the Board can be viewed in Ex. NRC113.

⁴³⁶ Tr. at 212-13 (7/11/12 Hearing).

⁴³⁷ Tr. at 213 (stating "specifically, [§] 70.61(b) requires high consequence events to be highly unlikely, and [§] 70.61(c) requires intermediate consequence events to be unlikely").

all design bases related to these hazards.⁴³⁸ Dr. Hsiung also reviewed several guidance documents and well-established codes and standards that the Staff used in its review of GLE's application.⁴³⁹

The Staff found that GLE's application of various guidance documents was appropriate and that all floods were bounded by the highly unlikely maximum probable river flood of 28 feet.⁴⁴⁰ The topography of the landscape around the proposed site — a relative high point surrounded by flat areas with gentle sloping surfaces at gradients less than 2% with little relief — provides the site with much protection from potential flood hazards.⁴⁴¹

The Staff also reviewed GLE's assessment that a high wind hazard of 157 mph is an appropriate design basis for wind for the facility.⁴⁴² Historical data in the area indicate that the highest wind recorded in the region was approximately 107 mph, and hurricane winds never equaled or exceeded those of a Category 3 hurricane.⁴⁴³ The high wind hazard of 157 mph equals the winds of a Category 4 hurricane, which the Staff found sufficiently bounding and conservative on all wind-related events.⁴⁴⁴ Additional conservatism was built into those numbers through the likelihood that hurricane wind speeds will have dropped by the time they would reach an inland location like the proposed site and through GLE's use of codes and standards in its structural design.⁴⁴⁵

In addressing concerns about soil liquefaction at the site, Dr. Hsiung explained that thus far a very small mineral pocket has been found, which will be designed around to avoid impact to that particular area.⁴⁴⁶ GLE has committed to additional investigation to ensure there are not further liquefaction issues.⁴⁴⁷ If further issues arise, structural and engineering adjustments can be made to avoid the potential effect of the liquefaction.⁴⁴⁸ After GLE has performed further investigations, the Staff will review those results, ensure they are accurate, and determine any design changes that may be necessary.⁴⁴⁹

Dr. Hsiung also clarified that different water levels and elevations are used for different flooding-related measurements. For the particular hurricane surge

⁴³⁸ Tr. at 213-14.

⁴³⁹ Tr. at 214-15.

⁴⁴⁰ Tr. at 216-22.

⁴⁴¹ Tr. at 217.

⁴⁴² Tr. at 222.

⁴⁴³ *Id.*

⁴⁴⁴ Tr. at 223.

⁴⁴⁵ Tr. at 223-24.

⁴⁴⁶ Tr. at 233.

⁴⁴⁷ *Id.*

⁴⁴⁸ Tr. at 235.

⁴⁴⁹ *Id.*

assessed here, GLE and the Staff applied a calculation based on mean low water, which differs by about 2.3 feet from mean sea level.⁴⁵⁰ Differences in tides, seasons, and other variations in water level are accounted for.⁴⁵¹ For calculations concerning hurricane surges, the regulatory guidance suggests use of the mean low water, as was applied here.⁴⁵²

Dr. Hsiung acknowledged that changing weather patterns do limit the usefulness of historical data, but NRC regulations and guidance set out the criteria necessary for the Staff to review hazards. Additionally, layers of accident analysis and structural design add additional protection, and design basis events are likely to cause only minor structural damage.⁴⁵³

D. Topic 4: Tracking and Implementation of Applicant Commitments

1. GLE Witnesses

a. Julie Anne Olivier

Ms. Olivier's background and qualifications have been previously summarized in regard to her testimony on Topic 2.

In her written testimony on Topic 4, Ms. Olivier testified as follows:

GLE has an inclusive process to ensure that commitments, license conditions, and other regulatory requirements are properly tracked and implemented.⁴⁵⁴ GLE will use compliance checklists to identify and implement existing, new, or modified regulatory requirements.⁴⁵⁵ A Self-Assessment Program and Corrective Action Program will provide reasonable assurance that GLE detects precursor conditions and corrects noncompliances.⁴⁵⁶ Additionally, GLE's reporting and incident investigation procedures will provide direction as to whether a discovered noncompliance merits an investigation and report to the appropriate regulatory agency.⁴⁵⁷ Finally, in preparation for the NRC's Operational Readiness Review, GLE will perform comprehensive internal readiness reviews.⁴⁵⁸

Mandatory commitments are those required by a regulatory agency and include compliance with NRC license conditions.⁴⁵⁹ In addition to mandatory commit-

⁴⁵⁰ Tr. at 244.

⁴⁵¹ Tr. at 245.

⁴⁵² Tr. at 246.

⁴⁵³ Tr. at 251-52.

⁴⁵⁴ Ex. GLE021-R, at 4.

⁴⁵⁵ *Id.*

⁴⁵⁶ *Id.*

⁴⁵⁷ *Id.*

⁴⁵⁸ *Id.*

⁴⁵⁹ *Id.* at 6.

ments, when practicable GLE seeks to achieve and maintain standards regarding protection of its workers, the public, and the environment that go above and beyond regulatory requirements.⁴⁶⁰ To achieve this objective, GLE has made various voluntary commitments to the NRC and to other local, state, and federal agencies during the licensing process.⁴⁶¹ Both mandatory and voluntary commitments will be tracked by a comprehensive GLE tracking and implementation process.⁴⁶²

Changes to the proposed facility that require prior NRC approval in accordance with 10 C.F.R. § 70.72 will be documented as license amendments.⁴⁶³ For changes that do not require prior NRC approval under 10 C.F.R. § 70.72(d)(2), GLE will submit to the NRC annually, within 30 days after the end of the calendar year during which the change occurred, a brief summary of all changes.⁴⁶⁴ In addition, in accordance with 10 C.F.R. § 70.72(f), GLE will maintain records of such changes that include a written evaluation providing the bases for determining that the changes did not require prior NRC approval.⁴⁶⁵ These records will be maintained until termination of the license.⁴⁶⁶

GLE is in the process of completing similar compliance checklists for (1) the majority of mandatory licensing basis commitments; (2) commitments arising from the ISA; and (3) commitments to codes and standards, as well as regulatory guidance documents.⁴⁶⁷ In addition to comprehensively identifying such commitments, the checklists will, as appropriate, identify a commitment's action owner and responsible manager, so that an electronic calendar system can be used to capture the action, action owner, responsible manager, and relevant due dates.⁴⁶⁸

In the case of commitments to codes, standards, and regulatory guides, if GLE finds that it cannot meet these commitments, the responsible employee, with oversight and approval by the responsible manager, will make a conservative decision regarding how best to proceed.⁴⁶⁹ For example, if the direction in one industry standard conflicts with the direction in another, GLE will use a conservative approach to determine which to follow and then document resolution of the issue on the checklist.⁴⁷⁰ This information will be maintained in dedicated

⁴⁶⁰ *Id.*

⁴⁶¹ *Id.*

⁴⁶² *Id.*

⁴⁶³ *Id.* at 7.

⁴⁶⁴ *Id.* at 8.

⁴⁶⁵ *Id.*

⁴⁶⁶ *Id.*

⁴⁶⁷ *Id.* at 8-12.

⁴⁶⁸ *Id.* at 9.

⁴⁶⁹ *Id.* at 11.

⁴⁷⁰ *Id.*

records that will either be submitted directly to the NRC upon request or made available to the NRC during an inspection.⁴⁷¹

GLE will transfer the compliance checklists discussed above, which will capture all of GLE's requirements and commitments, to a database that will allow electronic searching for individual regulatory requirements and commitments.⁴⁷² The database will be updated as actions are taken on commitments.⁴⁷³ During onsite NRC inspections, the database will be available for review by inspectors.⁴⁷⁴

GLE also has procedures for reviewing, tracking, and implementing new or modified regulatory requirements and guidance.⁴⁷⁵ These procedures are intended (1) to provide guidance concerning the review and implementation of new or modified domestic and foreign regulations, directives, and regulatory guidance; and (2) to establish a process for submitting comments to regulatory agencies, as deemed appropriate.⁴⁷⁶

GLE will determine the feasibility of implementing voluntary commitments on the basis of several factors, including (1) practicability (e.g., the availability of low-sulfur fuel oil and ultra-low-sulfur diesel fuel); (2) the potential for conflict between commitments; (3) overall feasibility with respect to project schedule; and (4) cost-benefit analysis.⁴⁷⁷ If a voluntary commitment is not feasible to complete, GLE will note that fact in the same tracking system discussed above for mandatory commitments, along with a justification as to why the action will not be performed.⁴⁷⁸ In addition, GLE will likely consult with the affected regulatory authority.⁴⁷⁹

Finally, GLE will perform comprehensive internal readiness reviews in preparation for the NRC's Operational Readiness Review.⁴⁸⁰ GLE will form a multidisciplinary team and utilize the NRC inspection manual or other relevant guidance documents to perform the review.⁴⁸¹ It is GLE's objective to perform the internal readiness review prior to scheduling the NRC inspection, thus allowing time for potential corrective actions to be implemented and evaluated before the NRC inspection team arrives.⁴⁸² In addition, GLE will also perform various, albeit more

⁴⁷¹ *Id.* at 11-12.

⁴⁷² *Id.* at 12.

⁴⁷³ *Id.*

⁴⁷⁴ *Id.*

⁴⁷⁵ *Id.*

⁴⁷⁶ *Id.*

⁴⁷⁷ *Id.* at 13.

⁴⁷⁸ *Id.*

⁴⁷⁹ *Id.*

⁴⁸⁰ *Id.* at 17.

⁴⁸¹ *Id.*

⁴⁸² *Id.*

limited, internal readiness reviews before beginning a new process or activity, including radioactive material handling, connecting new computer networks, and installing new safety or security equipment.⁴⁸³

In her oral testimony on Topic 4, Ms. Olivier testified as follows:

Commitments can be either mandatory or voluntary.⁴⁸⁴ Mandatory commitments are categorized as those commitments required by a regulatory agency. Voluntary commitments are selective actions that go above and beyond the regulations.⁴⁸⁵ GLE viewed environmental mitigation measures as a subset of commitments.⁴⁸⁶ Changes to commitments requiring NRC approval will involve a license amendment.⁴⁸⁷ If NRC approval is not required, GLE will submit a summary of the changes to the NRC.⁴⁸⁸ Commitments are implemented through compliance checklists, which map out implementing procedures for each commitment, assign responsibility, and track responsibilities in an electronic calendar system.⁴⁸⁹ GLE will also track voluntary commitments.⁴⁹⁰ If a voluntary commitment is not feasible or not implemented, GLE will note the decision and justification in the compliance checklist.⁴⁹¹

Although no construction activities have begun, GLE has not made any changes to its commitments.⁴⁹² Because preconstruction is now lumped into construction, GLE will perform all mitigation measures that have been committed to in the license application, ER, and FEIS as it begins work on the site.⁴⁹³ If a voluntary measure cannot be implemented due to one of GLE's five assessment factors, it will be documented on the compliance checklist.⁴⁹⁴ Compliance checklists are not public because they can contain proprietary or sensitive information about safety or security systems, but they are available to the NRC and other regulators.⁴⁹⁵ GLE determined mitigation measures largely based on experience and knowledge of the Wilmington site; thus, GLE intends "to go through all of these mitigation

⁴⁸³ *Id.*

⁴⁸⁴ Tr. at 13 (7/12/12 Hearing). The slides associated with Ms. Olivier's presentation to the Board can be viewed in Ex. GLE022.

⁴⁸⁵ Tr. at 13 (7/12/12 Hearing).

⁴⁸⁶ *Id.*

⁴⁸⁷ Tr. at 14.

⁴⁸⁸ *Id.*

⁴⁸⁹ *Id.*

⁴⁹⁰ Tr. at 15.

⁴⁹¹ *Id.*

⁴⁹² Tr. at 17-18.

⁴⁹³ Tr. at 18.

⁴⁹⁴ *See* Tr. at 19-20.

⁴⁹⁵ Tr. at 22.

measures unless one of these factors prevents [them] from doing so.”⁴⁹⁶ GLE will follow the same process for NRC-recommended mitigation measures — which will also be performed unless some reason prevents GLE from performance. If that is the case, the deviation and the reason for such deviation will be documented.⁴⁹⁷

The decision to determine whether or not a change requires a license amendment is a formalized process led by individuals trained in making conservative decisions and familiar with the license application.⁴⁹⁸ Once changes are entered through the electronic workflow system for change requests, reviewers will consider whether they reflect any decrease in effectiveness and determine what action should be made.⁴⁹⁹

Compliance checklists must be completed before any inspection — internal or external can occur.⁵⁰⁰ The internal review that occurs prior to the NRC’s Operational Readiness Review will utilize the checklists to ensure compliance.⁵⁰¹ Any changes to the ISA Summary or ISA would go through the GLE change request process, be reviewed against GLE’s documents, and a determination would be made on whether a license amendment is required.⁵⁰²

GLE tracks voluntary commitments the same way as other commitments; however, there is no requirement to share those records with the NRC.⁵⁰³ GLE nonetheless will make them available should the agency request access to them.⁵⁰⁴ Despite their voluntary nature, Ms. Olivier stated that “[t]here are several reasons that it behooves GLE to comply with those voluntary commitments. . . . [O]ne area is typically those commitments are good for our business. . . . [T]here are some public relation aspects to being stewards to the environment, as well as [the fact that] it’s our site, it’s our community.”⁵⁰⁵

b. Robert Crate

Mr. Crate is the Operations Manager for the GLE project.⁵⁰⁶ He has a B.S. degree in Sociology from the University of the State of New York and was

⁴⁹⁶ Tr. at 20.

⁴⁹⁷ Tr. at 21.

⁴⁹⁸ Tr. at 23.

⁴⁹⁹ Tr. at 23-24.

⁵⁰⁰ Tr. at 24-25.

⁵⁰¹ Tr. at 24.

⁵⁰² Tr. at 25-26.

⁵⁰³ Tr. at 27.

⁵⁰⁴ *Id.*

⁵⁰⁵ Tr. at 27-28.

⁵⁰⁶ Ex. GLE021-R, at 1.

certified by the U.S. Navy as a Nuclear Plant Engineering Officer.⁵⁰⁷ During his 37-year career, he has been employed in various segments of the nuclear industry, from the Nuclear Navy and Department of Energy to, more recently, working at a commercial nuclear power plant and fuel fabrication facility.⁵⁰⁸

In his written testimony, Mr. Crate testified to many of the same matters regarding compliance and tracking as Ms. Olivier. Additionally, he testified as follows:

GLE's Corrective Action Program was established to ensure that a broad range of conditions, including improper implementation of commitments and noncompliances are detected, reported, and resolved appropriately to improve quality and performance.⁵⁰⁹ The Corrective Action Program is a repository designed to capture significant conditions adverse to quality, safety, and other conditions that may be precursors to more significant issues, possibly involving noncompliances with a commitment or other regulatory requirement.⁵¹⁰ Many of these issues are identified through other GLE programs, including, for example, its Self-Assessment, Quality Assurance, 10 C.F.R. Part 21, and Configuration Management programs, and are captured and resolved through the Corrective Action Program.⁵¹¹ The Corrective Action Program includes condition reporting, investigation, analysis, corrective action, preventive action, trend analysis, and reviews.⁵¹² Approved written policies, plans, and procedures specify requirements for documenting conditions adverse to quality including identification, classification, appropriate notifications, and corrective actions taken.⁵¹³ In addition, followup actions to verify implementation of corrective actions and trending analyses are required for significant conditions adverse to quality.⁵¹⁴ The Corrective Action Program also allows for continuous improvement through entry and resolution of new requirements and commitments.⁵¹⁵

The primary method for identifying noncompliances is through GLE's Self-Assessment Program, which was developed on the basis of widely used nuclear industry guidance adopted from the Institute of Nuclear Power Operations Principles for Effective Self-Assessment and Corrective Action Programs.⁵¹⁶ Should GLE determine that a noncompliance has occurred, the noncompliance will be

⁵⁰⁷ *Id.* at 2.

⁵⁰⁸ *Id.*

⁵⁰⁹ *Id.* at 13.

⁵¹⁰ *Id.* at 13-14.

⁵¹¹ *Id.* at 14.

⁵¹² *Id.*

⁵¹³ *Id.*

⁵¹⁴ *Id.*

⁵¹⁵ *Id.*

⁵¹⁶ *Id.*

evaluated in accordance with GLE's reporting procedures to determine if the NRC or other regulatory agencies need to be notified.⁵¹⁷ In addition, when a noncompliance occurs, GLE will institute a corrective action request that requires GLE to determine whether an incident investigation is necessary.⁵¹⁸

Incident investigations are performed to ensure that the noncompliance is understood and appropriate corrective actions are identified and implemented to prevent recurrence.⁵¹⁹ The implementing procedure requires that noncompliances are documented in an investigation report.⁵²⁰ These reports are entered into the Corrective Action Program and the associated corrective actions are tracked to completion.⁵²¹ The objectives of the incident investigation and reporting procedures are to establish the validity of the data related to the incident, to develop and implement corrective action plans when appropriate, to document an event that was or could become a danger to persons or property, and to ensure that proper levels of GLE management and public agencies are notified as appropriate.⁵²²

In his oral testimony on Topic 4, Mr. Crate testified as follows:

GLE's Corrective Action Program captures improper implementation of commitments and other noncompliances.⁵²³ GLE also has a self-assessment program, which proactively identifies noncompliances for inclusion in the Corrective Action Program.⁵²⁴ Corrective action requests are initiated through the Corrective Action Programs.⁵²⁵ GLE also will conduct incident investigations, implement corrective actions, notify appropriate agencies, and conduct periodic assessments and audits.⁵²⁶ To prepare for the Operational Readiness Review, GLE will conduct internal readiness reviews.⁵²⁷

2. NRC Staff Witnesses

a. Jennifer A. Davis

Ms. Davis is a Senior Project Manager in the NRC's Environmental Review Branch, Environmental Protection and Performance Assessment Directorate, Di-

⁵¹⁷ *Id.* at 16.

⁵¹⁸ *Id.*

⁵¹⁹ *Id.*

⁵²⁰ *Id.*

⁵²¹ *Id.*

⁵²² *Id.* at 16-17.

⁵²³ Tr. at 16 (7/12/12 Hearing). The slides associated with Mr. Crate's presentation to the Board can be viewed in Ex. GLE022.

⁵²⁴ Tr. at 16 (7/12/12 Hearing).

⁵²⁵ *Id.*

⁵²⁶ *Id.*

⁵²⁷ Tr. at 17.

vision of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs Office.⁵²⁸ She has a B.A. in Historic Preservation/Classical Civilization from Mary Washington College, and has taken several advanced courses and seminars in her area of expertise.⁵²⁹ She has 10 years' experience at the NRC managing and participating in major, multidisciplinary environmental projects.⁵³⁰ As the Project Manager for the environmental review of GLE's application, she was responsible for overseeing the preparation of the FEIS.⁵³¹

In her written testimony on Topic 4, Ms. Davis testified as follows:

The NRC distinguishes between license conditions and mandatory mitigation measures, on the one hand, and voluntary commitments on the other.⁵³² A commitment is a statement in a licensing document, such as the ER, in which an applicant promises to take certain actions.⁵³³ Unlike regulations and orders, commitments in and of themselves are not legally binding.⁵³⁴ A commitment becomes legally binding only if it is "tied down" in the license (that is, if the licensing document in which the commitment is stated is incorporated into the license by reference).⁵³⁵

The Staff will have an ongoing role in inspecting and monitoring the implementation of mitigation measures that are required to meet 10 C.F.R. Parts 20, 30, 40, and 70.⁵³⁶ Specifically, NRC Region II Staff is responsible for tracking implementation of these mandatory mitigation measures, which fall within the NRC's regulatory authority, as well as for oversight and tracking of the construction and facility operations inspection program.⁵³⁷ Mandatory measures that are covered by permits issued by other federal, state, and local permitting agencies would be tracked by the agency that issued the particular permit.⁵³⁸ Because the NRC does not have the legal authority to require the Applicant to comply with voluntary commitments, the Staff will not require that voluntary commitments are tracked or implemented.⁵³⁹

⁵²⁸ Ex. NRC122, at 1.

⁵²⁹ *Id.*, Attach. (Jennifer Davis Statement of Professional Qualifications).

⁵³⁰ *Id.*

⁵³¹ *Id.* at 2. The FEIS can be viewed in Exs. NRC003A & B.

⁵³² Ex. NRC122, at 3-4.

⁵³³ *Id.* at 3.

⁵³⁴ *Id.*

⁵³⁵ *Id.*

⁵³⁶ *Id.* at 15.

⁵³⁷ *Id.*

⁵³⁸ *Id.* at 16.

⁵³⁹ *Id.* at 17.

The implementation of the mandatory mitigation measures by GLE would be protective of public health and safety and of the environment.⁵⁴⁰ If GLE implemented some of the voluntary mitigation measures, impacts in some resource areas could be lower, but the NRC Staff's overall impact conclusion in the FEIS would not change.⁵⁴¹ As a result, none of the voluntary mitigation measures would be considered by the Staff to be necessary commitments.⁵⁴²

In her oral testimony on Topic 4, Ms. Davis testified as follows:

A commitment becomes legally binding only if the licensing document in which the commitment is stated is tied down in the license.⁵⁴³ Once a licensing document is tied down in a license, any commitments made in that document become mandatory.⁵⁴⁴ License conditions and mandatory mitigation measures are also mandatory.⁵⁴⁵ The NRC Region II staff is responsible for tracking implementation of mandatory mitigation measures and for oversight and tracking of the construction and operations of the facility.⁵⁴⁶

If GLE only implements mandatory mitigation measures, without complying with its various voluntary commitments, the Staff determined this adequately protects public health and safety and the environment.⁵⁴⁷ GLE's ER could not be incorporated into an NRC license.⁵⁴⁸ The Staff "does not have the authority to require the applicant to comply with all of its statements in the environmental report, because many of these statements fall outside of the NRC's regulatory authority."⁵⁴⁹ If GLE only implements mandatory measures, "the impacts in some resource areas could be incrementally higher than estimated in the FEIS, but the staff's overall impact conclusions would not change."⁵⁵⁰

Although GLE's tracking of voluntary commitments is available to the NRC, NRC inspectors do not track voluntary commitments because the Staff has no authority to make sure commitments outside the NRC's regulatory authority are implemented.⁵⁵¹ To the extent GLE's commitments to state, local, and other federal agencies involve radiological health and safety, the Staff also follows up

⁵⁴⁰ *Id.* at 16.

⁵⁴¹ *Id.*

⁵⁴² *Id.*

⁵⁴³ Tr. at 31 (7/12/12 Hearing). The slides associated with Ms. Davis's presentation to the Board can be viewed in Ex. NRC114.

⁵⁴⁴ Tr. at 31-32 (7/12/12 Hearing).

⁵⁴⁵ Tr. at 32.

⁵⁴⁶ Tr. at 36.

⁵⁴⁷ Tr. at 39.

⁵⁴⁸ *Id.*

⁵⁴⁹ Tr. at 40.

⁵⁵⁰ Tr. at 40-41.

⁵⁵¹ Tr. at 63.

on those commitments, but “[n]ot every construction or operating permit that GLE obtains would require notification necessarily to the NRC.”⁵⁵²

The Staff was able to perform its cost-benefit balancing without giving weight to the voluntary commitments and still found the facility cost-beneficial.⁵⁵³ Because the voluntary measures go “above and beyond and [are] hard to track,” they do not necessarily weigh heavily into the Staff’s analysis.⁵⁵⁴ The mandatory measures are sufficiently protective to meet the NRC’s regulatory requirements.⁵⁵⁵

b. Timothy C. Johnson

Mr. Johnson’s background and qualifications have been previously summarized in relation to his testimony on Topic 2.

In his written testimony on Topic 4, Mr. Johnson testified to some of the same matters regarding commitment tracking as Ms. Davis. Additionally, he summarized the safety-related conditions that the NRC Staff proposes to include in the license for the proposed GLE facility.⁵⁵⁶ Additionally, he described the process by which the NRC includes a tie-down condition in the license to make enforceable an applicant’s statements and commitments that support the NRC Staff’s safety and security reviews.⁵⁵⁷ Finally, he explained how the NRC will ensure compliance with the license conditions, as well as other regulatory requirements, through its inspection program.⁵⁵⁸

In his oral testimony on Topic 4, Mr. Johnson testified as follows:

On the safety side, license conditions fall into two categories: standard conditions used for all materials licenses and facility-specific license conditions.⁵⁵⁹ Standard conditions include the license term and authorized place of use.⁵⁶⁰ Facility-specific conditions include limitations on the tails cylinder storage capacity, availability of funding for the facility, and a requirement that the proposed GLE facility be specifically added to the insurance policy covering the Wilmington site.⁵⁶¹ A license exemption allows GLE to make changes that do not have safety significance to its licensing application, exempting GLE from license

⁵⁵² Tr. at 64.

⁵⁵³ Tr. at 85-86.

⁵⁵⁴ Tr. at 87.

⁵⁵⁵ Tr. at 89.

⁵⁵⁶ Ex. NRC122, at 18-22.

⁵⁵⁷ *Id.* at 22-24.

⁵⁵⁸ *Id.* at 24.

⁵⁵⁹ Tr. at 41 (7/12/12 Hearing). The slides associated with Mr. Johnson’s presentation to the Board on Topic 4 can be viewed in Ex. NRC114.

⁵⁶⁰ Tr. at 42 (7/12/12 Hearing).

⁵⁶¹ Tr. at 43-44.

amendments for administrative changes.⁵⁶² Another significant exemption allows GLE to provide decommissioning funding assurance for its depleted uranium tails on an annual forward-looking assessment, rather than requiring financial assurance at the time of licensing for the entire 40-year period during which the facility will generate tails.⁵⁶³ GLE was also given an exemption from providing locations and details of criticality accident alarms in the ISA “because not all of the areas have been specifically designed, [so] the exact detail required under this regulation is not available at this time.”⁵⁶⁴ The Staff has allowed GLE to submit this information for review and approval prior to its receipt of licensed material.⁵⁶⁵ GLE was also required to address the details of its detection systems for material control and accounting; however, these systems have not yet been designed, so the Staff granted GLE an exemption that requires GLE to submit this information for review and approval prior to the receipt of license material.⁵⁶⁶ This detail will come to the NRC in the form of a license amendment subject to AEA § 189a public notice and hearing opportunity requirements.⁵⁶⁷

License conditions tie down the important licensing-basis documents, making them enforceable.⁵⁶⁸ Documents that are tied down include the license application, the fundamental nuclear control plan, the emergency plan, the standard practice and procedure plans for the protection of classified matter, the quality assurance program description, the validation report for the criticality analyses, the physical security plan, the decommissioning funding plan, the nuclear material transportation security plan, the human factors engineering plan, and the program cyber security plans.⁵⁶⁹

With regard to the \$200 million insurance policy that covers the Wilmington site, the Staff will ensure the GLE facility specifically is added to the policy and that this amount of coverage is sufficient for both facilities.⁵⁷⁰ The insurer will not provide coverage beyond \$200 million, but “the reviewer agreed that that was sufficient to meet the regulatory requirements.”⁵⁷¹

The ISA and ISA Summary are not tied down because, under NRC regulations, the ISA Summary is not part of the license application and is not considered a

⁵⁶² Tr. at 46.

⁵⁶³ Tr. at 48.

⁵⁶⁴ Tr. at 50.

⁵⁶⁵ *Id.*

⁵⁶⁶ *Id.*

⁵⁶⁷ Tr. at 89-90.

⁵⁶⁸ Tr. at 53.

⁵⁶⁹ Tr. at 54.

⁵⁷⁰ Tr. at 65.

⁵⁷¹ Tr. at 92.

licensing-basis document.⁵⁷² The rationale for not including them is that the ISA and ISA Summary are dynamic documents that will change, and when an ISA Summary contains a commitment, the Staff required the Applicant to put the commitments into the license application, which is tied down.⁵⁷³ The Monte Carlo validation report is tied down because it is an important part of criticality safety analysis.⁵⁷⁴ Changes to that document could change the conservatism of how the margin of subcriticality is calculated and used.⁵⁷⁵ The dates of the validation reports that are tied down relate to GLE's initial filing and subsequent revision, but if future changes are made, the Staff would expect that those changes would be integrated into current validation report or a new document would be reflected in the tie down.⁵⁷⁶ The ER is not tied down.⁵⁷⁷

c. Deborah Seymour

Ms. Seymour is a Branch Chief in the NRC's Region II Office in Atlanta, Georgia.⁵⁷⁸ Ms. Seymour has a B.S. in Chemical Engineering and Materials Engineering from the University of Connecticut, and has worked for the NRC for 25 years.⁵⁷⁹ In her current role, Ms. Seymour provides direction and oversight to the construction inspection programs at fuel facilities under construction.⁵⁸⁰ Previously, she held various NRC Inspector and Engineer positions.⁵⁸¹ She holds four different NRC Inspector Qualifications and has graduated from the NRC Senior Resident Inspector Development Program.⁵⁸²

In her written testimony, Ms Seymour testified as follows:

If the Applicant is granted a license, the NRC's Division of Construction Projects in Region II will oversee implementation of the construction inspections and the Operational Readiness Review inspections that must be completed before the licensee can begin operations.⁵⁸³ Ms. Seymour will be the Branch Chief overseeing these activities for the proposed GLE facility.⁵⁸⁴ She was involved in

⁵⁷² Tr. at 77-78.

⁵⁷³ Tr. at 78-79.

⁵⁷⁴ Tr. at 80.

⁵⁷⁵ *Id.*

⁵⁷⁶ Tr. at 81-82.

⁵⁷⁷ Tr. at 90.

⁵⁷⁸ Ex. NRC122, at 1.

⁵⁷⁹ *Id.*, Attach. (Deborah Seymour Statement of Professional Qualifications).

⁵⁸⁰ *Id.*

⁵⁸¹ *Id.*

⁵⁸² *Id.*

⁵⁸³ *Id.* at 2.

⁵⁸⁴ *Id.*

these activities for the Louisiana Energy Services National Enrichment Facility and is currently involved in these activities for the Shaw AREVA MOX Services Mixed Oxide Fuel Fabrication Facility.⁵⁸⁵

The Staff will conduct construction inspections, in addition to Operational Readiness Review inspections, to confirm that GLE has constructed the proposed facility in accordance with applicable requirements.⁵⁸⁶ The Operational Readiness Review inspections will address the facility's operational programs, or significant changes to those operational programs, for each of the applicable phases.⁵⁸⁷

The NRC's Division of Construction Projects Staff in Region II is responsible for overseeing and implementing the GLE construction and Operational Readiness Review inspection programs.⁵⁸⁸ A Senior Project Inspector, in conjunction with a senior project manager from the NRC's Office of Nuclear Material Safety and Safeguards, will be assigned to the GLE facility to oversee and coordinate both programs.⁵⁸⁹

The inspection program will be outlined in a site-specific inspection manual chapter that describes fuel facility construction and preoperational readiness review inspection programs.⁵⁹⁰ The relevant inspection manual chapter is expected to be issued in advance of the onset of construction at the GLE facility.⁵⁹¹

Prior to the NRC's authorizing operation of the facility, Operational Readiness Review inspections will be conducted to verify safety programs and operational readiness.⁵⁹² Typical areas covered by Operational Readiness Review inspections include radiation safety, environmental and waste, transportation, nuclear criticality, operations, fire protection, emergency preparedness, and material control and accountability.⁵⁹³

Region II typically obtains licensee construction schedules in Primavera scheduling software (commonly used by many NRC licensees).⁵⁹⁴ The Primavera schedule is integrated into the NRC's construction inspection schedule.⁵⁹⁵ The goal is to inspect, identify issues, and verify the implementation of appropriate corrective actions early in the construction/preoperational readiness process.⁵⁹⁶

⁵⁸⁵ *Id.*

⁵⁸⁶ *Id.* at 25.

⁵⁸⁷ *Id.*

⁵⁸⁸ *Id.*

⁵⁸⁹ *Id.*

⁵⁹⁰ *Id.* at 26.

⁵⁹¹ *Id.*

⁵⁹² *Id.*

⁵⁹³ *Id.*

⁵⁹⁴ *Id.* at 27.

⁵⁹⁵ *Id.*

⁵⁹⁶ *Id.*

In her oral testimony, Ms. Seymour testified as follows:

After the license is issued, Ms. Seymour and a senior project inspector will be responsible for oversight of the implementation of construction inspections and the Operational Readiness Review inspections that must be completed before the licensee can begin operations.⁵⁹⁷ This team will be responsible for the planning, performance, documentation, and enforcement associated with the construction inspection program, and will track implementation of licensee requirements and commitments.⁵⁹⁸ The team will receive assistance from headquarters, regional inspectors, and other Division of Construction Projects inspectors.⁵⁹⁹ Required construction and Operational Readiness Review inspections ensure the facility is constructed as designed and licensed.⁶⁰⁰ The inspection process for the proposed facility will be outlined in an inspection manual chapter that describes the construction and Operational Readiness Review inspection programs and that will be available prior to construction onset.⁶⁰¹ Commitments and requirements are sampled at each inspection stage with inspections focusing on the facility IROFS.⁶⁰²

Inspectors receive training specific to the facilities to be inspected and are informed of licensee-specific commitments and requirements.⁶⁰³ Inspectors must go through a rigorous qualification process, which takes 18 months to 2 years.⁶⁰⁴ Like GLE, the Staff also tracks commitments and requirements through a software program, which guides inspections by tracking when inspections of certain areas are to be made.⁶⁰⁵ As part of routine inspections, the Staff inspectors will look at changes to the facility that have been made without license amendment and will perform a sampling of those revisions to check that GLE's determinations that no license amendment was required were appropriate.⁶⁰⁶ In addition, lists of changes are sent to headquarters reviewers who give recommendations to the regional inspectors on which changes should be included in an inspection.⁶⁰⁷

With regard to the Operational Readiness Review inspection, the Staff ensures that it uses the appropriate technical specialist for each area under review,

⁵⁹⁷ Tr. at 55 (7/12/12 Hearing). The slides associated with Ms. Seymour's presentation to the Board can be viewed in Ex. NRC114.

⁵⁹⁸ Tr. at 55 (7/12/12 Hearing).

⁵⁹⁹ *Id.*

⁶⁰⁰ Tr. at 56.

⁶⁰¹ Tr. at 57.

⁶⁰² Tr. at 57-58.

⁶⁰³ Tr. at 66.

⁶⁰⁴ *Id.*

⁶⁰⁵ Tr. at 67.

⁶⁰⁶ Tr. at 69.

⁶⁰⁷ Tr. at 70.

including confirming that inspectors have the proper qualifications.⁶⁰⁸ The result is that some inspectors in certain specialized areas, like criticality safety, come from headquarters so that appropriately qualified individuals are performing each inspection.⁶⁰⁹

d. Jose Diaz

Mr. Diaz is a Senior Fuel Facility Project Inspector in the NRC's Region II Office in Atlanta, Georgia.⁶¹⁰ He has a B.S. in Physics from the University of Puerto Rico and an M.Div. in Biblical Languages from New Orleans Baptist Theological Seminary.⁶¹¹ Mr. Diaz has over 19 years' experience implementing NRC inspection programs and holds three NRC Inspection Qualifications and one Reviewer Qualification.⁶¹²

In his written testimony on Topic 4, Mr. Diaz testified as follows:

Mr. Diaz is the Senior Fuel Facility Inspector within the division (in the NRC's Region II Office) that is responsible for performing the Operational Readiness Review inspection that, if the Applicant is granted a license, would need to be completed before the Applicant could begin operations.⁶¹³ He would also be responsible for performing regular facility inspections that would occur during operation of the proposed GLE facility.⁶¹⁴

After operations begin, the Staff will conduct routine inspections of various aspects of facility operations based on the core inspection program to ensure compliance with regulatory requirements and mandatory commitments in the license application.⁶¹⁵ These inspections are conducted throughout the calendar year.⁶¹⁶ Results of these inspections are evaluated by NRC management and staff to assess licensee performance in various functional areas.⁶¹⁷

The Region II office would have direct responsibility for oversight of the facility once operations begin.⁶¹⁸ The Region II office, with support from the Office of Nuclear Material Safety and Safeguards and the Office of Nuclear Security and Incident Response as applicable, is responsible for conducting the

⁶⁰⁸ Tr. at 74-75.

⁶⁰⁹ Tr. at 75.

⁶¹⁰ Ex. NRC122, at 1.

⁶¹¹ *Id.*, Attach. (Jose M. Diaz Velez Statement of Professional Qualifications).

⁶¹² *Id.*

⁶¹³ *Id.* at 2.

⁶¹⁴ *Id.*

⁶¹⁵ *Id.* at 27.

⁶¹⁶ *Id.*

⁶¹⁷ *Id.*

⁶¹⁸ *Id.*

various inspection activities.⁶¹⁹ Tracking and verification of compliance with mandatory licensee commitments are part of the overall inspection program.⁶²⁰

In his oral testimony on Topic 4, Mr. Diaz testified as follows:

After passing the Operational Readiness Review inspection, GLE will continue to be inspected by NRC operations inspectors.⁶²¹ The results of these inspections are evaluated by the Region II management and headquarters offices, and inspectors receive support from headquarters staff.⁶²²

The frequency of operational inspections is defined in the NRC Inspection Manual Chapter 2600 for fuel cycle facilities.⁶²³ The majority of inspections are once a year with a bigger inspection occurring every 3 years.⁶²⁴

E. Topic 5: Need/Alternatives/Environmental Cost-Benefit Analysis

1. GLE Witnesses

a. Julie Anne Olivier

Ms. Olivier's education and background were discussed previously in reference to her testimony on Topic 2.

In her written testimony on Topic 5, Ms. Olivier testified as follows:

Ms. Olivier has been involved with the GLE Facility project since its early phases.⁶²⁵ She served as the technical lead for preparation and submittal of the GLE license application, authoring sections related to chemical safety, environmental protection, decommissioning, management measures, and project administration.⁶²⁶ She also served as the interface between the design and safety teams. Currently, she manages project-related interactions with federal, state, and local government agencies; oversees matters concerning the NRC's ongoing review of the GLE license application; and serves as technical lead on environmental issues.⁶²⁷

Since the proposed license for this uranium enrichment facility is covered by 10 C.F.R. Part 51, GLE was required by NRC regulations to prepare an ER. Using

⁶¹⁹ *Id.*

⁶²⁰ *Id.* at 28.

⁶²¹ Tr. at 60 (7/12/12 Hearing). The slides associated with Mr. Diaz's presentation to the Board can be viewed in Ex. NRC114.

⁶²² Tr. at 61 (7/12/12 Hearing).

⁶²³ Tr. at 71.

⁶²⁴ Tr. at 72.

⁶²⁵ Ex. GLE012, at 4.

⁶²⁶ *Id.*

⁶²⁷ *Id.*

relevant provisions of 10 C.F.R. Part 51 and assistance from NUREG-1748, GLE developed its ER.⁶²⁸

Section 1.2 of the ER addresses the need for the proposed GLE facility, which GLE sees as threefold: (1) the need for enriched uranium to fulfill nuclear electrical-generation requirements; (2) the need for domestic uranium enrichment capacity for national energy security; and (3) the need for advanced uranium enrichment technology in the United States.⁶²⁹ The information in the ER was based on the information available to GLE in January 2009.⁶³⁰

Section 2.2 of the ER addresses alternatives to the proposed action with respect to (1) enrichment technology; (2) facility design; (3) site location; and (4) facility location within the preferred site.⁶³¹ GLE evaluated other enrichment technologies and concluded they were not reasonable alternatives for economic, commercial, technological, and environmental reasons.⁶³² Through the facility design process, several design alternatives were considered but eliminated due to environmental impacts, contamination of the facility, ease of decommissioning, waste minimization, emergency response, and uranium-separation efficiency.⁶³³

GLE also evaluated the No Action Alternative or maintenance of the status quo, as required by NUREG-1748.⁶³⁴ Under the No Action Alternative, the proposed GLE facility is not constructed, and the positive socioeconomic impacts like employment, economic activity, and tax revenue do not occur.⁶³⁵ There is no increase in domestic supply of low-enriched uranium, no technological advance of a first-of-kind facility, and a less diverse supply of uranium.⁶³⁶ Under the No Action Alternative, the small to moderate beneficial impacts of the proposed GLE facility would not accrue.⁶³⁷ On the other hand, potential local environmental impacts would be avoided by the No Action Alternative, including those related to water and land use, potential groundwater contamination, ecology, air emissions, human health and occupation safety, and waste storage and disposal.⁶³⁸ All of these effects were found to be small, excepting community effects brought on by motor vehicle traffic, flora and fauna, noise during construction/decommissioning, and

⁶²⁸ *Id.* at 6-7. NUREG-1748 can be found in Ex. NRC006.

⁶²⁹ Ex. GLE012, at 8 (citing Ex. GLE006A, at 1-4).

⁶³⁰ *Id.*

⁶³¹ *Id.* at 33. *See also* Ex. GLE006A.

⁶³² Ex. GLE012, at 34.

⁶³³ *Id.*

⁶³⁴ *Id.* This guidance can be found in Ex. NRC006, at 6-3.

⁶³⁵ Ex. GLE012, at 35.

⁶³⁶ *Id.*

⁶³⁷ *Id.* at 37.

⁶³⁸ *Id.*

UF₆ waste management, which would produce moderate impacts.⁶³⁹ Comparing the costs and benefits, the Staff concluded the GLE proposed facility is preferable to the No Action Alternative because it contributes to fulfilling future demand for enrichment services from domestic nuclear plants and increases national energy security. It also introduces a new technology that has the potential to have lower resource and environmental impacts than existing technologies. The proposed facility also generates positive impacts in the region of interest in the form of employment, income, and tax revenues.⁶⁴⁰

The GLE site selection process is described in both the ER and the FEIS.⁶⁴¹ The steps undertaken to select a site were: (1) identification of candidate sites; (2) initial screening; (3) coarse screening; (4) site reconnaissance visits; (5) fine screening; and (6) qualitative cost-benefit analysis.⁶⁴² The process began with the identification of candidate sites, subject to initial screening for seismic, tectonic, and flooding hazards.⁶⁴³ Sites passing this step entered the coarse screening phase, which considered property size requirements and potential impediments to property transfer. Sites failing one or more of these criteria were eliminated.⁶⁴⁴ Reconnaissance visits then were conducted at the remaining sites to identify potential issues, and the sites that passed that step entered fine screening.⁶⁴⁵ Fine screening involved consideration of detailed criteria for each project phase.⁶⁴⁶

A total of twenty-two potential sites were screened using this multistage evaluation process. Of the twenty-two sites, three were eliminated on seismic grounds and sixteen were eliminated because they were too small, government owned, at significant risk for litigation or public opposition, subject to Resource Conservation and Recovery Act Corrective Action, or designated as CERCLA National Priority List sites.⁶⁴⁷ Of the three remaining sites, one had insufficient uncommitted land.⁶⁴⁸ The remaining two sites (Morris, Illinois and Wilmington, North Carolina) were compared using the fine-screening criteria.⁶⁴⁹

The comparison between the Morris and Wilmington sites was conducted

⁶³⁹ *Id.* at 37-38.

⁶⁴⁰ *Id.* at 38.

⁶⁴¹ *Id.* The site selection process is described in ER § 2.2.3.1, which can be found in Ex. GLE006A, at 2-15 and FEIS § 2.3.1, which can be found in Ex. NRC003A, at 2-43.

⁶⁴² Ex. GLE012, at 38-39. *See also* Ex. GLE006A, Figure 2.2-1; and Ex. NRC003A, at 2-44, Figure 2-4.

⁶⁴³ Ex. GLE012, at 39.

⁶⁴⁴ *Id.*

⁶⁴⁵ *Id.*

⁶⁴⁶ *Id.* (citing Ex. GLE006A, at 2-15).

⁶⁴⁷ *Id.*

⁶⁴⁸ *Id.*

⁶⁴⁹ *Id.*

under a multicriteria decision analysis methodology referred to as the Analytic Hierarchy Process.⁶⁵⁰ The Wilmington site scored higher in three of four criteria clusters, and a qualitative cost-benefit analysis indicated that net benefits would be slightly higher on the Wilmington site.⁶⁵¹ GLE determined that the Wilmington site was the preferred site due to existing nuclear infrastructure and greater cost savings and smaller adverse impacts in Wilmington on several environmental resources.⁶⁵²

The 2014 operations startup date listed in the ER was GLE's best estimate when that document was produced.⁶⁵³ Although subsequent events have rendered that date infeasible, no alternative schedule has been established.⁶⁵⁴ Despite delays in preconstruction activities, GLE does not intend to expedite or compress the construction schedule, and as such, the impacts of construction activities described in the ER and FEIS remain current.⁶⁵⁵

GLE has confirmed with Progress Energy that sufficient capacity exists at the Sutton Electrical Plant to supply the expected electricity demands of the proposed facility. To meet this demand, Progress Energy has noted that several upgrades to feeder line and terminals will be needed.⁶⁵⁶ Original discussions for planning and design work were put on hold due to construction delays and by agreement of the parties.⁶⁵⁷ In September 2011, GLE and Progress discussed the plan to resume planning and preliminary design once a decision is made to proceed with construction.⁶⁵⁸ Progress Energy affirmed its ability and willingness to provide the services once a cost-sharing arrangement had been established.⁶⁵⁹

In her oral testimony on Topic 5, Ms. Olivier testified as follows:

Based on the GLE evaluation in the environmental report, there are four areas of environmental costs in which the proposed facility would create small to moderate impacts.⁶⁶⁰ All remaining impacts were small.⁶⁶¹ Moderate impacts indicate that impacts would not destabilize a resource, and in the majority of

⁶⁵⁰ *Id.* at 40.

⁶⁵¹ *Id.*

⁶⁵² *Id.*

⁶⁵³ *Id.* at 46.

⁶⁵⁴ *Id.*

⁶⁵⁵ *Id.*

⁶⁵⁶ *Id.* at 47.

⁶⁵⁷ *Id.*

⁶⁵⁸ *Id.*

⁶⁵⁹ *Id.* (citing Ex. GLE017).

⁶⁶⁰ Tr. at 108 (7/12/12 Hearing). *See also* Ex. GLE018 for the slides related to an oral presentation to the Board on this topic.

⁶⁶¹ Tr. at 108 (7/12/12 Hearing).

environmental cost areas with small to moderate impacts, those impacts were characterized as temporary or related to the construction phase.⁶⁶²

In the site selection process, key factors led GLE to select the Wilmington site over the Morris site. One was the existing nuclear infrastructure on the Wilmington site, such as existing radiation protection programs, environmental management programs, and emergency preparedness programs that can be built on when the GLE facility is constructed.⁶⁶³ Another was greater cost savings to GLE for the Wilmington site, as well as slightly smaller adverse impacts to the environment.⁶⁶⁴ On the other hand, the Morris site provided slightly higher positive impacts in the socioeconomic area.⁶⁶⁵ But this did not qualify the Morris site as an obviously superior site, and so, based on the factors discussed above, the Wilmington site was the preferred location for GLE and was selected.⁶⁶⁶

With regard to mitigation measures, Ms. Olivier testified that “GLE will implement those mitigation measures whether they are mandatory, required by another federal, local, or state agency, or if they were voluntary. If GLE finds a reason that they cannot implement one of the voluntary commitments, [GLE] will perform an analysis . . . and document that in [GLE’s] compliance checklist, which will be made available to the NRC.”⁶⁶⁷

Ms. Olivier explained the limitations on GLE under the SILEX Treaty between the United States and Australia and GLE’s Technology and Commercialization Licensing Agreement with SILEX. The SILEX Treaty gives GLE the exclusive right to commercialize the technology in the United States with the caveat that the enriched uranium can only be used for peaceful purposes.⁶⁶⁸ The SILEX Treaty allows SILEX technology to be used in countries that execute the Treaty; however, currently the United States is the only signatory.⁶⁶⁹ Ms. Olivier acknowledged that some of the national objectives she stated in her written testimony might be accomplished through GLE’s facility — such as “[p]roviding the U.S. an unencumbered source of enriched uranium, critical in the near-term for the national security tritium production mission” and “[p]roviding a U.S. capability to enrich uranium to make fuel, critical in the long term for meeting demand for defense-related research reactors and for naval nuclear propulsion reactors” — would in fact violate GLE’s treaty obligations.⁶⁷⁰ Neither the treaty nor any other

⁶⁶² *Id.*

⁶⁶³ Tr. at 109-10.

⁶⁶⁴ Tr. at 110.

⁶⁶⁵ *Id.*

⁶⁶⁶ *Id.*

⁶⁶⁷ Tr. at 118-19.

⁶⁶⁸ Tr. at 129.

⁶⁶⁹ Tr. at 136.

⁶⁷⁰ Tr. at 133. See Ex. GLE012, at 36 for the referenced written testimony.

document requires GLE to conserve or confine its services for domestic use⁶⁷¹ but there are some restrictions on the exportation of enrichment services contained in the SILEX Treaty.⁶⁷² Ms. Olivier stated that “there is a lot of interest domestically, and so GLE is in the process of finalizing contracts with domestic customers.”⁶⁷³

b. Michael Schwartz

Mr. Schwartz is the Chairman of the Board for Energy Resources International, Inc. in Washington, D.C.⁶⁷⁴ He holds B.S. and M.S. degrees in Nuclear Engineering from the University of Michigan and has completed graduate-level courses in finance, economics, and management.⁶⁷⁵ He is a registered Professional Engineer in California and has been a consultant on issues related to the nuclear fuel cycle for over 35 years.⁶⁷⁶ In his current role as Chairman of the Board, he oversees all consulting services provided by the firm, which offers energy and resource consulting services to a range of institutions, industries, and government agencies.⁶⁷⁷ Energy Resources International produces an annual market projection that addresses all nuclear fuel market elements, including the international sector.⁶⁷⁸ Mr. Schwartz has previously testified in both state and federal proceedings on issues relating to the need for new uranium facilities and the pricing of enrichment services by the federal government.⁶⁷⁹ Prior to his current role, Mr. Schwartz held positions as an engineer and consultant at various other entities.⁶⁸⁰

In his written testimony, Mr. Schwartz testified as follows:

Mr. Schwartz was recently retained by GLE to consult on issues related to domestic and global uranium enrichment supply and requirements.⁶⁸¹ He has reviewed portions of the ER and FEIS related to the need for the proposed facility and researched enriched uranium supply and demand, as well as other considerations key to NEPA analysis.⁶⁸²

Mr. Schwartz is the primary author of a report entitled “A Detailed Review of the Need for Future Enrichment Capability — Response to ASLB 5A” (ERI

⁶⁷¹ Tr. at 130 (7/12/12 Hearing).

⁶⁷² Tr. at 178.

⁶⁷³ Tr. at 133.

⁶⁷⁴ Ex. GLE012, at 1.

⁶⁷⁵ *Id.* at 2.

⁶⁷⁶ *Id.*

⁶⁷⁷ *Id.*

⁶⁷⁸ *Id.*

⁶⁷⁹ *Id.* at 2-3.

⁶⁸⁰ *Id.*, App. B.

⁶⁸¹ *Id.* at 4.

⁶⁸² *Id.*

Report).⁶⁸³ The report details a supply and demand requirements analysis of the world installed nuclear generating capacity and global enrichment services for 2012-2035.⁶⁸⁴ The ERI Report was based on currently-available data and information concerning future uranium enrichment demand and supply and was created using conservative assumptions and accepted forecasting methodologies.⁶⁸⁵ The ERI Report was generated from an array of publicly available sources, as well as from direct communications with market participants. Data were obtained from various government and international entity sources, World Nuclear Association publications, nuclear trade press articles and reports, newspaper articles, meeting materials, industry press releases, and financial filings.⁶⁸⁶ The information was evaluated, to the extent possible, for reliability and accuracy.⁶⁸⁷

The ERI Report indicates that enriched uranium from the GLE Facility would be used in commercial nuclear power plants, most of which are fueled by low-enriched uranium.⁶⁸⁸ The enrichment services market is global, with the United States purchasing the majority of its enrichment services overseas, while USEC's Paducah plant exports much of its production.⁶⁸⁹

To develop a forecast of future demand, ERI looked at installed nuclear power generating capacity based on a country-by-country and unit-by-unit review of current nuclear power programs and future plans.⁶⁹⁰ The forecast considered: (1) plants currently in operation and retirements among those units during the forecast period (assuming no license renewals); (2) capacity created by power uprates or by restarting units on extended outage; (3) capacity created by extending operating lifetimes of existing units through license renewal; (4) units under construction, ordered, or firmly planned; and (5) additional future capacity at expected sites still requiring approval.⁶⁹¹

Using these data, the ERI Report generated Reference, High, and Low Nuclear Power Growth forecasts of installed nuclear power generating capacity and divided the world into five regions: the United States; Western Europe; the Commonwealth of Independent States and Eastern Europe; East Asia; and Other (including all remaining countries).⁶⁹² The Reference, High, and Low Nuclear

⁶⁸³ *Id.* at 9. The report can be viewed in its entirety in Ex. GLE014.

⁶⁸⁴ Ex. GLE012, at 9.

⁶⁸⁵ *Id.*

⁶⁸⁶ *Id.*

⁶⁸⁷ *Id.*

⁶⁸⁸ *Id.* at 10.

⁶⁸⁹ *Id.*

⁶⁹⁰ *Id.*

⁶⁹¹ *Id.* (citing Ex. GLE014, at 3).

⁶⁹² *Id.* at 11 (citing Ex. GLE014, at 2).

Power Growth forecasts illustrate what could occur to installed nuclear generating capacity under three different scenarios.⁶⁹³

The Reference forecast is considered most likely at this time and predicts a steady average annual nuclear generating capacity growth rate of 1.9% through 2035.⁶⁹⁴ This model assumed aggressive expansion in Asia; license renewals for most American plants; and power plant uprates.⁶⁹⁵ It also predicts some growth in Russia and countries in the Commonwealth of Independent States/Eastern Europe category.⁶⁹⁶

The High forecast is considered an upper-bound scenario, with a comparatively low probability of occurrence.⁶⁹⁷ The High forecast assumes most countries grant 50-year or greater license extensions and replace retiring units.⁶⁹⁸ It also assumes persistent high coal and natural gas prices, broad agreement regarding the need for new baseload capacity, and more stringent environmental controls and costs imposed on fossil-fired capacity.⁶⁹⁹

The ERI Low forecast is considered to be a lower-bound scenario, with a comparatively low probability of occurrence.⁷⁰⁰ This forecast assumes a lack of support for the nuclear energy option in most countries, as well as low natural gas prices, lack of carbon-based taxes, difficulties in raising capital for new construction, high construction costs, lower than expected growth in electric power demand, declining market prices for electricity, difficulties in plant site selection, and growing anti-nuclear sentiments.⁷⁰¹

The Fukushima Dai-ichi event has had some immediate effects on world installed nuclear generating capacity. In Germany, the adverse sociopolitical reaction led to the permanent shut down of the seven oldest units in the country, along with another unit that had been in long-term outage.⁷⁰² Thus, including the six units at the Fukushima Dai-ichi station itself, fourteen units totaling approximately 13 gigawatts-electric (GWe) were retired as an immediate result of the Fukushima event.⁷⁰³ This was the equivalent of 3.5% of existing world capacity. The long-term impact of the Fukushima event is estimated to be a 4.6% reduction in installed nuclear generation by 2020, growing to a 7.9% reduction by

⁶⁹³ *Id.* at 12.

⁶⁹⁴ *Id.*

⁶⁹⁵ *Id.*

⁶⁹⁶ *Id.*

⁶⁹⁷ *Id.*

⁶⁹⁸ *Id.* at 12-13.

⁶⁹⁹ *Id.* at 13.

⁷⁰⁰ *Id.*

⁷⁰¹ *Id.*

⁷⁰² *Id.*

⁷⁰³ *Id.*

2030.⁷⁰⁴ This is equivalent by 2020 to a 2- to 3-year slippage in projected installed nuclear generation capacity compared to pre-Fukushima estimates, and as much as a 4-year slippage by 2030.⁷⁰⁵ ERI's Reference forecast does take into account the additional reduced capacity resulting from the Fukushima event. Specifically, the Reference forecast assumes twelve Japanese units will retire without ever restarting, while the restart of other units is spread out over the next 30 months.⁷⁰⁶ The Reference forecast also assumes that Japan will complete the two reactors under construction (which is currently suspended), but that all other Japanese projects, regardless of planning stage, will not be built.⁷⁰⁷

Under the Reference forecast, world installed nuclear power capacity is forecast to increase 32% to 485 GWe by 2025, and to rise an additional 19% to 580 GWe by 2035 for a total cumulative increase of 58% over the Reference forecast period.⁷⁰⁸ The Reference forecast considers the majority of world nuclear capacity to be generated by currently operating units and license renewals for units whose licenses expire during the forecast period.⁷⁰⁹ A small increased capacity contribution is obtained from uprates and plant restarts.⁷¹⁰ Plants currently under construction or firmly planned account for 9% of total operable capacity in 2015 and an average of 23% of total operable capacity between 2020 and 2035.⁷¹¹ Cumulative retirements are also accounted for — 3% of total operable capacity in 2015, slowly rising to 14% by 2030, and then doubling to 28% by 2035.⁷¹² Capacity growth in the United States is expected to be modest with eleven new units added by 2030.⁷¹³

Mr. Schwartz asserted that, in comparison to other available forecasts, his is conservative. The full range of forecasts indicates variation of $\pm 16\%$ in 2020, increasing to $\pm 41\%$ by 2030.⁷¹⁴ The ERI Low forecast was lower than most other forecasts, and the High forecasts are in general agreement.⁷¹⁵ The Reference forecasts have low variation initially ($\pm 4\%$ in 2015) but increase to $\pm 9\%$ by

⁷⁰⁴ *Id.* at 13-14.

⁷⁰⁵ *Id.* at 14 (citing Ex. GLE014, at 2).

⁷⁰⁶ *Id.*

⁷⁰⁷ *Id.* (citing Ex. GLE014, at 5).

⁷⁰⁸ *Id.*

⁷⁰⁹ *Id.* Mr. Schwartz noted that “[t]he contribution of license renewal of existing units rises from 17% in 2015 to 42% of total capacity by 2028, before gradually declining to 30% in 2035.” *Id.* at 14-15.

⁷¹⁰ *Id.* at 14.

⁷¹¹ *Id.* at 15.

⁷¹² *Id.*

⁷¹³ *Id.*

⁷¹⁴ *Id.* at 16.

⁷¹⁵ *Id.*

2035.⁷¹⁶ The ERI Report Reference is at nearly all points more conservative than comparative models.⁷¹⁷ This conservatism comes from assuming both a more consistent (rather than accelerated) growth rate after 2020, and a slower Japanese recovery with an overall reduced commitment to nuclear power as a result of the Fukushima event.⁷¹⁸ With regard to American generating capacity, the three existing forecasts are in close agreement (± 3 to 5% from 2020 to 2030), and of the two that extend to 2035, the predictions in that year are identical.⁷¹⁹

The ERI Report then translated the nuclear generating capacity projections into forecasts of demand for enrichment services that also considered certain fuel design and management parameters that contribute to demand.⁷²⁰ In developing this enrichment services forecast, the ERI Report considered: (1) country-by-country average capacity factors; (2) individual plant enriched product assays, in terms of weight-percent of uranium-235, based on plant design, energy production, design burnup, and fuel type; (3) enrichment tails assays, in terms of weight-percent ²³⁵U; (4) current plant-specific fuel discharge burnup rates for American plants, and country- and reactor-type-specific fuel burnup rates for foreign facilities; (5) country- or plant-specific fuel cycle lengths; and (6) typical delivery lead times for enrichment services.⁷²¹

The ERI Report generated High, Low, and Reference forecasts for the world, as well as each country group, four 5-year blocks beginning in 2016.⁷²² The Reference forecast indicates a 45% increase in world enrichment requirements over the estimated 2011 value of 40.9 million separative work units (SWU) during the 2021 to 2025 period; by the 2031 to 2035 period, the Reference forecast indicates a 76% increase over 2011.⁷²³ For the United States, the Reference forecast indicates a 31% increase during the period from 2021 to 2025 (as compared to 2011), and a 37% increase over 2011 during the 2031 to 2035 period.⁷²⁴ These numbers are conservative compared to the only other publicly available forecast of enrichment requirements. From 2016 through 2030, the ERI Reference forecast for the world is 16% lower than the alternative.⁷²⁵ During

⁷¹⁶ *Id.*

⁷¹⁷ *Id.* at 16-17. *See also* Ex. GLE014, at 8 (illustrating the ERI Reference forecast as compared to several others).

⁷¹⁸ Ex. GLE012, at 17.

⁷¹⁹ *Id.* at 17-18.

⁷²⁰ *Id.* at 18.

⁷²¹ *Id.* at 18-19 (citing Ex. GLE014, at 9-10).

⁷²² *Id.* at 20. The information is portrayed in a table found in Ex. GLE014, at 7, tbl. 1.

⁷²³ Ex. GLE012, at 20.

⁷²⁴ *Id.* at 20-21.

⁷²⁵ *Id.* at 21.

the same period, the ERI Reference forecast for the U.S. is 11% lower than the comparison.⁷²⁶

The ERI Report also forecast world and American supplies of enrichment services. Base sources employed in the study included: (1) existing inventories of low-enriched uranium; (2) production from existing uranium enrichment plants; (3) enrichment services obtained by blending down Russian weapons-grade high-enriched uranium; (4) the base capacity for enrichment plants presently under construction; (5) capacity expansion at existing facilities; and (6) enrichment services that are presently being obtained by blending down American high-enriched uranium.⁷²⁷ In addition to these base sources, there are three proposed sources of additional enriched uranium, all in the United States.⁷²⁸ Besides the GLE facility, USEC's American Centrifuge Plant and AREVA's Eagle Rock Enrichment Facility have both already received NRC licenses but both have encountered financial challenges and neither appears to be able to surmount the necessary hurdles for operation in the immediate future.⁷²⁹ The American Centrifuge Plant would replace the Paducah Gaseous Diffusion Plant and produce 3.8 million SWU per year.⁷³⁰ Eagle Rock Enrichment Facility is authorized to produce 6.6 million SWU per year.⁷³¹ GLE is planning an annual target of 6 million SWU for its facility.⁷³²

Comparing the ERI Report's demand forecasts with enrichment supply, the ERI Report found that, without the GLE Facility, American Centrifuge Plant, or the Eagle Rock Enrichment Facility, world supply is not adequate to meet world demand by as early as 2017.⁷³³ Without these sources, under the Reference forecast, the world supply yields a 2.2% annual shortage from 2016 to 2025.⁷³⁴ From 2026 to 2035, the worldwide annual shortage would increase to 5.4%.⁷³⁵ If just one of the three facilities is built, there would be adequate world supply, but supply margins would be very small which "is not optimal in terms of diversity and security of supply."⁷³⁶

As to the domestic market, at some point between 2016 and 2035, all three facilities are needed to avoid a shortage of American-based supply relative

⁷²⁶ *Id.* at 22.

⁷²⁷ *Id.* at 23.

⁷²⁸ *Id.* at 25.

⁷²⁹ *Id.* at 25-28.

⁷³⁰ *Id.* at 25.

⁷³¹ *Id.* at 26.

⁷³² *Id.*

⁷³³ *Id.* at 28.

⁷³⁴ *Id.*

⁷³⁵ *Id.* at 28-29.

⁷³⁶ *Id.* at 29.

to American-based demand.⁷³⁷ With only two facilities operating, the average American shortage between 2016 and 2025 is between 10.1% and 29.7% of annual American demand.⁷³⁸ And, without the two facilities with larger generating capacities (GLE and Eagle Rock Enrichment Facility) operating, the shortage during the period 2026 to 2035 would be about 10.1% of annual requirements. But even if both GLE and the Eagle Rock Enrichment Facility are operating and the smaller American Centrifuge Plant is not, then average domestic supply exceeds average domestic demand by only about 3% — considered a small margin by the ERI study.⁷³⁹

Table 4⁷⁴⁰ of the study shows that under all three forecasts (High, Low, and Reference), the United States eventually will experience significant shortages of domestic supply unless all three facilities are built.⁷⁴¹ The world will also experience shortages if none of the facilities are built or if the High forecast is accurate.⁷⁴² Under all scenarios, “all three of the proposed U.S.-based enrichment facilities [are necessary] if the U.S. is to achieve a domestic enrichment capability that significantly reduces reliance on foreign suppliers There is only one exception; it is the 2026-2035 periods under the Low Nuclear Power Growth forecast, when only two of the three proposed sources of enrichment services are necessary to meet projected U.S. requirements.”⁷⁴³ The Reference scenario for the alternative forecast indicates that all three American sources would have to be operational to avoid a world shortage during the 2016 through 2030 period. With only two facilities operating, there would be a shortage.⁷⁴⁴ When the alternate study’s Reference forecast is applied to American supply, even with two of the three facilities in operation, substantial shortages would exist during the 2016 to 2030 time period.⁷⁴⁵

In his oral testimony, Mr. Schwartz testified as follows:

The American Centrifuge Plant’s future remains uncertain as both financing and technology-related questions remain open according to the Department of Energy.⁷⁴⁶ Likewise, the AREVA Eagle Rock Enrichment Facility announced

⁷³⁷ *Id.* at 30.

⁷³⁸ *Id.*

⁷³⁹ *Id.*

⁷⁴⁰ *Id.* at 31. This table is also found in Ex. GLE014, at 28, where it is labeled as Table 5.

⁷⁴¹ Ex. GLE012, at 31. Even if all three are built, under the High forecast, the United States would experience a shortage between 2016 and 2025.

⁷⁴² *Id.*

⁷⁴³ *Id.* at 31-32.

⁷⁴⁴ *Id.* at 32.

⁷⁴⁵ *Id.*

⁷⁴⁶ Tr. at 101 (7/12/12 Hearing). *See also* Ex. GLE013 for the slides related to an oral presentation given by Mr. Schwartz at the hearing.

again in early July 2012 that the project is on indefinite suspension.⁷⁴⁷ Mr. Schwartz stated that “[g]iven the previously noted uncertainties with the proposed AREVA Eagle Rock Enrichment Facility, and the USEC American Centrifuge Plant, the Global Laser Enrichment Commercial Facility is clearly needed” to meet American and world demand and prevent shortages domestically and abroad.⁷⁴⁸

In addressing the assumptions that went into the ERI Report, Mr. Schwartz clarified that the study assumed present fuel cycle lengths would hold constant. Generally, these cycles range from 18 to 24 months with pressurized water reactors tending to have 18-month cycles and boiling water reactors tending toward 24-month cycles.⁷⁴⁹ Similarly, the study tended to allow burnups to increase up to an average of 53 gigawatt-days per metric ton.⁷⁵⁰ Some reactor units in the United States are operating at about that level and have not indicated any intention of going beyond it.⁷⁵¹ Preproduced inventory in the study also was evaluated on the principle that gaseous diffusion facilities, such as the Paducah Plant, generally cannot operate at extremely low levels of production. Therefore, even as they are shutting down, enrichment facilities tend to operate at a higher level consistent with their more economic level of production, even if they do not have customers.⁷⁵² In case there is a transition between shutting down an old enrichment plant and starting up the new one, this inventory is used to serve customers until the new plant can meet its orders.⁷⁵³ Inventory is not held in significant quantities and has a small overall effect.⁷⁵⁴

The Louisiana Energy Services facility in New Mexico is in the process of ramping up to their current license capacity and has indicated that it might increase beyond that.⁷⁵⁵ The model accounts for this likely increase over time.⁷⁵⁶ The Eagle Rock Enrichment Facility has confirmed that the project remains on hold while AREVA seeks a potential financial participant in the project. Mr. Schwartz stated that “the key to that project going ahead on a timely basis” is the involvement of “somebody to help share the financial burden.”⁷⁵⁷

Mr. Schwartz explained the phenomenon of underfeeding. Underfeeding is “where the operator of the enrichment plant operates a facility at a lower tails assay

⁷⁴⁷ Tr. at 101 (7/12/12 Hearing).

⁷⁴⁸ Tr. at 106.

⁷⁴⁹ Tr. at 122-23.

⁷⁵⁰ Tr. at 123.

⁷⁵¹ Tr. at 123-24.

⁷⁵² Tr. at 124.

⁷⁵³ Tr. at 125.

⁷⁵⁴ *Id.*

⁷⁵⁵ Tr. at 126.

⁷⁵⁶ *Id.*

⁷⁵⁷ *Id.*

than what they have contracted with their customer to provide.”⁷⁵⁸ Customers will have to provide the uranium feed materials to be enriched, and “depending on what the tails assay is, they would provide more or less uranium, and they’d end up purchasing more or less enrichment services to end up with the same final product.”⁷⁵⁹ In recent years enrichment facilities “have taken advantage of the fact that they can contract with a customer at one tails assay, receive the appropriate amount of uranium, and . . . bill them for the appropriate amount of enrichment services.”⁷⁶⁰ Thereafter, they operate the facility at a lower tails assay, which uses more enrichment services than contracted for but leaves the facility with excess natural uranium they can resell as another product.⁷⁶¹ Depending on the respective prices of enrichment services and natural uranium, enrichment facilities can gain financial benefit “actually using that enrichment capability to essentially create additional uranium which they can sell.”⁷⁶²

Mr. Schwartz concluded by recognizing that an optimistic bias was likely built into many of the sources he consulted in developing his model, which is why “we developed our forecasts of requirements independent of them.”⁷⁶³ All figures were based on “on our own internally generated analyses and forecasts.”⁷⁶⁴

c. Katherine Heller

Ms. Heller is a Senior Economist at RTI International in Research Triangle Park, North Carolina.⁷⁶⁵ She holds a B.A. in Economics from The College of William and Mary and an M.S. degree in Economics from the University of North Carolina, Chapel Hill.⁷⁶⁶ Ms. Heller has been employed as an economist at RTI International since 1985, holding a Research Economist position before promotion to her current role.⁷⁶⁷ At RTI, she has performed or assisted with various economic, socioeconomic, and water resource availability analyses for private and governmental entities.⁷⁶⁸

In her written testimony, Ms. Heller testified as follows:

⁷⁵⁸ Tr. at 127.

⁷⁵⁹ *Id.*

⁷⁶⁰ *Id.*

⁷⁶¹ Tr. at 127-28.

⁷⁶² Tr. at 128.

⁷⁶³ Tr. at 134.

⁷⁶⁴ *Id.*

⁷⁶⁵ Ex. GLE012, at 1.

⁷⁶⁶ *Id.* at 3.

⁷⁶⁷ *Id.*

⁷⁶⁸ *Id.*

Ms. Heller served as the project lead in analysis of the socioeconomic impacts of the proposed GLE facility.⁷⁶⁹ In that evaluation, she profiled existing and projected future demographic and economic conditions in the region and analyzed potential changes in those conditions as a result of construction and operation of the proposed facility.⁷⁷⁰ She was principally responsible for performing the cost-benefit analysis described in Chapter 7 and Appendix U of the ER⁷⁷¹ and reviewed corresponding sections of the FEIS.⁷⁷²

NUREG-1748 requires a cost-benefit analysis as part of the ER and FEIS.⁷⁷³ The cost-benefit analysis estimates the overall impact of the proposed action on society's well-being, including both private benefits and external benefits and costs. These benefits and costs result from changes in conditions, relative to a baseline.⁷⁷⁴ Cost-benefit analysis is a tool used to systematically catalogue, quantify, and value in monetary terms (when possible) the effect of the project on society.⁷⁷⁵ The overall effect is measured by project net benefit, defined by benefits minus costs.⁷⁷⁶ Economists discount benefits and costs to reflect that those occurring in the future are worth less than those occurring today. The Office of Management and Budget discounts future streams of net benefits using a 7% discount rate to reflect the private cost of capital and a 3% discount rate to reflect society's estimated rate of time preference.⁷⁷⁷

The cost-benefit analysis for the GLE facility compares the proposed action with the No Action Alternative. Benefits were assigned significance levels of small, moderate, or large, as were costs.⁷⁷⁸ Both GLE and the Staff found the proposed action preferable to the No Action Alternative, particularly because the proposed facility contributes to future need and increases national energy security; introduces new technology that is expected to have smaller resource requirements and environmental impacts than known technologies; and has positive socioeconomic impacts.⁷⁷⁹

In her oral testimony on Topic 5, Ms. Heller testified as follows:

⁷⁶⁹ *Id.* at 5.

⁷⁷⁰ *Id.*

⁷⁷¹ Chapter 7 of the ER can be found in Ex. GLE006C. Containing proprietary material, Appendix U was submitted separately as Ex. NRC117.

⁷⁷² Ex. GLE012, at 5.

⁷⁷³ Ex. GLE012, at 40 (citing Ex. NRC006, at 5-30 to 5-31, 6-32 to 6-33).

⁷⁷⁴ *Id.* The baseline is defined as conditions expected to exist throughout the lifetime of the proposed GLE Facility, in the absence of the impacts that would result from it. *Id.*

⁷⁷⁵ *Id.*

⁷⁷⁶ *Id.* at 40-41.

⁷⁷⁷ *Id.* at 41.

⁷⁷⁸ *Id.* at 42-43.

⁷⁷⁹ *Id.* at 44.

Cost-benefit analysis is a widely used economic method for evaluating the overall impact of a project.⁷⁸⁰ The cost-benefit analysis for the GLE site was conducted in accordance with NUREG-1748, section 6.⁷⁸¹ Generally, the private costs and benefits are assigned dollar values, whereas the public costs and benefits are characterized qualitatively.⁷⁸² The qualitative benefits and costs are estimated to be small, moderate, or large, using the same general definitions found in 10 C.F.R. Part 51.⁷⁸³ Positive impacts may be larger than estimated because assessments focused on the direct employment and payroll impact of the project.⁷⁸⁴ However, employees will spend money on goods and services in the region, and GLE will purchase some materials and supplies regionally, increasing the overall benefits regionally.⁷⁸⁵ The ER did not attempt to quantify the indirect impacts of the project, but identified that employment and other multipliers apply. Therefore, during construction the total impact on employment could be as much as 1.3 times GLE's employment, and during operations it could reach as high as 3.2 times GLE's employment.⁷⁸⁶ Events like Fukushima and the global recession would not impact GLE's overall cost-benefit conclusions in the ER.⁷⁸⁷ While projected demand for enrichment services may be lower post-Fukushima, projections indicate the need for GLE services is high.⁷⁸⁸

d. Kimberly Matthews

Ms. Matthews is a Research Environmental Scientist at RTI International in Research Triangle Park, North Carolina.⁷⁸⁹ She holds a B.A. in Biology from Wittenberg University and an M.S. degree in Natural Resources with a concentration in Watershed Hydrology from North Carolina State University.⁷⁹⁰ In her current role, she provides support to numerous water quality and ecological projects to private entities, as well as local, state, and federal agencies.⁷⁹¹ She specializes in analysis of streams, wetlands, and terrestrial resources; water quality assessment;

⁷⁸⁰ Tr. at 111 (7/12/12 Hearing). *See also* Ex. GLE018 for the slides associated with Ms. Heller's presentation to the Board.

⁷⁸¹ Tr. at 111 (7/12/12 Hearing).

⁷⁸² Tr. at 112.

⁷⁸³ Tr. at 113.

⁷⁸⁴ Tr. at 114.

⁷⁸⁵ *Id.*

⁷⁸⁶ Tr. at 115.

⁷⁸⁷ Tr. at 116.

⁷⁸⁸ *Id.*

⁷⁸⁹ Ex. GLE012, at 1.

⁷⁹⁰ *Id.* at 3.

⁷⁹¹ *Id.*

stormwater quality; protected species; and onsite stormwater management best practices.⁷⁹² Prior to joining RTI International, Ms. Matthews worked as a Biologist for another research group and as a Water Quality Monitoring Technician for the City of Greensboro, North Carolina.⁷⁹³

In her written testimony, Ms. Matthews testified as follows:

Ms. Matthews led field investigations related to GLE's assessment of ecological resources, wetlands, and surface waters. She served as the primary author of the corresponding chapters in the ER that describe existing resource conditions and estimate potential impacts of the GLE facility and contributed to the mitigation and monitoring chapters of the ER.⁷⁹⁴ She also coordinated GLE's interaction with various state and federal agencies to ensure compliance with the Coastal Area Management Act, sections 401 and 404 of the Clean Water Act, and section 8 of the Endangered Species Act.⁷⁹⁵

GLE will implement the mitigation measures in Table 5-1 of the FEIS that are required by federal, state, and local regulations and those mitigation measures factored into the ER's analysis of environmental impacts.⁷⁹⁶ To the extent practicable, GLE will implement additional mitigation measures from Table 5-1, as well as those contained in Table 5-2 of the FEIS.⁷⁹⁷ GLE will use the following factors to determine which mitigation measures will be implemented: (1) regulations or ordinances that require implementation; (2) availability of materials; (3) potential conflicts among mitigation measures; (4) safety and security considerations; (5) overall feasibility with respect to project schedule; and (6) cost-benefit analysis.⁷⁹⁸ Ms. Matthews' written testimony reproduced Tables 5-1 and 5-2 with notations concerning which mitigation measures GLE intended to implement and in which phases.⁷⁹⁹ GLE intends to implement every measure unequivocally, in accordance with law or ordinance, "to the extent practicable" or in accordance with other considerations (i.e., security) except it will not establish food plots along roadways due to the increased risk of human mortality from vehicles and it is unlikely GLE will construct noise control measures, like barriers, as they are not likely to be effective during construction and decommissioning.⁸⁰⁰

⁷⁹² *Id.* at 4.

⁷⁹³ *Id.* at 3.

⁷⁹⁴ *Id.* at 5.

⁷⁹⁵ *Id.*

⁷⁹⁶ *Id.* at 48. *See also* Ex. NRC003A, at 5-2 to 5-13 (tbl. 5-1).

⁷⁹⁷ Ex. GLE012, at 48. *See also* Ex. NRC003A, at 5-2 to 5-18 (tbl. 5-1 and tbl. 5-2).

⁷⁹⁸ Ex. GLE012, at 48.

⁷⁹⁹ *Id.* at 49-69.

⁸⁰⁰ *Id.*

2. NRC Staff Witnesses

a. Jennifer A. Davis

Ms. Davis's education and background were discussed previously in reference to her testimony on Topic 4.

In her written testimony on Topic 5, Ms. Davis testified as follows:

Ms. Davis is the Project Manager for the environmental review of GLE's application for the proposed facility and was responsible for overseeing preparation of the FEIS.⁸⁰¹

The proposed GLE facility is intended to provide an additional reliable and economical domestic source of low-enriched uranium to be used in American commercial nuclear power plants.⁸⁰² The need for the GLE facility is based on (1) the need for enriched uranium to fulfill electricity generation requirements in the United States; and (2) the need for domestic supplies of enriched uranium for national energy security purposes.⁸⁰³ According to the Energy Information Administration, American commercial nuclear power plants currently supply about 20% of the nation's electricity requirements.⁸⁰⁴ By 2035, domestic electricity demand is expected to grow by 30%.⁸⁰⁵ As electricity demand increases, the need for enriched uranium to fuel commercial nuclear power plants is also expected to increase.⁸⁰⁶ Looking at Energy Information Administration projections, nuclear power capacity and nuclear generation is expected to increase in the United States over the coming years.⁸⁰⁷ This year's projections indicate that nuclear generating capacity will increase to a high in 2025 and then begin a decline as plants are retired.⁸⁰⁸ In assessing the need for the proposed facility, the Staff also considered the number of combined license applications for construction and operation of new reactors that are actively before the NRC or expected in the future.⁸⁰⁹ The Fukushima Dai-ichi accident slowed nuclear power growth worldwide, but current information suggests that nuclear power growth will continue globally.⁸¹⁰

Domestic production of enriched uranium fulfills approximately 16% of American demand.⁸¹¹ The Paducah Gaseous Diffusion Plant is the primary uranium

⁸⁰¹ Ex. NRC123-R1, at 2. The FEIS can be found at Exs. NRC003A and NRC003B.

⁸⁰² Ex. NRC123-R1, at 2. *See also* Ex. NRC003A, at 1-2 to 1-9.

⁸⁰³ Ex. NRC123-R1, at 2-3.

⁸⁰⁴ *Id.* at 3 (citing Ex. NRC044, at 43).

⁸⁰⁵ *Id.* at 3 (citing Ex. NRC045, at 73).

⁸⁰⁶ *Id.*

⁸⁰⁷ *Id.* at 3-4.

⁸⁰⁸ *Id.* at 4.

⁸⁰⁹ *Id.*

⁸¹⁰ *Id.* at 5.

⁸¹¹ *Id.* at 7.

enrichment facility in the United States, and is currently being evaluated for “whether it is economically feasible to continue operations.”⁸¹² The Paducah Gaseous Diffusion Plant will remain open for at least one more year, but “[t]here is still some uncertainty regarding whether [it] will continue to operate beyond this additional year.”⁸¹³ Another domestic source of enriched uranium is the National Enrichment Facility in New Mexico, which is operated by Louisiana Energy Services and opened in 2010.⁸¹⁴ Currently the National Enrichment Facility is operating below capacity and is expected to reach full capacity of 3 million SWU annually by October 2013.⁸¹⁵ Louisiana Energy Services is considering plans to expand total capacity to 5.9 million SWU per year.⁸¹⁶ The Megatons-to-Megawatts program fulfills about 37% of American demand, but the program is scheduled to expire in 2013.⁸¹⁷ Under the TENEX Agreement, beginning in 2013, USEC will receive enriched uranium from Russia, which will ultimately reach half of the current Megatons-to-Megawatts supply by 2015.⁸¹⁸ Imports from other countries currently fulfill about 47% of American demand.⁸¹⁹

Two other enrichment facilities have been granted licenses, but their construction and operation remains uncertain.⁸²⁰ The American Centrifuge Plant will require significant additional financing and has run into hurdles obtaining the necessary funding from Department of Energy and Congress.⁸²¹ The Eagle Rock Enrichment Facility is currently on hold due to financial issues.⁸²² The Staff took the uncertain futures of these two facilities into account when developing its FEIS analysis. While the operation of the proposed GLE facility, the American Centrifuge Plant, the Eagle Rock Enrichment Facility, and the National Enrichment Facility at full capacity would lead to a domestic surplus, the uncertainty surrounding the American Centrifuge Plant and the Eagle Rock Enrichment Facility increases the need for the GLE proposed facility to ensure that enriched uranium is available for commercial reactors in the United States.⁸²³

⁸¹² *Id.*

⁸¹³ *Id.*

⁸¹⁴ *Id.*

⁸¹⁵ *Id.*

⁸¹⁶ *Id.*

⁸¹⁷ *Id.* at 7-8.

⁸¹⁸ *Id.* at 8. The agreement allows for the amount to increase to an amount equal to what is received through the Megatons-to-Megawatts program after mutual agreement by the parties. *Id.*

⁸¹⁹ *Id.* There is no indication that importation cannot continue at this level, although new nuclear capacity is expected in several of the importing countries, which will increase their domestic demand. *Id.*

⁸²⁰ *Id.* at 9.

⁸²¹ *Id.*

⁸²² *Id.*

⁸²³ *Id.* at 9-10. *See also* Ex. NRC003, at 1-8.

The proposed GLE facility “could play an important role in assuring the nation’s ability to maintain a reliable and economical domestic source of enriched uranium.”⁸²⁴ With approximately 84% of current demand in the United States fulfilled by foreign sources and large portion of the remaining 16% fulfilled by the Paducah Gaseous Diffusion Plant (which has an uncertain future), there could be a supply deficit of enriched uranium available to American commercial nuclear power plants.⁸²⁵ Combined with the uncertainty around the American Centrifuge Plant and the Eagle Rock Enrichment Facility, the Staff concluded “the proposed GLE Facility is necessary to help assure that there is sufficient domestic enrichment capacity . . . and that having the proposed GLE Facility licensed and in operation would provide an additional domestic source of enriched uranium consistent with national energy security objectives.”⁸²⁶

In her oral testimony on Topic 5, Ms. Davis testified as follows:

The Fukushima Dai-ichi event has affected global nuclear growth, but early studies seem to indicate that nuclear power will continue to grow worldwide, albeit at a potentially slower rate than previously anticipated.⁸²⁷

The FEIS assumed that GLE’s enriched uranium would be sold to domestic nuclear power plants, but the Staff acknowledged that GLE would not be prohibited from selling overseas. Rather, the Staff assessed the proposed facility on the grounds that it would meet national policy objectives and the Energy Policy Act.⁸²⁸ The Staff considered the international market for uranium in the context of examining how domestic demand is currently met and how the proposed GLE facility could serve national objectives.⁸²⁹ The Staff mostly focused its assessment on national energy security policy objectives, but acknowledged possible advantages to the technology this facility would bring.⁸³⁰ However, the technological advantages came mainly from the Applicant’s statements and could not be verified because the Staff is “not privy to a lot of the information behind . . . the advantages.”⁸³¹ Because the Staff was not “able to independently verify some of these statements, . . . because it is a highly classified technology . . . the staff did not use that per se as a factor in the purpose and needs . . . analysis.”⁸³²

⁸²⁴ Ex. NRC123-R1, at 10.

⁸²⁵ *Id.* at 10-11.

⁸²⁶ *Id.* at 11.

⁸²⁷ Tr. at 146 (7/12/12 Hearing). The slides associated with Ms. Davis’s presentation to the Board can be viewed in Ex. NRC115.

⁸²⁸ Tr. at 167 (7/12/12 Hearing).

⁸²⁹ Tr. at 168.

⁸³⁰ Tr. at 169.

⁸³¹ *Id.*

⁸³² Tr. at 169-70.

b. Halil Avci

Dr. Avci is a Nuclear Materials and Waste Disposition Team Lead in the Environmental Science Division of Argonne National Laboratory.⁸³³ Dr. Avci received his B.S., M.S., and Ph.D. in Nuclear Engineering from the University of Wisconsin, Madison.⁸³⁴ Dr. Avci is a nuclear engineer with over 33 years of experience, specializing in the environmental effects of energy production and use, nuclear energy, nuclear reactor licensing and license renewals, waste management, radiation effects, risk assessment, and accident analysis.⁸³⁵ Dr. Avci manages Argonne's Technical Assistance Program to the NRC.⁸³⁶ He has also served as an adjunct faculty member at Northwestern University's School of Continuing Studies.⁸³⁷ He is the author or coauthor of more than fifty journal papers, reports, conference publications, and presentations.⁸³⁸

In his written testimony, Dr. Avci testified as follows:

Dr. Avci served as Argonne National Laboratory's Project Team Lead on its contract with the Staff to provide technical assistance for the preparation of the FEIS.⁸³⁹ He oversaw all Argonne National Laboratory activities supporting the Staff's preparation of the FEIS.⁸⁴⁰

The Staff must evaluate the impacts of the proposed action and a reasonable range of alternatives and compare the impacts from all alternatives in the FEIS.⁸⁴¹ To be considered a reasonable alternative, the alternative must meet the proposed objectives and applicable environmental standards and be technically feasible.⁸⁴² The purpose of the alternatives analysis is to illustrate and support the Staff's determination that there was no obviously superior site.⁸⁴³ The No Action Alternative is required to be one of the alternatives considered.⁸⁴⁴ In this case, the No Action Alternative is that "the NRC would not issue a license that would allow GLE to construct and operate the proposed GLE Facility at the Wilmington site."⁸⁴⁵

⁸³³ Ex. NRC123-R1, at 1.

⁸³⁴ *Id.*, Attach. (Halil Avci Statement of Professional Qualifications).

⁸³⁵ *Id.*

⁸³⁶ *Id.*

⁸³⁷ *Id.*

⁸³⁸ *Id.*

⁸³⁹ *Id.* at 2.

⁸⁴⁰ *Id.*

⁸⁴¹ *Id.* at 12.

⁸⁴² *Id.* See also Ex. NRC006, at 5-5 to 5-7.

⁸⁴³ Ex. NRC123-R1, at 13. The concept of "obviously superior" is discussed in NUREG-1555, in relation to site selection for nuclear reactors. See Ex. NRC072.

⁸⁴⁴ Ex. NRC123-R1, at 12.

⁸⁴⁵ *Id.* at 13-14.

In analyzing the No Action Alternative, the Staff assumed GLE would not construct the facility, but that the preconstruction activities covered by GLE's exemption request would have taken place.⁸⁴⁶ These activities included "site clearing, site grading and erosion control, building of stormwater retention ponds, access roadways, guard houses, utilities, parking lots, and administrative buildings not used to process, handle, or store classified information."⁸⁴⁷ Because GLE was uncertain at what pace it would undertake preconstruction activities prior to licensing, the Staff assumed all of these activities would occur regardless of whether a license was issued.⁸⁴⁸ The No Action Alternative also assumed that enrichment services would continue to be obtained in the same fashion, with the American Centrifuge Plant and the Eagle Rock Enrichment Facility possibly providing services in the future.⁸⁴⁹

The No Action Alternative analysis indicated that the impacts to most resource areas of the GLE proposed facility are small, with small to moderate impacts occurring in the areas of historic and cultural resources, air quality, ecological resources, noise, and transportation. However, the findings of small to moderate in those categories are primarily associated with preconstruction and construction activity.⁸⁵⁰ Since the impacts under both the proposed action and the No Action Alternative would be small in most resource areas and slightly different at small to moderate in some limited categories, "the NRC Staff did not consider the differences in impacts between the proposed action and the No Action Alternative to be significant."⁸⁵¹ However, since it was considered likely that GLE would not conduct any preconstruction activities prior to licensing, the impacts under the No Action Alternative "would essentially be zero."⁸⁵² Despite this reduction in effects, the NRC Staff "determined that the proposed action would better meet the purpose and need than the no-action alternative."⁸⁵³

The Staff also considered a range of alternatives, including alternative siting locations both on and off of the Wilmington site, alternative sources of enriched uranium, and the alternative technologies available.⁸⁵⁴ The Staff "reviewed the site selection process used by GLE and determined that GLE's process was rational and objective."⁸⁵⁵ The Staff also found that "none of the alternative

⁸⁴⁶ *Id.* at 14.

⁸⁴⁷ *Id.*

⁸⁴⁸ *Id.* at 14-15.

⁸⁴⁹ *Id.* at 15.

⁸⁵⁰ *Id.* at 15-16.

⁸⁵¹ *Id.* at 17.

⁸⁵² *Id.*

⁸⁵³ *Id.* at 18.

⁸⁵⁴ *Id.*

⁸⁵⁵ *Id.*

sites outside of the Wilmington site or the other potential alternative locations within the Wilmington site would be environmentally preferable to the location selected by GLE.”⁸⁵⁶ The Staff “concluded that the only alternative that would meet the purpose and need for the proposed GLE Facility . . . would be the use of gas centrifuge technology instead of GLE’s proposed laser-based technology.”⁸⁵⁷ However, when the Staff conducted a qualitative assessment of the two technologies, the Staff found “employing gas centrifuge technology in place of the proposed laser-based technology would not be environmentally preferable.”⁸⁵⁸ Therefore, the Staff “concluded, as a result of the alternatives analysis and the cost-benefit analysis in the FEIS, that the overall benefits of the proposed GLE Facility would outweigh the environmental disadvantages and costs.”⁸⁵⁹

Because no preconstruction activities have occurred, the Staff determined that a compression of the construction schedule may increase some impacts and lower others.⁸⁶⁰ Due to resource constraints and a necessary sequencing of activities, there are natural limitations on how significantly a construction schedule could be compressed.⁸⁶¹ However, even if the schedule were compressed, the Staff “believes that the increases in annual impacts would not be great enough to change the impact conclusions in the FEIS.”⁸⁶²

In his oral testimony, Dr. Avci testified as follows:

The Staff’s analysis of the No Action Alternative in the FEIS requires correction. Because of the assumption that preconstruction activities would occur in both cases, the impacts under the No Action Alternative to historic and cultural resources, air quality, ecological resources, noise, and transportation would be small to moderate under both the proposed action and the No Action Alternative.⁸⁶³ These impacts “were incorrectly designated to be small in the FEIS.”⁸⁶⁴ However, because GLE has not conducted any preconstruction activities to date and it appears GLE will not conduct any prior to a licensing decision, “all the impacts that would be associated with the No Action Alternative at the Wilmington site would essentially be zero or small in . . . NRC impact classification terminology.”⁸⁶⁵ Though some areas indicated potential moderate impacts, most of

⁸⁵⁶ *Id.*

⁸⁵⁷ *Id.*

⁸⁵⁸ *Id.* at 18-19.

⁸⁵⁹ *Id.* at 19.

⁸⁶⁰ *Id.* at 27.

⁸⁶¹ *Id.*

⁸⁶² *Id.*

⁸⁶³ Tr. at 153 (7/12/12 Hearing). The slides associated with Dr. Avci’s presentation to the Board can be viewed in Ex. NRC115.

⁸⁶⁴ Tr. at 153 (7/12/12 Hearing).

⁸⁶⁵ Tr. at 153-54.

those impacts are temporary and associated with preconstruction and construction activity or could have reduced severity if voluntary mediation measures are in fact employed.⁸⁶⁶ Therefore, the Staff “did not consider the difference in impacts between the proposed action and the No Action Alternative to be significant.”⁸⁶⁷

c. Tim Allison

Mr. Allison is an Economist at Argonne National Laboratory’s Center for Energy, Environmental and Economic Systems Analysis.⁸⁶⁸ Mr. Allison received his B.S. in Economics and Geography from the University of Portsmouth (United Kingdom) and his M.A. in Geography and M.S. in Mineral and Energy Resource Economics from West Virginia University.⁸⁶⁹ Mr. Allison has over 21 years of experience at Argonne National Laboratory, where he specializes in local and regional economic development impacts, with specific regard to nuclear fuel plant and reactor licensing.⁸⁷⁰ His expert areas include input-output and economic base modeling, statistical analysis, fiscal analysis, and the analysis of social and health impacts of energy and waste programs as they relate to low-income and minority populations.⁸⁷¹ He has written over fifty technical reports, published ten papers in peer-reviewed journals, and made over thirty presentations to professional conferences and workshops.⁸⁷²

In his written testimony, Mr. Allison testified as follows:

Mr. Allison served as Argonne National Laboratory’s Technical Lead for the Socioeconomic, Environmental Justice, and Cost-Benefit Analyses for its contract with the NRC to provide technical assistance in preparation of the FEIS.⁸⁷³

Cost-benefit analysis provides a rationale for deciding whether a project has a net positive impact by aggregating the costs and benefits of an associated project.⁸⁷⁴ The primary purpose of the cost-benefit analysis is to evaluate all costs and benefits of the proposed action, and compare it to the No Action Alternative “to help determine which had the higher overall net benefits.”⁸⁷⁵ The cost-benefit analysis values benefits and costs in monetary terms, where

⁸⁶⁶ Tr. at 154-55.

⁸⁶⁷ Tr. at 155.

⁸⁶⁸ Ex. NRC123-R1, at 1.

⁸⁶⁹ *Id.*, Attach. (Tim Allison Statement of Professional Qualifications).

⁸⁷⁰ *Id.*

⁸⁷¹ *Id.*

⁸⁷² *Id.*

⁸⁷³ *Id.* at 2.

⁸⁷⁴ *Id.* at 19-20.

⁸⁷⁵ *Id.* at 20.

possible.⁸⁷⁶ Qualitative data are also included to consider unquantifiable costs and benefits.⁸⁷⁷ Costs and benefits are also separated into two categories: private and societal.⁸⁷⁸ While most private benefits and costs can be quantified, not all societal costs and benefits can.⁸⁷⁹ Nonquantifiable societal costs include land use, historic and cultural resources, visual, air quality, water, noise, and waste management impacts.⁸⁸⁰ Nonquantifiable societal benefits include meeting national energy policy goals.⁸⁸¹ Quantifiable costs and benefits include tax incentives given to GLE, local property and other tax revenue expected to be generated by the project and direct and indirect income and employment.⁸⁸²

In the cost-benefit analysis, the Staff defined the socioeconomic region of influence as the Wilmington Statistical Area, a three-county area (Brunswick, New Hanover, and Pender Counties) where GLE's employees would likely live and spend income.⁸⁸³ This region of influence was used to assess the socioeconomic costs and benefits.⁸⁸⁴ After comparing all costs and benefits, the Staff concluded that "the net benefits of the proposed action (constructing and operating the proposed GLE Facility) outweighed the overall costs and benefits of the No Action Alternative."⁸⁸⁵ Key societal benefits included the contribution of increased domestic sources of enriched uranium to meeting future demand and increased national energy security; the development of a new technology that has the potential to have lower resource and environmental costs than currently employed methods; and positive impacts on the region of influence — including increasing employment and tax revenue.⁸⁸⁶

In his oral testimony, Mr. Allison testified as follows:

The overall result of the cost-benefit analysis was that the quantifiable benefits associated with each stage of the proposed GLE facility would exceed quantifiable costs.⁸⁸⁷ Nonquantifiable societal costs and benefits were also considered qualitatively.⁸⁸⁸ Certain impacts were removed from the analysis. This was because

⁸⁷⁶ *Id.*

⁸⁷⁷ *Id.*

⁸⁷⁸ *Id.*

⁸⁷⁹ *Id.* at 21.

⁸⁸⁰ *Id.*

⁸⁸¹ *Id.*

⁸⁸² *Id.*

⁸⁸³ *Id.* at 22.

⁸⁸⁴ *Id.*

⁸⁸⁵ *Id.* at 23.

⁸⁸⁶ *Id.* at 24.

⁸⁸⁷ Tr. at 162 (7/12/12 Hearing). The slides associated with Mr. Allen's presentation to the Board can be viewed in Ex. NRC115.

⁸⁸⁸ Tr. at 162 (7/12/12 Hearing).

the impacts were equal between the proposed action and No Action Alternative or because some benefits and costs are too difficult to weigh or predict, such as trickle-down benefits to customers and suppliers or the impact of uranium prices on the market.⁸⁸⁹

If benefits or costs cannot be quantified, then the analysis ends. The nonquantifiable costs and benefits are appreciated and discussed, but “are not included in the overall net benefit calculus at least as a result of the cost-benefit analysis.”⁸⁹⁰ Because nonquantifiable impacts and benefits are classified by the NRC system, any larger impacts would be given more weight when balancing out the overall costs and benefits.⁸⁹¹ But monetizing environmental costs, for example, is “quite difficult intellectually and politically quite controversial because there are various aspects to the evaluation of environmental costs.”⁸⁹² Various socioeconomic factors, like political viewpoints, gender, and education all affect the way individuals would value different environmental impacts, making quantification problematic.⁸⁹³

F. Topic 6: Environmental Monitoring Program

1. GLE Witnesses

a. Joseph Alexander

Mr. Alexander is currently a Senior Geologist and Project Director for RTI International in Research Triangle Park, North Carolina.⁸⁹⁴ He has a B.S. in Geology from East Carolina University and an M.S. in Geology with a concentration in Hydrogeology and Engineering Geology from Northern Arizona University.⁸⁹⁵ He is a licensed professional geologist in North Carolina and Georgia.⁸⁹⁶ Mr. Alexander has spent most of his career at RTI International, working in various capacities. He has led various groundwater contamination assessments; developed and implemented compliance monitoring programs, shallow-soil remedial efforts, and site characterizations; and provided technical oversight of integrated programs associated with hydrogeology, remedial technology, and geochemistry.⁸⁹⁷ Prior

⁸⁸⁹ Tr. at 162-63.

⁸⁹⁰ Tr. at 170-71.

⁸⁹¹ Tr. at 171-72.

⁸⁹² Tr. at 172.

⁸⁹³ *Id.*

⁸⁹⁴ Ex. GLE023, at 1.

⁸⁹⁵ *Id.* at 2.

⁸⁹⁶ *Id.*

⁸⁹⁷ *Id.*

to working at RTI International, Mr. Alexander worked as a hydrogeologist and engineering geologist for various private entities.⁸⁹⁸

In his written testimony, Mr. Alexander testified as follows:

Mr. Alexander was involved in the remediation evaluation, site selection, and hydrogeologic characterization projects concerning GLE's proposed project.⁸⁹⁹ He also assisted with the development of GLE's ER.⁹⁰⁰

The Wilmington site is within the North Carolina Coastal Plain physiographic province.⁹⁰¹ The coastal aquifer system within that province is an eastward-dipping and eastward-thickening wedge of depositional sediments and sedimentary rock underlain by igneous and metamorphic rock.⁹⁰² Six regional aquifers are present in the region surrounding the site, including the Surficial Aquifer, the Castle Hayne Aquifer, the Peedee Aquifer, the Black Creek Aquifer, and the Upper and Lower Cape Fear Aquifers.⁹⁰³ These aquifers are water-yielding formations that are more permeable than the finer-grained formations that are typically above and beneath coastal aquifers.⁹⁰⁴ The Surficial Aquifer is under water table conditions.⁹⁰⁵ Groundwater assessments associated with the existing site facilities have focused on the Surficial Aquifer and the upper portion of the underlying Peedee Aquifer.⁹⁰⁶ In the eastern portion of the site, these two aquifers are typically separated by a less-permeable semiconfining layer, which is thin or absent in the vicinity of the GLE study area.⁹⁰⁷ In the GLE study area, there is also no clear differentiation between the Peedee and Surficial Aquifers.⁹⁰⁸

The Surficial Aquifer includes undifferentiated, stratified deposits generally located approximately 9 feet below ground surface at the Wilmington site.⁹⁰⁹ This aquifer is recharged by rainfall, and the water table is generally located 9 feet below ground surface, with a range of 0 to 20 feet below ground surface.⁹¹⁰ The Surficial Aquifer discharges into streams, drainage canals and ditches, and the low-lying swampy areas of the western and northwestern portions of the

⁸⁹⁸ *Id.*, App. A.

⁸⁹⁹ *Id.* at 2.

⁹⁰⁰ *Id.*

⁹⁰¹ *Id.* at 29.

⁹⁰² *Id.* at 29-30.

⁹⁰³ *Id.* at 30.

⁹⁰⁴ *Id.*

⁹⁰⁵ *Id.*

⁹⁰⁶ *Id.* The Peedee Aquifer is also called the Principal Aquifer because it is the only aquifer that provides water to the site. *Id.*

⁹⁰⁷ *Id.*

⁹⁰⁸ *Id.*

⁹⁰⁹ *Id.* at 31.

⁹¹⁰ *Id.*

Wilmington site.⁹¹¹ It also recharges groundwater into the underlying Principal Aquifer.⁹¹²

The relatively less-permeable Peedee clay layer underlies much of the Surficial Aquifer and acts as a semiconfining layer for the Principal Aquifer.⁹¹³ The thickness of this layer varies and is not universally present on the Wilmington site.⁹¹⁴ When present and sufficiently below the water table, the Peedee clay layer hydraulically separates the two aquifers — acting as a semiconfining layer.⁹¹⁵ Site studies indicate this layer is present in the eastern portion of the Wilmington site, where it eventually transitions to alluvial clay across the north-central portion of the Wilmington site and is ineffective as a semiconfining layer.⁹¹⁶ The northwestern portion of the Wilmington site has no clay layers.⁹¹⁷

The Principal Aquifer at the Wilmington site refers to the upper zones of the Peedee Aquifer, a deposit that includes greenish-gray to dark-gray silt and sand interbedded with semiconsolidated calcareous sandstone and limestone.⁹¹⁸ The upper portion of the Principal Aquifer is generally more permeable and contains more sand than the lower zones.⁹¹⁹ Groundwater flows from the upland areas toward the surrounding hydrogeologic boundaries, including streams, the Northeast Cape Fear River, and the low-lying swampy areas.⁹²⁰ In addition, groundwater is drawn to the Global Nuclear Fuel — Americas (GNF-A) pumping wells, which provide process water and groundwater remediation for the existing facility.⁹²¹ The potable water supply for the site is provided by three wells just east of the Wilmington site and Castle Hayne Road.⁹²² The primary input of groundwater to the Principal Aquifer system is recharged from leakage through the overlying semiconfining layer or direct seepage of rainwater in areas where the semiconfining layer is absent, including in the vicinity of the proposed GLE site.⁹²³

The current GNF-A groundwater monitoring program includes analysis of

⁹¹¹ *Id.*

⁹¹² *Id.*

⁹¹³ *Id.* at 32.

⁹¹⁴ *Id.*

⁹¹⁵ *Id.*

⁹¹⁶ *Id.* at 32-33.

⁹¹⁷ *Id.* at 33.

⁹¹⁸ *Id.*

⁹¹⁹ *Id.*

⁹²⁰ *Id.*

⁹²¹ *Id.*

⁹²² *Id.*

⁹²³ *Id.*

samples from a large number of wells around the Wilmington site.⁹²⁴ GLE will construct thirteen additional sampling wells around its proposed site.⁹²⁵ These wells and the eight existing wells within the GLE site will be added to the sampling protocol as part of GLE's Environmental Monitoring Program.⁹²⁶ The GLE site wells will be positioned in seven clusters, with three wells at different depths in each cluster.⁹²⁷ All of these locations are west of the western extent of the less-permeable clay semiconfining layer.⁹²⁸ The well-cluster locations were selected on the basis of groundwater flow directions.⁹²⁹ Samples will initially be collected quarterly prior to operation to establish baseline conditions.⁹³⁰ The monitoring frequency of each well will be reviewed and adjusted after a sufficient data set is developed.⁹³¹ Samples will be collected using dedicated sampling equipment or other industry-accepted practices and will be analyzed for uranium and fluoride.⁹³² If analytical results for uranium exceed GLE's threshold limit of 0.02 parts per million, then the subsequent quarterly sample will also be analyzed for gross alpha and gross beta activity.⁹³³

In his oral testimony, Mr. Alexander testified as follows:

The Principal Aquifer provides process water to the Wilmington site, as well as potable water for the Wilmington site and the surrounding communities.⁹³⁴ Effectively there is no reason to distinguish between the Principal and Surficial Aquifers because they act as one under water table conditions.⁹³⁵ No aquacludes have been found in the GLE aquifer study, so generally porosity and permeability decrease with depth.⁹³⁶ If a spill on the GLE site were to reach the water table, it would traverse down and then laterally.⁹³⁷ The water beneath the GLE site is potable quality and flows from the GLE site in all directions.⁹³⁸ The sites for additional wells were chosen based on a judgmental sampling intended to provide perimeter cover on the basis of knowledge of site hydrogeology and groundwater

⁹²⁴ *Id.* at 34.

⁹²⁵ *Id.*

⁹²⁶ *Id.*

⁹²⁷ *Id.*

⁹²⁸ *Id.* at 35.

⁹²⁹ *Id.*

⁹³⁰ *Id.* at 36.

⁹³¹ *Id.*

⁹³² *Id.*

⁹³³ *Id.*

⁹³⁴ Tr. at 193 (7/12/12 Hearing). The slides associated with Mr. Alexander's presentation to the Board can be viewed in Ex. GLE024.

⁹³⁵ Tr. at 205-06 (7/12/12 Hearing).

⁹³⁶ Tr. at 206.

⁹³⁷ *Id.*

⁹³⁸ Tr. at 207-08.

flows.⁹³⁹ Based on the initial data, the first well in a cluster will be shallow, at water table level; the second will be at a 30- to 40-foot depth; and the deepest may go as deep as 50 feet.⁹⁴⁰ Modeling has been done to determine groundwater flow and groundwater contaminant transport.⁹⁴¹ The models were calibrated based on water levels and formation information with depth, which will be used to determine actual well depths.⁹⁴²

b. Kimberly Matthews

Ms. Matthews is an Environmental Scientist for RTI International in Research Triangle Park, North Carolina.⁹⁴³ Her education and background were discussed previously in reference to her testimony on Topic 5.

In her written testimony on Topic 6, Ms. Matthews testified as follows:

Ms. Matthews was the primary author of the ER's sections regarding the existing surface water and ecological environmental settings and the potential impacts on surface water from the proposed GLE facility.⁹⁴⁴ The Wilmington site is located within the Northeast Cape Fear River Sub-basin of the Cape Fear River Basin.⁹⁴⁵ The Northeast Cape Fear River flows in a southerly direction past the Wilmington site and, 6 miles south of the site, joins the Cape Fear River to form the Cape Fear River Estuary.⁹⁴⁶ The Northeast Cape Fear River is the nearest named waterbody to the proposed site, located along the southwestern property boundary.⁹⁴⁷ The river demonstrates conditions that are characteristic of a tidally influenced river in the North Carolina Coastal Plain.⁹⁴⁸ The Wilmington site is drained by several small streams and an effluent channel.⁹⁴⁹ The effluent channel begins in the eastern portion of the Wilmington site, flows west to the site dam, and then connects to Unnamed Tributary #1 of the Northeast Cape Fear River.⁹⁵⁰ The effluent channel receives stormwater runoff from the developed portion of the site and treated wastewater effluent.⁹⁵¹ Unnamed Tributary #2 of the Northeast

⁹³⁹ Tr. at 213.

⁹⁴⁰ Tr. at 213-14.

⁹⁴¹ Tr. at 219.

⁹⁴² *Id.*

⁹⁴³ Ex. GLE023, at 1.

⁹⁴⁴ *Id.* at 3.

⁹⁴⁵ *Id.* at 20.

⁹⁴⁶ *Id.* at 20-21.

⁹⁴⁷ *Id.* at 21.

⁹⁴⁸ *Id.*

⁹⁴⁹ *Id.*

⁹⁵⁰ *Id.*

⁹⁵¹ *Id.* at 22.

Cape Fear River drains the northwestern portion of the site, while two unnamed streams flow north from the property to Prince George Creek, a tributary of the Northeast Cape Fear River.⁹⁵² Unnamed Tributary #1 of Prince George Creek originates on the eastern portion of the site and receives site stormwater runoff from parking lots and buildings.⁹⁵³ Unnamed Tributary #2 of Prince George Creek receives drainage from the largely forested north-central portion of the site.⁹⁵⁴

During facility construction and operation, surface water quality will continue to be monitored on the Wilmington site in the effluent channel by either GNF-A or GLE, and upstream and downstream of the site through an existing partnership with the Lower Cape Fear River Program.⁹⁵⁵ The Lower Cape Fear River Program also maintains a station near the site's southern border.⁹⁵⁶ The North Carolina Department of the Environment and Natural Resources, Division of Water Quality also maintains two monitoring stations along the Northeast Cape Fear River — 17 miles upstream of the site and 6 miles downstream of the site.⁹⁵⁷ GNF-A or GLE surface water sampling and analysis will be conducted in accordance with North Carolina approved methodologies, and analyses will be performed by state-certified labs.⁹⁵⁸ The Lower Cape Fear River Program follows similar methodologies as specified in a Memorandum of Agreement with the state.⁹⁵⁹ GNF-A or GLE will monitor radiological water quality parameters in the effluent channel, as well as at the Northeast Cape Fear River significantly upstream and just downstream of the Wilmington site.⁹⁶⁰ These samples will be obtained and analyzed in accordance with North Carolina standard operating procedures and other applicable industry best practices.⁹⁶¹

The surface water at or downstream of the site is not used as drinking water.⁹⁶² All water used at the site for both potable and process water is provided through the groundwater.⁹⁶³ There is no public intake of surface water from the Northeast Cape Fear River downstream of the site.⁹⁶⁴

⁹⁵² *Id.*

⁹⁵³ *Id.*

⁹⁵⁴ *Id.*

⁹⁵⁵ *Id.*

⁹⁵⁶ *Id.*

⁹⁵⁷ *Id.*

⁹⁵⁸ *Id.*

⁹⁵⁹ *Id.*

⁹⁶⁰ *Id.* at 24.

⁹⁶¹ *Id.*

⁹⁶² *Id.*

⁹⁶³ *Id.*

⁹⁶⁴ *Id.*

The monitoring program for the surface water pathways also includes wastewater effluent and stormwater discharge as specified by state permits.⁹⁶⁵ Sediment samples are also included in the surface water pathway because sediment-bound pollutants are a result of transport through surface wastewater and stormwater runoff.⁹⁶⁶

The Wilmington site state permit currently mandates three stormwater monitoring locations: two outfalls discharge to the Northeast Cape Fear River and one outfall discharges to Prince George Creek.⁹⁶⁷ Semiannual sampling is required during a storm event, with analysis for lead, oil and grease, pH, and total suspended solids.⁹⁶⁸ This permit could be modified by the state upon the construction and operation of the proposed GLE facility by adding additional monitoring locations and analytical parameters.⁹⁶⁹ Stormwater runoff from the UF₆ cylinder storage area will be collected in a holding pond for monitoring of uranium, gross alpha, gross beta, and fluoride.⁹⁷⁰ After monitoring, this stormwater will be released to a stormwater wet detention basin, which will not be monitored except for qualitative monitoring and maintenance inspections.⁹⁷¹

Sediment samples are collected semiannually in the effluent channel and farther downstream of the site dam at a road crossing before the channel enters the Tidal Swamp area.⁹⁷² These sediment samples are analyzed for uranium.⁹⁷³ Because GLE sediment will flow through the same process basins as currently used by GNF-A, the current sampling locations are sufficient.⁹⁷⁴

In her oral testimony on Topic 6, Ms. Matthews testified as follows:

Nonradiological monitoring of the Northeast Cape Fear River is conducted by the Lower Cape Fear River Program, but GNF-A or GLE could choose not to participate in this group and conduct their own monitoring in accordance with the state permit.⁹⁷⁵

Water pathways are analyzed for total uranium bound to sediment that would most likely enter the pathways through wastewater or stormwater runoff.⁹⁷⁶

⁹⁶⁵ *Id.*

⁹⁶⁶ *Id.*

⁹⁶⁷ *Id.* at 27.

⁹⁶⁸ *Id.*

⁹⁶⁹ *Id.*

⁹⁷⁰ *Id.*

⁹⁷¹ *Id.* at 27-28.

⁹⁷² *Id.* at 28.

⁹⁷³ *Id.* at 28-29.

⁹⁷⁴ *Id.* at 29.

⁹⁷⁵ Tr. at 187-88 (7/12/12 Hearing). The slides associated with Ms. Matthew's presentation to the Board can be viewed in Ex. GLE024.

⁹⁷⁶ Tr. at 204-05 (7/12/12 Hearing).

c. *Andrew Stahl*

Mr. Stahl is a Senior Research Geologist for RTI International in Research Triangle Park, North Carolina.⁹⁷⁷ He holds a B.S. degree in Geology from the State University of New York at Binghamton and an M.S. in Geology with a Hydrogeology focus from Pennsylvania State University.⁹⁷⁸ He is a licensed professional geologist in North Carolina and certified as a Professional Geologist by the American Institute of Professional Geologists.⁹⁷⁹ While at RTI International, Mr. Stahl has led groundwater resource assessments, conducted environmental site assessments, and analyzed the environmental consequences of the Fukushima Dai-ichi accident and of potential terrorist attacks.⁹⁸⁰ Prior to joining RTI International, Mr. Stahl worked as a hydrogeologist at various private entities.⁹⁸¹

In his written testimony, Mr. Stahl testified as follows:

Mr. Stahl was responsible for various aspects of the ER, including project scoping, technical coordination, and senior management-level review.⁹⁸²

The weather in North Carolina is primarily influenced by the position of the jet stream and a large subtropical area of high pressure called the Bermuda high.⁹⁸³ During summer, the Bermuda high is most often centered over Bermuda and, on occasion, asserts a more direct influence in North Carolina by moving westward.⁹⁸⁴ During the winter months, the Bermuda high generally moves eastward, while the jet stream dips farther south.⁹⁸⁵ On an annual basis, the wind direction in Wilmington is predominantly southwesterly, but during the fall and winter, the wind direction is often northerly.⁹⁸⁶ The annual prevailing wind speed at the Wilmington International Airport is 9 knots.⁹⁸⁷ Because the airport is located approximately 4 miles from the GLE proposed site, meteorological and atmospheric data collected at the airport are considered accurate for characterizing weather conditions at the proposed GLE site.⁹⁸⁸

The primary source of radiological air emissions from the proposed facility will be short-term releases of uranium that could potentially occur inside the operations building during activities associated with the enrichment process and subsequently

⁹⁷⁷ Ex. GLE023, at 1.

⁹⁷⁸ *Id.* at 3.

⁹⁷⁹ *Id.* at 3.

⁹⁸⁰ *Id.*, App. C.

⁹⁸¹ *Id.*

⁹⁸² *Id.* at 4.

⁹⁸³ *Id.* at 14.

⁹⁸⁴ *Id.*

⁹⁸⁵ *Id.* at 14-15.

⁹⁸⁶ *Id.* at 15.

⁹⁸⁷ *Id.*

⁹⁸⁸ *Id.*

could be vented through the building's high efficiency, multistage emissions control system.⁹⁸⁹ To monitor for potential airborne radiological emissions, GLE will sample the vent stack exhaust gas from the main GLE operations building emissions control system; the ambient air at selected locations at and outside of the fenceline of the proposed facility; and the soil at selected locations on and off the Wilmington site to assess ground surface deposition.⁹⁹⁰ Exhaust gas vented to the atmosphere from the main GLE operations building will be sampled continuously to measure its radioactivity.⁹⁹¹ The collection filter will be removed on a daily basis during initial operation; however, the frequency of filter removal and analysis will eventually decrease to weekly if the results during normal operations are shown to be consistently within regulatory requirements.⁹⁹² Ambient air levels of radiological emissions will be monitored by placing eleven samplers around the proposed GLE facility to measure gross alpha activity and concentrations of uranium isotopes.⁹⁹³ The samplers' locations were based on the predominant wind directions as determined by a long-term wind rose, which was based on 17 years of Integrated Surface Hourly Observation data from the Wilmington International Airport.⁹⁹⁴ Nine of the samplers will be placed around the controlled-access area fenceline of the proposed facility.⁹⁹⁵ One sampler would be placed in the west-northwest direction about a half-mile away from the operations building stack, for the purpose of background or ambient air monitoring.⁹⁹⁶

Soil sampling and analysis will also be performed to assess the deposition of airborne radionuclides.⁹⁹⁷ The current GNF-A radiological soil monitoring program analyzes samples from a number of onsite and offsite locations.⁹⁹⁸ Soil samples will continue to be collected on a semiannual basis from these areas, plus two additional locations established by GLE based on the location of the main operations building stack and prevailing wind directions.⁹⁹⁹ The soil samples will be collected from the upper 4 inches of soil using decontaminated hand-sampling tools.¹⁰⁰⁰ To establish baseline conditions, these new locations will be sampled

⁹⁸⁹ *Id.* at 16.

⁹⁹⁰ *Id.*

⁹⁹¹ *Id.*

⁹⁹² *Id.*

⁹⁹³ *Id.* at 17.

⁹⁹⁴ *Id.*

⁹⁹⁵ *Id.*

⁹⁹⁶ *Id.* at 18.

⁹⁹⁷ *Id.*

⁹⁹⁸ *Id.*

⁹⁹⁹ *Id.* at 18-19.

¹⁰⁰⁰ *Id.* at 19.

prior to operations and throughout operation.¹⁰⁰¹ Baseline shallow soil uranium concentrations will be assessed by implementing a statistically designed sampling program.¹⁰⁰²

The primary source of nonradiological hazardous air emissions would be the release of small gaseous emissions that could potentially contain HF.¹⁰⁰³ Any such releases will be contained within the main GLE operations building and vented through the building's high-efficiency, multistage emissions control system.¹⁰⁰⁴ The emissions control system vent stack of the main GLE operations building will be sampled continuously to monitor for fluoride emissions.¹⁰⁰⁵ This sampling will initially occur daily until it is established that the results are consistently within regulatory requirements, at which point, the filter will be analyzed weekly.¹⁰⁰⁶ The quantity of fluoride emissions vented to the atmosphere through the stack will be calculated using the analytical results, the corresponding measured exhaust volume for the stack, and the associated stack sampler volume.¹⁰⁰⁷

In his oral testimony, Mr. Stahl testified as follows:

The GLE Environment, Health, and Safety function serves as an internal, unbiased third party — that has the authority to enforce shutdown of any GLE process or facility.¹⁰⁰⁸ It will also implement the Environmental Monitoring Program.¹⁰⁰⁹ The Environmental Monitoring Program can be modified to maintain effectiveness, but such changes will be evaluated in accordance with the GLE Change Management Program.¹⁰¹⁰

The monitoring station nearest to any residential area is the fenceline ambient air monitoring station, located in the northeast corner of the controlled-access area about 3000 feet from a residential area.¹⁰¹¹ The two pairs of sampling locations for soil were selected based on predominant wind directions; they are located in an attempt to provide average measurements along the parts of the wind diagram in the north and northeast quadrant.¹⁰¹² Although GLE has only two soil monitoring

¹⁰⁰¹ *Id.*

¹⁰⁰² *Id.*

¹⁰⁰³ *Id.* at 20.

¹⁰⁰⁴ *Id.*

¹⁰⁰⁵ *Id.*

¹⁰⁰⁶ *Id.*

¹⁰⁰⁷ *Id.*

¹⁰⁰⁸ Tr. at 180 (7/12/12 Hearing). The slides associated with Mr. Stahl's presentation to the Board can be found in Ex. GLE024.

¹⁰⁰⁹ Tr. at 180 (7/12/12 Hearing).

¹⁰¹⁰ Tr. at 180-81.

¹⁰¹¹ Tr. at 198.

¹⁰¹² Tr. at 198-99.

sites, GNF-A has several more sites as well as historical data from those areas.¹⁰¹³ One of the GLE soil sampling sites is near a road that traverses the property line to the north; the other is located on a power line.¹⁰¹⁴ However, the site near a road is located in a place with little or no traffic — as it is a limited access road for the private hunting grounds north and northwest of the facility.¹⁰¹⁵ To allow ground surface deposits to infiltrate to a certain depth, soil samples will be collected semiannually from the upper 4 inches of the soil.¹⁰¹⁶ For its part, GNF-A conducts soil uranium analyses at seven onsite and offsite monitoring locations.¹⁰¹⁷

In modeling the air emissions monitoring stations, height of the stack was assumed to be 50 to 75 feet.¹⁰¹⁸ The smaller portion of the building on which the stack is to be placed will be located next to the taller portion of the building, which will reach 200 feet.¹⁰¹⁹ Mr. Stahl did not know if the taller portion of the building was factored into the model used to determine where monitoring stations should be placed.¹⁰²⁰

d. Julie Anne Olivier

Ms. Olivier is the Licensing and Regulatory Affairs Manager for the GLE project.¹⁰²¹ Her education and background were discussed previously in reference to her testimony on Topic 2.

In her written testimony on Topic 6, Ms. Olivier testified as follows:

Data collected from monitoring activities will be managed and tracked according to comprehensive Records Management and Quality Assurance programs.¹⁰²² GLE will ensure compliance with environmental requirements by establishing internal actions that will be set at specific levels to indicate when action, such as an investigation, is necessary.¹⁰²³ In the event that GLE exceeds an internal action level or regulatory requirement, GLE will enter a corrective action request into its Corrective Action Program, conduct an investigation, and formulate and implement plans to correct the issue.¹⁰²⁴

¹⁰¹³ *Id.*

¹⁰¹⁴ Tr. at 200.

¹⁰¹⁵ Tr. at 217.

¹⁰¹⁶ Tr. at 202.

¹⁰¹⁷ Tr. at 216-17.

¹⁰¹⁸ Tr. at 222.

¹⁰¹⁹ *Id.* This statement was made by Ms. Olivier to enhance Mr. Stahl's explanation of this issue.

¹⁰²⁰ Tr. at 222-23.

¹⁰²¹ Ex. GLE023, at 1.

¹⁰²² *Id.* at 6.

¹⁰²³ *Id.*

¹⁰²⁴ *Id.*

GLE's monitoring programs are guided by several NRC regulations. For example, 10 C.F.R. Part 20 requires that GLE perform the measurements and monitoring necessary to demonstrate that the amount of radioactive material present in effluents is kept As Low As Reasonably Achievable (ALARA).¹⁰²⁵ GLE will also be required to submit semiannual reports to the NRC, specifying the quantities of principal radionuclides released to unrestricted areas.¹⁰²⁶ NRC Regulatory Guides 4.15 and 4.16, as well as local, state, and federal regulatory requirements, provide guidance and regulation to ensure concentrations in effluents and emissions are properly controlled.¹⁰²⁷

GLE's approach involves monitoring at the points of release, called source-point monitoring.¹⁰²⁸ To ensure the validity of these measurements, source-point measurements will be verified by additional measurements performed farther away from release points.¹⁰²⁹ To evaluate whether changes are needed in systems or practices to achieve ALARA goals, trends in emissions and monitoring data are reviewed annually by a multidisciplinary team, the Wilmington Safety Review Committee.¹⁰³⁰ The GLE Environmental Monitoring Program's sampling, analytical, and reporting procedures will be conducted in accordance with industry-accepted methods and instrumentation, as well as the requirements of the GLE Quality Assurance program.¹⁰³¹ Employees involved in the implementation of monitoring will be trained on these procedures.¹⁰³² GLE's Quality Assurance program will require that sampling equipment is properly maintained and calibrated, and functional monitoring and routine checks will ensure this occurs.¹⁰³³ Any laboratory that performs testing services will be certified by either the National Environmental Laboratory Accreditation Program or an equivalent state laboratory accreditation agency and these laboratories will be required to employ established standards, like those provided by the National Institute of Standards and Technology.¹⁰³⁴ GLE's program will monitor for both radiological and hazardous, nonradiological releases into the environment.¹⁰³⁵

Four primary types of monitoring for hazardous releases will be conducted: stack monitoring; water sampling; stormwater runoff sampling; and groundwater

¹⁰²⁵ *Id.* at 7.

¹⁰²⁶ *Id.*

¹⁰²⁷ *Id.*

¹⁰²⁸ *Id.*

¹⁰²⁹ *Id.* at 8.

¹⁰³⁰ *Id.*

¹⁰³¹ *Id.* at 11.

¹⁰³² *Id.*

¹⁰³³ *Id.*

¹⁰³⁴ *Id.* at 11-12.

¹⁰³⁵ *Id.* at 12-13.

quality and levels.¹⁰³⁶ GLE will also incorporate the past experience and data obtained during implementation of the GNF-A's environmental program.¹⁰³⁷ Procedures from that existing environmental program will be replicated, and GLE may use data generated from GNF-A's monitoring program.¹⁰³⁸

The GLE Environmental, Health, and Safety organization will implement the environmental monitoring program.¹⁰³⁹ This organization will provide independent oversight of operations and ensure that the GLE facility complies with applicable rules, regulations, and codes.¹⁰⁴⁰

Separate wastewater effluent monitoring locations are not needed because GLE wastewater effluent discharges will be combined with GNF-A's discharges for treatment at the final process lagoon treatment facility.¹⁰⁴¹ The lagoon facility will be monitored at existing outfalls in accordance with a permit issued to GNF-A.¹⁰⁴² Radioactive liquid waste treatment will consist of a system to remove uranium and fluoride.¹⁰⁴³ Uranium removal will be accomplished through pH adjustment, followed by precipitation and filtration.¹⁰⁴⁴ Fluoride will be removed through the addition of salt to form a solid fluoride precipitate, followed by either filtration or evaporation and removal of the precipitate.¹⁰⁴⁵ Treated wastewater effluent will be routed to a pump station, which will route the effluent to the final process lagoon facility for further treatment.¹⁰⁴⁶ The treated process wastewater samples are collected daily at Outfall 001, at the final process lagoons.¹⁰⁴⁷ The monitoring program includes: daily composite samples for uranium content; weekly composite samples of daily samples for gross alpha and gross beta activity; and quarterly composites for technetium-99.¹⁰⁴⁸ The treated wastewater effluent is also monitored for various parameters, including total suspended solids, total nitrogen, fluoride, cyanide, pH, metals, oil and grease, and total toxic organics.¹⁰⁴⁹ GLE sanitary wastewater will be treated in the existing sanitary wastewater treatment facility, with treated effluent being used in onsite cooling towers if there

¹⁰³⁶ *Id.* at 13.

¹⁰³⁷ *Id.*

¹⁰³⁸ *Id.*

¹⁰³⁹ *Id.*

¹⁰⁴⁰ *Id.* at 14.

¹⁰⁴¹ *Id.* at 25.

¹⁰⁴² *Id.*

¹⁰⁴³ *Id.*

¹⁰⁴⁴ *Id.*

¹⁰⁴⁵ *Id.*

¹⁰⁴⁶ *Id.*

¹⁰⁴⁷ *Id.* at 26. For the exact location of Outfall 001, consult Figure 6-6 in Ex. GLE023.

¹⁰⁴⁸ *Id.*

¹⁰⁴⁹ *Id.* at 26-27.

is sufficient demand.¹⁰⁵⁰ When demand is not sufficient, the portion of treated sanitary wastewater effluent not used in the cooling towers will be discharged as surface water and monitored in accordance with the permit governing surface water releases.¹⁰⁵¹

GLE will track its Environmental Monitoring Program data as part of GLE's Quality Assurance Program.¹⁰⁵² The Quality Assurance Program requires procedures for reviewing, approving, handling, identifying, retaining, retrieving, and maintaining Quality Assurance records.¹⁰⁵³ The records will include test and inspection results and all documentation required by codes, standards, or the Quality Assurance Program.¹⁰⁵⁴ GLE will store these records electronically using a dual-facility records storage process with backup tape storage in a fireproof safe in a separate location from the computerized records.¹⁰⁵⁵ To ensure accuracy, analytical data will be transferred directly to the program-specific relational database, so manual transcription errors will be avoided.¹⁰⁵⁶ Regardless of how data are imported, Quality Assurance checks will verify accurate data storage, and Quality Assurance and Quality Control reviews and audits will also be required.¹⁰⁵⁷ GLE will track the stored data by using modules which will track sampling completeness and allow GLE to efficiently determine conditions that require further action or review.¹⁰⁵⁸

Further, GLE will work to ensure ongoing compliance with environmental requirements by establishing internal action levels.¹⁰⁵⁹ The internal action levels for environmental measurements will be set based on the concentration of an analyte that indicates some action needs to be taken.¹⁰⁶⁰ Internal action levels provide guidance for ensuring compliance with regulatory limits and requirements.¹⁰⁶¹ In most cases, these internal action levels are lower than the pertinent regulatory or permit action levels, providing GLE with a margin of safety.¹⁰⁶² If a monitoring result exceeds an internal action level or a regulatory requirement, GLE will enter a corrective action request into GLE's Corrective Action Program and possibly

¹⁰⁵⁰ *Id.* at 27.

¹⁰⁵¹ *Id.*

¹⁰⁵² *Id.* at 36.

¹⁰⁵³ *Id.* at 37.

¹⁰⁵⁴ *Id.*

¹⁰⁵⁵ *Id.*

¹⁰⁵⁶ *Id.*

¹⁰⁵⁷ *Id.*

¹⁰⁵⁸ *Id.* at 38.

¹⁰⁵⁹ *Id.*

¹⁰⁶⁰ *Id.* at 38-39.

¹⁰⁶¹ *Id.* at 39.

¹⁰⁶² *Id.*

shutdown the affected process equipment.¹⁰⁶³ The Corrective Action Program is designed to capture various conditions that may be precursors to more significant issues and ensure problems are addressed, analyzed, and corrective actions are taken.¹⁰⁶⁴ An incident will trigger an investigation, which will help to determine what immediate and long-term actions need to be taken.¹⁰⁶⁵

In her oral testimony on Topic 6, Ms. Olivier testified as follows:

In areas where GLE and GNF-A share monitoring responsibilities, the two will have to enter into a memorandum of agreement or a memorandum of understanding to work out the details of monitoring and data sharing.¹⁰⁶⁶ The onsite sanitary wastewater treatment facility was upgraded about 5 years ago and was built with a capacity to accommodate the GLE facility.¹⁰⁶⁷ Currently the treated effluent is recycled into the cooling tower for the GNF-A facility; if additional treatment creates excess effluent, it will be transported to the GLE cooling towers.¹⁰⁶⁸

GNF-A's air monitoring stations are located a few meters off the ground.¹⁰⁶⁹ GLE plans to use the same type, subject to vendor availability.¹⁰⁷⁰

Sanitary wastewater effluent is not monitored for radiological substances, as it is not required under the requisite permits.¹⁰⁷¹ GLE assesses that there is a very low chance that radiological constituents would get into the sanitary wastewater system because that system is separated from the contaminated systems on the site.¹⁰⁷² There have been issues at nuclear fuel facilities with accumulation of radionuclides in domestic wastewater treatment systems, but this has not been an issue on the Wilmington site.¹⁰⁷³

2. NRC Staff Witnesses

a. Karl Fischer

Mr. Fischer was an Environmental Systems Engineer at Argonne National

¹⁰⁶³ *Id.* at 39-40.

¹⁰⁶⁴ *Id.* at 40.

¹⁰⁶⁵ *Id.*

¹⁰⁶⁶ Tr. at 189 (7/12/12 Hearing). The slides concerning Ms. Olivier's presentation to the Board on Topic 6 can be viewed in Ex. GLE024.

¹⁰⁶⁷ Tr. at 189 (7/12/12 Hearing).

¹⁰⁶⁸ Tr. at 189-90.

¹⁰⁶⁹ Tr. at 218.

¹⁰⁷⁰ *Id.*

¹⁰⁷¹ Tr. at 220.

¹⁰⁷² *Id.*

¹⁰⁷³ Tr. at 221.

Laboratory.¹⁰⁷⁴ In June 2012, he joined the University of Michigan as a Senior Health Physicist and is in the process of being rehired part-time by Argonne National Laboratory.¹⁰⁷⁵ Mr. Fischer received his B.S.E. in Nuclear Engineering and his M.Eng. in Radiological Health Engineering from the University of Michigan.¹⁰⁷⁶ He became a Certified Health Physicist in 2004 and has been recertified twice since.¹⁰⁷⁷ His areas of expertise are health physics and radiological health risk.¹⁰⁷⁸ At Argonne National Laboratory, he provided health physics and programmatic support to various government sponsors, including technical, cumulative impacts, and vulnerability assessments.¹⁰⁷⁹ Prior to his role at Argonne National Laboratory, Mr. Fischer worked at Northrop Grumman Information Technology, serving as Deputy Program Manager for the Nuclear Test Personnel Review Program for the Department of Defense.¹⁰⁸⁰ Prior to that, he served as a health physicist and senior health physicist for the National Institutes of Health, Division of Radiation Safety.¹⁰⁸¹

In his written testimony, Mr. Fischer testified as follows:

Mr. Fischer was Argonne National Laboratory's Deputy Team Lead and Document Manager on its contract with the NRC to provide assistance on the preparation of the FEIS.¹⁰⁸² In that role, he oversaw Argonne National Laboratory's subject matter experts who contributed to the FEIS.¹⁰⁸³

Several key NRC guidance documents are applicable to the Staff's review of an environmental monitoring program for a uranium enrichment facility.¹⁰⁸⁴ They include NUREG-1748,¹⁰⁸⁵ NUREG-1520,¹⁰⁸⁶ Regulatory Guide 4.15,¹⁰⁸⁷ Regulatory Guide 4.16,¹⁰⁸⁸ Regulatory Guide 8.37,¹⁰⁸⁹ and NUREG-1302.¹⁰⁹⁰

The GLE Environmental Monitoring Program consists of two components:

¹⁰⁷⁴ Ex. NRC124, at 1.

¹⁰⁷⁵ *Id.*

¹⁰⁷⁶ *Id.*, Attach. (Karl Fischer, CHP, Statement of Professional Qualifications).

¹⁰⁷⁷ *Id.*

¹⁰⁷⁸ *Id.*

¹⁰⁷⁹ *Id.*

¹⁰⁸⁰ *Id.*

¹⁰⁸¹ *Id.*

¹⁰⁸² *Id.* at 2.

¹⁰⁸³ *Id.*

¹⁰⁸⁴ *Id.* at 3-5.

¹⁰⁸⁵ See Ex. NRC006.

¹⁰⁸⁶ See Ex. NRC005.

¹⁰⁸⁷ See Ex. NRC077.

¹⁰⁸⁸ See Ex. NRC078.

¹⁰⁸⁹ See Ex. NRC079.

¹⁰⁹⁰ See Ex. NRC080.

effluent monitoring activities and environmental monitoring activities.¹⁰⁹¹ Both types of monitoring include radiological and nonradiological analyses.¹⁰⁹² Because GNF-A already conducts effluent and environmental monitoring for existing facilities on the Wilmington site, the existing program would be expanded to include the GLE facility and called the Expanded Monitoring Program.¹⁰⁹³

Radiological monitoring of effluent releases would be performed to comply with federal and state regulations.¹⁰⁹⁴ The radiological effluent monitoring program is based on various regulatory requirements, the existing program on the Wilmington site, and NRC guidance documents.¹⁰⁹⁵ Nonradiological monitoring of chemical constituents in effluent releases complies with permitting requirements and other agencies' regulations.¹⁰⁹⁶ Radiological and nonradiological monitoring will include airborne and liquid release, but sanitary wastewater effluent will be used as makeup water in site cooling towers, so no discharge of treated sanitary wastewater is expected.¹⁰⁹⁷

Monitoring for contaminants in the various environmental media near the proposed facility would be performed to verify the validity of effluent monitoring results, verify that containment and effluent controls are working properly, and provide a means for evaluating the impacts from GLE operations on the local environment.¹⁰⁹⁸ Types of monitoring that will occur include direct radiation monitoring, ambient air monitoring, process wastewater monitoring, surface water and sediment monitoring, stormwater runoff monitoring, groundwater monitoring, and soil monitoring.¹⁰⁹⁹

The North Carolina Department of the Environment and Natural Resources, Division of Water Quality conducts water quality monitoring in two locations along the Northeast Cape Fear River, both upstream and downstream of the Wilmington site.¹¹⁰⁰ Monitoring parameters include metals, arsenic, biochemical oxygen demand, chloride, dissolved oxygen, fecal coliform, nitrogen, pH, salinity, phosphorus, suspended solids, and temperature.¹¹⁰¹ The North Carolina Division

¹⁰⁹¹ Ex. NRC124, at 5. Effluent monitoring is the monitoring of gaseous and liquid effluents at the point of release. Environmental monitoring is the monitoring of various environmental media in the vicinity of the facility. *Id.*

¹⁰⁹² *Id.*

¹⁰⁹³ *Id.*

¹⁰⁹⁴ *Id.*

¹⁰⁹⁵ *Id.*

¹⁰⁹⁶ *Id.* at 5-6.

¹⁰⁹⁷ *Id.* at 6.

¹⁰⁹⁸ *Id.* at 8.

¹⁰⁹⁹ *Id.* at 8-10.

¹¹⁰⁰ *Id.* at 16.

¹¹⁰¹ *Id.*

of Environmental Health, Radiation Protection Section also conducts routine environmental sampling and analysis in the vicinity of the Wilmington site.¹¹⁰² This monitoring includes low-volume air sampling and sampling of vegetation, sediment, soil, surface water, and groundwater.¹¹⁰³ Water quality monitoring in the Lower Cape Fear River watershed is performed by the Lower Cape Fear River Program.¹¹⁰⁴ Physical, chemical, and biological measurements are routinely collected at thirty-four sites within the Cape Fear River Estuary and the Lower Cape Fear River watershed.¹¹⁰⁵

In his oral testimony, Mr. Fischer testified as follows:

The Staff used the guidance in NUREG-1748 §§ 5.6.1 and 6.6.1 to review the radiological monitoring program discussed in the ER and to draft Chapter 6 of the FEIS.¹¹⁰⁶ In addition, NUREG-1520 § 9.4.3.2.2 discusses the acceptance criteria for Effluent and Environmental Monitoring.¹¹⁰⁷ Applicable regulatory guides also assisted in the Staff's review.¹¹⁰⁸ All effluents from the proposed GLE facility would be discharged only through monitored pathways — the ventilation system exhaust stack for gaseous effluent and the final process lagoon for liquid effluent.¹¹⁰⁹

The Argonne National Laboratory environmental review staff, aiding the NRC Staff's FEIS preparation, did perform its own air monitoring analysis, including modeling the exhaust stack and the locations around the facility where effluents are likely to be transported.¹¹¹⁰ Mr. Fischer knew the height of the stack was included in this review, but he did not know if building configuration was also considered.¹¹¹¹

Stormwater monitoring is done at the outfall of a storm event twice a year.¹¹¹² Mr. Fischer did not know whether storm events occur in different seasons.¹¹¹³

¹¹⁰² *Id.*

¹¹⁰³ *Id.*

¹¹⁰⁴ *Id.*

¹¹⁰⁵ *Id.*

¹¹⁰⁶ Tr. at 226-27 (7/12/12 Hearing). The slides associated with Mr. Fischer's presentation to the Board can be viewed in Ex. NRC116.

¹¹⁰⁷ Tr. at 227 (7/12/12 Hearing).

¹¹⁰⁸ Tr. at 227-28.

¹¹⁰⁹ Tr. at 231.

¹¹¹⁰ Tr. at 248.

¹¹¹¹ *Id.*

¹¹¹² Tr. at 250.

¹¹¹³ *Id.*

b. Matthew Bartlett

Dr. Bartlett is a Project Manager and Health Physics Reviewer in the NRC's Office of Nuclear Material Safety and Safeguards, Division of Fuel Cycle Safety and Safeguards.¹¹¹⁴ He received his B.S. in Physics from Bob Jones University, and his M.S. and Ph.D. in Physics from Clemson University.¹¹¹⁵ Dr. Bartlett has over 7 years' experience as a project manager and health physics reviewer at the NRC and has participated in several health physics reviews and overseen numerous licensing actions for fuel facilities.¹¹¹⁶ He also serves as the technical contact on the working group to incorporate ISA requirements into 10 C.F.R. Part 40.¹¹¹⁷ Prior to working at the NRC, Dr. Bartlett was a teaching and research assistant at Clemson University.¹¹¹⁸

In his written testimony, Dr. Bartlett testified as follows:

Dr. Bartlett did not participate in the preparation of the SER, but now serves as the replacement for the Health Physics Reviewer who prepared the SER and has since left the NRC.¹¹¹⁹ He has reviewed the relevant sections of the SER and license application and agrees with the findings of his predecessor.¹¹²⁰

GLE's Environmental Monitoring Program must comply with the principles of ALARA and with the dose limitations for members of the public and workers.¹¹²¹ Further, applicants must show that the facility design and procedures minimize environmental contamination.¹¹²² In addition, 10 C.F.R. § 20.1501 requires the licensee to have adequate survey and monitoring measures.¹¹²³

The Staff found GLE's effluent and environmental monitoring programs acceptable because the programs met the regulatory requirements and acceptance criteria of NUREG-1520.¹¹²⁴ These acceptance criteria address background level baselines for radiological and nonradiological analyses, monitoring sampling locations and methods, trends in monitoring data, radionuclide-specific analyses, quality control, action levels and corrective actions, and accidental releases.¹¹²⁵

¹¹¹⁴ Ex. NRC124, at 1.

¹¹¹⁵ *Id.*, Attach. (Matthew Bartlett Statement of Professional Qualifications).

¹¹¹⁶ *Id.*

¹¹¹⁷ *Id.*

¹¹¹⁸ *Id.*

¹¹¹⁹ *Id.* at 2.

¹¹²⁰ *Id.* at 2-3.

¹¹²¹ *Id.* at 16.

¹¹²² *Id.* at 17.

¹¹²³ *Id.*

¹¹²⁴ *Id.*

¹¹²⁵ *Id.*

The Staff also verified that the effluent monitoring program was conducted consistent with Regulatory Guide 8.37.¹¹²⁶

The proposed facility uses two complementary mechanisms of containment and ventilation to minimize effluents.¹¹²⁷ Containment involves the prevention of releases from both the processing equipment and the process buildings.¹¹²⁸ Process equipment is designed so that leaks are contained within the process equipment.¹¹²⁹ The process buildings are divided into ventilation zones to further confine airborne releases to localized areas.¹¹³⁰ Confinement assures effluents are routed through ventilation, filtration, and monitoring systems before release.¹¹³¹ Potentially contaminated ventilation exhaust is vented to the Operations Buildings Stack where the exhaust goes through High-Efficiency Particulate Arresting filters, in addition to prefilters, pressure monitors, and high-efficiency gas absorption filters.¹¹³² A number of secondary ventilation systems are incorporated into the facility design.¹¹³³

Contaminated liquid effluents are sent to an onsite treatment facility for chemical treatment.¹¹³⁴ Once the concentrations have been verified through continuous sampling to be below regulatory release limits, the effluents can be released into the Cape Fear River.¹¹³⁵

Airborne and liquid radionuclide analyses will be performed more frequently whenever there is a significant, nonroutine, unexplained increase in gross radioactivity.¹¹³⁶ As discussed in the SER,¹¹³⁷ there are set action levels that force GLE action when environmental measurements show the concentration of an analyte reaches a specified level.¹¹³⁸ GLE's corrective action program is implemented when set action levels are reached to ensure the cause of the action level exceedance is discovered and to ensure the issue is corrected.¹¹³⁹ Additionally, GLE has provisions in place to respond to emergency situations, accidents, or increased

¹¹²⁶ *Id.*

¹¹²⁷ *Id.* at 18.

¹¹²⁸ *Id.*

¹¹²⁹ *Id.*

¹¹³⁰ *Id.*

¹¹³¹ *Id.*

¹¹³² *Id.*

¹¹³³ *Id.*

¹¹³⁴ *Id.*

¹¹³⁵ *Id.*

¹¹³⁶ *Id.* at 19.

¹¹³⁷ *See* Ex. NRC001, at 9-13 to 9-16.

¹¹³⁸ Ex. NRC124, at 19.

¹¹³⁹ *Id.*

emission levels found in routine sampling.¹¹⁴⁰ Because effluent compliance levels are set by North Carolina permits, administrative action levels are established below compliance levels for all parameters.¹¹⁴¹ Response actions to address elevated measurements would be set in documented procedures at increasing levels of priority.¹¹⁴² The Applicant has a leak detection system in areas where liquid effluents are processed to prevent any unplanned releases.¹¹⁴³ GLE will institute a Corrective Action Program for personnel contamination, and a radiation and monitoring program will include requirements for controlling radiological contamination within the facility and monitoring external and internal radiation exposures.¹¹⁴⁴ Corrective actions range in severity from source-term investigation to operational modification to operations shutdown.¹¹⁴⁵ Because of the Applicant's commitment to monitoring and the Corrective Action Program, the NRC Staff has "reasonable assurance that public health and safety will be protected [and GLE has a program in] compliance with the regulations in 10 C.F.R. § 20.1101."¹¹⁴⁶

In his oral testimony, Dr. Bartlett testified as follows:

Solid waste is another type of waste that will be generated by the GLE facility, in addition to liquid and air effluents.¹¹⁴⁷ The solid waste generated will include low-level radioactive waste, such as filters, protective equipment, and uranium-contaminated equipment.¹¹⁴⁸ GLE will collect these contaminated materials into disposal containers for onsite storage, survey, and eventual transfer to a licensed disposal facility.¹¹⁴⁹ GLE has also developed a radiation protection program, which relies on qualified radiation protection staff, written procedures, dose monitoring, and contamination control.¹¹⁵⁰

As part of the accident analysis for the facility, the health physics reviewer did independent modeling of an accidental release, verifying GLE's information with use of the NRC RASCAL code.¹¹⁵¹ Dr. Bartlett did not know if this

¹¹⁴⁰ *Id.*

¹¹⁴¹ *Id.*

¹¹⁴² *Id.*

¹¹⁴³ *Id.* at 20.

¹¹⁴⁴ *Id.*

¹¹⁴⁵ *Id.* at 21.

¹¹⁴⁶ *Id.*

¹¹⁴⁷ Tr. at 240 (7/12/12 Hearing). The slides associated with Dr. Bartlett's presentation to the Board may be viewed in Ex. NRC116.

¹¹⁴⁸ Tr. at 240 (7/12/12 Hearing).

¹¹⁴⁹ *Id.*

¹¹⁵⁰ Tr. at 242.

¹¹⁵¹ Tr. at 248-49.

analysis verified the adequacy of the proposed measurement locations around the facility.¹¹⁵²

c. Stan Echols

Dr. Echols is a Project Manager and a Senior Environmental Engineer in the NRC's Office of Nuclear Material Safety and Safeguards, Division of Fuel Cycle Safety and Safeguards.¹¹⁵³ He received his B.S. in Nuclear Engineering Sciences from the University of Florida, his Ph.D. in Environmental Engineering from the University of Florida, and his J.D. from Georgetown University Law Center.¹¹⁵⁴ Dr. Echols has over 30 years' experience in the public and private sectors providing regulatory, environmental, technical, legal, and project management support to the government and nuclear industry.¹¹⁵⁵ He has worked on a variety of projects involving nuclear reactors, a fuel manufacturing facility, enrichment facilities, a weapons production facility, and a proposed high-level waste disposal facility.¹¹⁵⁶ Prior to joining the NRC, Dr. Echols was an associate and partner in the energy group of a national law firm for 10 years.¹¹⁵⁷ Prior to that, Dr. Echols was an attorney at the Department of Energy where he addressed a broad range of nuclear and environmental issues and briefly served as a Special Assistant United States Attorney in the Office of the United States Attorney for the District of Columbia.¹¹⁵⁸

In his written testimony, Dr. Echols testified as follows:

Dr. Echols was the primary reviewer of the Applicant's environmental protection measures.¹¹⁵⁹ His review and evaluation are contained in Chapter 9 of the SER.¹¹⁶⁰ His written testimony covered the same issues addressed by Dr. Bartlett in his written testimony.

In his oral testimony Dr. Echols testified as follows:

The NUREG-1520 review was conducted by comparing GLE's proposed environmental protection measures against the acceptance criteria found in Chapter 9 of NUREG-1520.¹¹⁶¹

¹¹⁵² *Id.*

¹¹⁵³ Ex. NRC124, at 1.

¹¹⁵⁴ *Id.*, Attach. (Stan Echols Statement of Professional Qualifications).

¹¹⁵⁵ *Id.*

¹¹⁵⁶ *Id.*

¹¹⁵⁷ *Id.*

¹¹⁵⁸ *Id.*

¹¹⁵⁹ *Id.* at 3.

¹¹⁶⁰ *Id.* See also NRC001, at 9-1 to 9-25.

¹¹⁶¹ Tr. at 239-40 (7/12/12 Hearing). The slides associated with Dr. Echols's presentation to the Board can be found in Ex. NRC116.

Dr. Echols testified that he reviewed the predominant wind directions to ensure that air monitoring locations “would pick up anything coming from the stack in the area of concern.”¹¹⁶²

The Staff asserted that seven three-well clusters, totaling twenty-one wells, was an adequate system to protect against contamination of groundwater, considering the clusters are set at three levels to get measurements at various depths.¹¹⁶³ In addition to using regulatory guides and regulations to ensure adequacy, the Staff reviews monitoring programs at similar facilities and talks with past project managers.¹¹⁶⁴ The Staff conducts various audits, as does North Carolina, and the issues are discussed at public meetings.¹¹⁶⁵ All of these can inform Staff judgment. However, in the FEIS, there were no public comments related to the environmental monitoring program.¹¹⁶⁶

d. Timothy C. Johnson

Mr. Johnson is a Senior Project Manager in the NRC’s Office of Nuclear Material Safety and Safeguards, Division of Fuel Cycle Safety and Safeguards.¹¹⁶⁷ His education and background were discussed previously in reference to his testimony on Topic 2.

In his written testimony on Topic 6, Mr. Johnson testified as follows:

Mr. Johnson is the Licensing Project Manager for the proposed GLE project.¹¹⁶⁸ In that role, he oversaw the licensing review of GLE’s application for facility construction and operation and preparation of the SER.¹¹⁶⁹

Effluents would be released from specified, monitored locations through the plant stack or various water outflow locations.¹¹⁷⁰ In each case, the effluents would be filtered, treated, and monitored.¹¹⁷¹ GLE would use the sampling data to track release trends, which would be documented in an annual ALARA report.¹¹⁷² In addition, GLE would submit semiannual effluent release reports under 10 C.F.R.

¹¹⁶² Tr. at 247 (7/12/12 Hearing).

¹¹⁶³ Tr. at 254.

¹¹⁶⁴ Tr. at 254-55.

¹¹⁶⁵ Tr. at 255.

¹¹⁶⁶ *Id.*

¹¹⁶⁷ Ex. NRC124, at 2.

¹¹⁶⁸ *Id.*

¹¹⁶⁹ *Id.*

¹¹⁷⁰ *Id.* at 7.

¹¹⁷¹ *Id.*

¹¹⁷² *Id.*

§ 70.59.¹¹⁷³ These reports and GLE’s process give “reasonable assurance that GLE will take appropriate actions to protect public health and safety.”¹¹⁷⁴

In his oral testimony on Topic 6, Mr. Johnson testified as follows:

The Applicant is required by 10 C.F.R. § 20.1302 to ensure compliance with the effluent release limits in Appendix B to Part 20.¹¹⁷⁵ Under 10 C.F.R. § 70.59, the Applicant must provide semiannual release reports to the NRC.¹¹⁷⁶ GLE has also committed to using Regulatory Guide 4.16 and to preparing an annual ALARA assessment.¹¹⁷⁷ If issues are identified that need correction, GLE would enter them into its Corrective Action Program, process them, and take whatever measures are necessary to address the issues.¹¹⁷⁸

Mr. Johnson believes that the RASCAL modeling of accident conditions that was performed by the Staff did not account for wake effects.¹¹⁷⁹ While RASCAL modeling does assume worst-case, conservative scenarios, it is difficult to model the wake effects.¹¹⁸⁰

The safety review did not consider a groundwater modeling analysis.¹¹⁸¹ However, there has been a substantial amount of groundwater monitoring done in association with some previous contamination caused by GNF-A.¹¹⁸²

The Staff did evaluate the fact that GLE will not monitor sanitary sewage effluent for radiologic constituents.¹¹⁸³ Because the sanitary sewage system is not connected to other radiological areas, no additional monitoring is necessary.¹¹⁸⁴

e. Jose Diaz

Mr. Diaz is a Senior Fuel Facility Project Inspector in the NRC’s Region II Office in Atlanta, Georgia.¹¹⁸⁵ His education and background were discussed previously in reference to his testimony on Topic 4.

In his written testimony on Topic 6, Mr. Diaz testified as follows:

¹¹⁷³ *Id.*

¹¹⁷⁴ *Id.*

¹¹⁷⁵ Tr. at 238 (7/12/12 Hearing). The slides associated with Mr. Johnson’s presentation to the Board can be viewed in Ex. NRC116.

¹¹⁷⁶ Tr. at 238 (7/12/12 Hearing).

¹¹⁷⁷ Tr. at 238-39.

¹¹⁷⁸ Tr. at 239.

¹¹⁷⁹ Tr. at 249.

¹¹⁸⁰ *Id.*

¹¹⁸¹ Tr. at 252.

¹¹⁸² Tr. at 253.

¹¹⁸³ Tr. at 256.

¹¹⁸⁴ *Id.*

¹¹⁸⁵ Ex. NRC124, at 2.

Mr. Diaz was not involved with the application review for the proposed GLE facility, but as a Senior Fuel Facility Inspector in Region II, his office would be responsible for performing the Operational Readiness Review inspections.¹¹⁸⁶

Once a license is issued, but prior to the start of operations, the NRC will conduct Operational Readiness Review inspections, which are required by license conditions.¹¹⁸⁷ The Operational Readiness Review inspections assess program safety readiness and assess different areas of the Environmental Monitoring Program.¹¹⁸⁸ If significant issues are identified during Operational Readiness Review inspections, then NRC authorization of operations will be impacted.¹¹⁸⁹ The results of these inspections will be documented in inspection reports, most of which will be publicly available on ADAMS.¹¹⁹⁰

The NRC will also perform environmental inspections based on Inspection Manual Chapter 2600.¹¹⁹¹ This manual chapter and the license itself will serve as the basis of these inspections, which will include inspections in the areas of radiation protection, effluent control and environmental protection, and radioactive waste management.¹¹⁹² The results will be documented in inspection reports that are largely available to the public in ADAMS.¹¹⁹³

The NRC's inspection program incorporates a core set of inspections that encompass multiple areas and are performed with a particular periodicity.¹¹⁹⁴ Various NRC inspection procedure documents define the objectives of each type of inspection, as well as directing an inspector on what to consider as part of the inspection.¹¹⁹⁵

If an environmental monitoring program is not implemented properly or if effluent limits are exceeded, the inspection program will identify and document such occurrences, which are assessed in accordance with the NRC Enforcement Policy and the NRC Enforcement Manual.¹¹⁹⁶ Licensees are required to take immediate and long-term corrective actions and ensure problems do not reoccur.¹¹⁹⁷ And, the inspection program will track findings and perform followup inspections until all

¹¹⁸⁶ *Id.* at 3.

¹¹⁸⁷ *Id.* at 21.

¹¹⁸⁸ *Id.*

¹¹⁸⁹ *Id.*

¹¹⁹⁰ *Id.*

¹¹⁹¹ *Id.* at 21-22. *See also* Ex. NRC081.

¹¹⁹² Ex. NRC124, at 22.

¹¹⁹³ *Id.*

¹¹⁹⁴ *Id.*

¹¹⁹⁵ *Id.* at 22-23 (citing Ex. NRC082, Ex. NRC083, and Ex. NRC084).

¹¹⁹⁶ *Id.* at 23.

¹¹⁹⁷ *Id.*

identified issues are resolved.¹¹⁹⁸ In addition to the Operational Readiness Review inspections, issues can also be identified as a result of NRC core inspections and reactive inspections.¹¹⁹⁹

In his oral testimony on Topic 6, Mr. Diaz testified as follows:

The Staff uses the same basis for the Operational Readiness Review inspections that it will use for later operational safety and safeguards inspections.¹²⁰⁰ The results of the environmental protection program can indicate the effectiveness of the program.¹²⁰¹ The inspection program will identify and document occurrences where the environmental monitoring program is not implemented properly or effluent limits are exceeded.¹²⁰² The NRC Inspection Program will follow up on corrective actions, including tracking findings and performing followup inspections.¹²⁰³ Inspectors review past reports to understand historic problem areas and ensure that GLE has implemented proper corrective actions.¹²⁰⁴ Inspectors may also conduct reactive inspections, which are unscheduled and based on self-revealing events.¹²⁰⁵

V. DISCUSSION

A. Topic 1: Criticality Safety and Chemical/Radiological Hazard Evaluation

The Board considered two areas — criticality safety and chemical/radiological hazard evaluation — to be central to public and worker safety. Because the laser-based separations process in the cascade area is a first-of-its-kind design, and therefore lacks an extensive full-scale operational history, the Board felt it was especially important to probe the adequacy and thoroughness of the safety evaluation for this part of the facility.¹²⁰⁶

After integrating the information from our review of the license application, the ISA and ISA Summary, the answers to our written questions, and the prefiled testimony and oral testimony received at the evidentiary hearing, including testimony that is summarized in the classified appendix to this decision, the Board concluded

¹¹⁹⁸ *Id.*

¹¹⁹⁹ *Id.* at 24.

¹²⁰⁰ Tr. at 244 (7/12/12 Hearing). The slides associated with Mr. Diaz's presentation to the Board on Topic 6 can be viewed in Ex. NRC116.

¹²⁰¹ Tr. at 244-45 (7/12/12 Hearing).

¹²⁰² Tr. at 245.

¹²⁰³ *Id.*

¹²⁰⁴ Tr. at 246.

¹²⁰⁵ *Id.*

¹²⁰⁶ *See* Prefiled Testimony Order at 2-3.

that the Applicant's criticality safety evaluation and chemical/radiological hazard evaluation and the NRC Staff's review of these evaluations are adequate to meet regulatory requirements.

The detailed discussion of the Board's assessment of Topic 1 can be viewed in the classified appendix.

B. Topic 2: Licensing an Evolving Design

The NRC Staff has stated that its safety evaluation in the SER was based on the facility baseline design presented in GLE's License Application.¹²⁰⁷ Based on available documentation, and following a site visit that included a classified briefing on the design, it appeared to the Board that the design was still evolving in significant ways, especially in the Cascade/Gas Handling area. Thus, the Board was concerned whether the baseline design was adequate for a meaningful safety evaluation, and whether future design changes that could impact safety would receive the level of scrutiny appropriate to a first-of-its-kind facility. For these reasons, and recognizing that the necessary level of design detail presents a mixed question of law and fact,¹²⁰⁸ the Board identified this topic for further consideration at the evidentiary hearing.¹²⁰⁹

The issue of an evolving facility design is closely linked to the Board's sufficiency review of the criticality and chemical/radiological hazards review discussed above. In the SER, the Staff stated that its review of the Applicant's ISA Summary, which is central to the hazards evaluation, "was based on the current facility design."¹²¹⁰ Furthermore, the Staff concluded in the SER that the process descriptions were sufficient to support the development of an adequate ISA.¹²¹¹ Based on a review of the available classified documents and a GLE site visit briefing, it appeared to the Board that important aspects of the laser separations cascade design were still evolving. This caused the Board to ask the Staff about its rationale for concluding that the baseline design was adequate, including the regulatory basis for the Staff's decision.¹²¹²

The Board first engaged the Staff on this issue through an initial written question, which asked:

Are there areas in the proposed facility design, such as the separations cascade, where the design is still evolving? If so, how can the NRC Staff assert that the

¹²⁰⁷ Tr. at 163, 165, 198 (7/11/12 Hearing).

¹²⁰⁸ See *supra* Section II.B.

¹²⁰⁹ Prefiled Testimony Order at 3-4.

¹²¹⁰ Ex. NRC002, at 5-37.

¹²¹¹ *Id.* at xxi.

¹²¹² Prefiled Testimony Order at 3.

design can and will meet regulatory requirements while important processes steps are still changing? Has a baseline cascade design been established that is subject to the formal change control process?¹²¹³

Part of the Staff's response was as follows:

The Applicant's baseline design is the current facility design defined in the ISA. The Applicant has not completed the final design of the facility and there are areas of the facility where the design is evolving. The NRC staff's approach was to review [the] baseline design as described in the ISA Summary and the codes and standards to be applied to the design. By reviewing the Applicant's proposed codes and standards, the NRC review ensures that the Applicant will apply basic engineering principles in developing its final designs needed to ensure containment of hazardous components and nuclear criticality safety. In addition, changes to this baseline design would be governed by the change process in 10 CFR 70.72.¹²¹⁴

After considering this response, the Board still had questions concerning: (1) the regulatory basis for the determination that the baseline design was adequately complete; (2) whether all important process elements in the cascade region were included in the baseline design; and (3) how will be it ensured that the safety impacts of future design changes will be accounted for. To further probe these issues, the Board identified this topic for the evidentiary hearing.¹²¹⁵

Both the NRC Staff and the Applicant provided prefiled testimony on this topic.¹²¹⁶ The Staff witnesses' testimony included a discussion of the current NRC policy regarding the level of design detail that is required to issue a fuel cycle facility license, and some background on how that policy came to be defined.¹²¹⁷

The crux of the Staff's approach to what level of design detail is required was summarized by Mr. Johnson:

The level of detail required for a licensing decision, therefore, does not require a final detailed facility design or an absolutely complete identification of all supporting items relied on for safety. . . . Instead, sufficient information has to be provided to understand the process and functions of items relied on for safety and to provide reasonable assurance that the integrated safety analysis summary is complete.¹²¹⁸

Similarly, on behalf of GLE, Ms. Olivier stated:

¹²¹³ Board Initial Questions Order, Attach. A at 3.

¹²¹⁴ Staff Initial Question Responses — Public Attach. A at 31.

¹²¹⁵ Prefiled Testimony Order at 3-4.

¹²¹⁶ See Exs. NRC120 & GLE019.

¹²¹⁷ See *supra* Section II.B & Exs. NRC021, NRC022, NRC023, NRC024.

¹²¹⁸ Ex. NRC120, at 9.

[I]t is unusual at best for a license applicant to have a complete design at the time it submits its license application, and that design evolution after license submittal (and even after license approval) is the rule not the exception in NRC practice. To that end, the NRC's NUREG 1520 states that "[t]he level of detail required for a licensing decision generally does not require final facility design; however, identification of all IROFS and possible accident sequences is necessary to make a licensing decision."¹²¹⁹

The Staff also provided testimony to the effect that it had used the same approach as had been used in the recent license proceedings for the Louisiana Energy Services National Enrichment Facility, the USEC American Centrifuge Plant, and the AREVA Eagle Rock Enrichment Facility. Specifically, Mr. Johnson stated, "[T]he staff's approach to addressing the level of detail in the facility design for the proposed GLE facility was the same as the approach used for the other recently licensed gas centrifuge facilities."¹²²⁰ He further testified: "There are no significant differences between the proposed GLE facility and the other gas centrifuge projects that would warrant a different level of design detail for the proposed GLE facility because the facility hazards at the GLE facility and the gas centrifuge plants are similar."¹²²¹ Mr. Smith pointed out that both LES and USEC had made significant changes in the design of their plants after their licenses had been granted.¹²²²

Another area addressed in both the Staff and the Applicant witnesses' prefiled testimony related to the NRC process for assuring that changes made after a license is issued will be adequately examined in terms of safety impacts. Mr. Johnson testified as follows:

In addition to the construction inspections required by 10 CFR 40.41(g) and 70.32(k), NRC will also perform an Operational Readiness Review (ORR) to ensure that other safety programs, such as the radiation protection program, nuclear criticality safety program, chemical and fire safety programs, and emergency preparedness programs, are in-place prior to operations and consistent with the applicant's commitments in the license.¹²²³

The oral testimony of Ms. Seymour and Mr. Diaz addressed the rigor and completeness of the construction and operations inspections and the Operational Readiness Review process that would be managed by the NRC Region II staff.¹²²⁴

¹²¹⁹ Ex. GLE019, at 3-4.

¹²²⁰ Ex. NRC120, at 13.

¹²²¹ *Id.*

¹²²² *Id.* at 19.

¹²²³ Ex. NRC120, at 17.

¹²²⁴ Tr. at 69-75 (7/12/12 Hearing).

In addition, Mr. Johnson confirmed that the Staff would review the annual update of the ISA Summary required to be submitted under 10 C.F.R. § 70.72.¹²²⁵

In her oral and written testimony, Ms. Olivier represented to the Board that any changes to the current baseline design will be evaluated through the Configuration Management and Change Request programs.¹²²⁶ In her written testimony, Ms. Olivier stated:

Any changes to the design will be thoroughly evaluated, implemented, and tracked based on GLE's Configuration Management Program and applicable change management processes. Changes within the existing safety basis will not affect the safety of the [facility]. . . . Other changes will require prior NRC approval before the change can be made.¹²²⁷

After reviewing and integrating the extensive record on this topic, up to and including the oral testimony at the hearing, the Board concluded:

1. While NRC regulations do not require a detailed facility design as the basis for a license, the design must be complete enough to allow for an adequate ISA to be developed, which includes all important accident sequences and associated IROFS.
2. The baseline design used in the GLE License Application and ISA Summary generally meets this adequacy criterion, which is detailed in NUREG-1520. This conclusion is supported by the criticality safety and chemical/radiological hazard evaluations presented in the classified appendix.
3. There is a formal and rigorous process in place to ensure that future design changes will remain in compliance with regulatory requirements and thoroughly evaluated by GLE and the Staff.

C. Topic 3: Safety Impact of External Hazards

An important objective of the safety evaluation of any nuclear facility is to ensure that external hazards will not compromise safety. The events in March 2011 at the Fukushima Dai-ichi facility in Japan underscored the importance of not underestimating the level and likelihood of external hazards that a facility must be designed to withstand. Therefore, the Board requested testimony on this topic to ensure that the external hazards evaluation for the GLE facility was adequately conservative.

The Board was satisfied that many of the issues related to the external hazards evaluation were resolved in the earlier stages of the hearing process. For example,

¹²²⁵ Ex. NRC120, at 17.

¹²²⁶ Ex. GLE019, at 4-5.

¹²²⁷ *Id.* at 6.

many of the human-induced hazards discussed in the SER required no further inquiry.¹²²⁸ Other external hazards concerns were answered in response to our Initial Questions, including concerns about aircraft crashes given the facility's close proximity to the local airport.¹²²⁹ However, the Board remained concerned whether the Staff's evaluation of certain external hazards was adequately conservative in light of the risks of certain naturally occurring external events. We therefore asked for testimony concerning "the external hazards evaluation related to flooding (including hurricanes and tsunamis), high winds and tornados, and earthquakes" and the "rationale behind the NRC Staff's conclusion that the evaluation of these hazards was adequately conservative."¹²³⁰

The flooding hazard at the proposed GLE site was evaluated on the basis of rainfall in the Northeast Cape Fear River and the Cape Fear River watersheds, locally heavy rainfall, and a potential hurricane surge.¹²³¹ GLE calculated the flooding levels using the probable maximum flood in the river watersheds, the probable maximum precipitation at the site, and the probable maximum hurricane surge.¹²³² The bounding flood event was the flooding of both rivers to a probable maximum flood of 28 feet above mean sea level.¹²³³ A dam failure on the Cape Fear River, maximum rainfall at the Wilmington site, or the probable maximum hurricane surge each produce flooding of less than 28 feet above mean sea level.¹²³⁴

The Wilmington site is located 10 miles inland from the Atlantic Ocean at 25 feet above mean sea level.¹²³⁵ Theoretically, therefore, the maximum probable flood could be 3 feet above the facility floor.¹²³⁶ However, the topography of the landscape around the proposed site — with the site at a relative high point surrounded by flat areas with gentle sloping surfaces at gradients less than 2% with little relief — provides considerable protection from potential flood hazards.¹²³⁷ Operational safety is enhanced by GLE's plan to evacuate and shut down operations prior to any flood threat and by their commitment to using certain codes and standards that further mitigate the flooding hazard.¹²³⁸ Because

¹²²⁸ Ex. NRC001, at 3-14 to 3-15 (discussing the human-induced hazards of nearby highways, railroads, and industrial facilities).

¹²²⁹ Staff Initial Question Responses — Nonpublic Attach. A at 1-4.

¹²³⁰ Prefiled Testimony Order at 4.

¹²³¹ Ex. NRC121, at 6-7.

¹²³² *Id.* at 7.

¹²³³ *Id.* at 7-8.

¹²³⁴ *Id.* at 8, 10.

¹²³⁵ *Id.* at 7.

¹²³⁶ *Id.* at 7-8.

¹²³⁷ Tr. at 217 (7/11/12 Hearing).

¹²³⁸ Ex. NRC121, at 10-11.

the bounding flood event was calculated in accordance with NRC guidance stating that the probable maximum flood is considered “highly unlikely” for the purposes of 10 C.F.R. Part 70 facilities, and because the area topography and GLE’s emergency planning enhance the safety of the facility in a flood event, the Board was satisfied that the treatment of the flood threat was adequately conservative.

The Staff found that the probability that a large tsunami would reach the facility site is “highly unlikely” because the Atlantic seaboard is not conducive to large earthquake-generated tsunamis, and there are no historical records of tsunamis along the North Carolina coast.¹²³⁹ Submarine landslides from sediment off of the continental shelf could cause severe localized damage, but in his testimony Dr. Stamatakos emphasized that the likelihood of a landslide-generated tsunami affecting the Wilmington site is “so small that [it] would fall well below the highly unlikely.”¹²⁴⁰ Concerning subduction-related tsunamis, Dr. Stamatakos explained that newer studies indicate that changes in water depth greatly affect the analysis, and these studies indicate a “greater dispersion of the waves and effects . . . mitigated substantially by the time the tsunami could reach the Atlantic seaboard.”¹²⁴¹ The Atlantic coast of North Carolina is not a subduction zone in itself and nearby subduction zones are too distant to significantly impact the North Carolina coast.¹²⁴² Tsunamis of any type in the vicinity of the Wilmington site, Dr. Stamatakos testified, are “highly unlikely” occurrences considering the lack of a historical record of such events.¹²⁴³ The Board agrees. Although there is some evidence that a tsunami could occur on the Atlantic seaboard, the likelihood that any such tsunami would occur and then reach 10 miles inland to the Wilmington site is “highly unlikely.”

GLE’s earthquake hazard analysis consisted of three parts: (1) the historical seismic record; (2) the USGS probabilistic seismic hazard assessment; and (3) the response of earthquake energy to site soil conditions.¹²⁴⁴ Because the historical record was inadequate, GLE analyzed seismic risks under the more conservative USGS ground motion model.¹²⁴⁵ The USGS 2500-year ground motions predicted by the model exceeded those that resulted from any known historical earthquake and amounted to a failure probability of 10^{-4} , which is an acceptable “highly unlikely” objective.¹²⁴⁶ The result was that the seismic design basis was enhanced from something roughly equivalent to the 1000-year return-period earthquake, if

¹²³⁹ *Id.* at 10.

¹²⁴⁰ Tr. at 237 (7/11/12 Hearing).

¹²⁴¹ Tr. at 240-41.

¹²⁴² Ex. NRC121, at 10.

¹²⁴³ Tr. at 241 (7/11/12 Hearing).

¹²⁴⁴ Ex. GLE010, at 2-18 to 2-22.

¹²⁴⁵ Tr. at 224-26 (7/11/12 Hearing).

¹²⁴⁶ Ex. NRC121, at 14.

only historical earthquakes were used, to the 10,000-year return-period earthquake predicted by the USGS 2500-year ground-motion model.¹²⁴⁷ While there is not a good understanding of local earthquake sources and history,¹²⁴⁸ Dr. Stamatakos explained that “the USGS model incorporates lower term period, high magnitude events, up to magnitude 7.5 . . . , and they randomly float that earthquake in their probabilistic analysis. . . . It’s probably one of the reasons why the USGS curve is significantly higher than the hazard you get by simply looking at historical events.”¹²⁴⁹

GLE also performed a site soil condition analysis and determined that the site was Class C on the USGS soil classification system.¹²⁵⁰ To account for softer soil conditions, GLE applied the site amplification coefficients from the International Building Code to account for any soil impacts to potential ground motions.¹²⁵¹ In addition, design methods outlined in DOE-STD-1020 and ASCE 43-05 provide sufficient margins to ensure that IROFS will maintain their safety functions for the 10,000-year return period ground motions predicted by the USGS model.¹²⁵² Dr. Stamatakos emphasized that even if a highly unlikely failure event occurred, an earthquake that exceeds the design basis may cause minor damage, like cracking or tilting, rather than building collapse or damage to the IROFS inside the building.¹²⁵³

With a failure probability of 10^{-4} and a design basis that exceeds the known magnitude of historical earthquakes through the use of a model that incorporates lower-term-period, higher-magnitude events, the Board found the proposed facility to be adequately designed to protect against seismic threats. The additional structural assurances and adjustment for softer soil conditions indicate that GLE not only took a more conservative approach than required, but exercised additional caution and conservatism in analyzing the seismic threat.

The “highly unlikely” wind hazard was analyzed by GLE to be 157.5 mph, equaling the winds of a Category 4 hurricane.¹²⁵⁴ Historical data in the area indicate that the highest wind gust ever recorded in the region was approximately 107 mph, and hurricane winds locally have never equaled or exceeded those of a Category 3 hurricane.¹²⁵⁵ Only fifteen tornados were recorded between 1950 and

¹²⁴⁷ *Id.* at 15-16.

¹²⁴⁸ Tr. at 231 (7/11/12 Hearing).

¹²⁴⁹ Tr. at 231-32.

¹²⁵⁰ Ex. NRC121, at 15.

¹²⁵¹ *Id.*

¹²⁵² *Id.* at 14.

¹²⁵³ *Id.* at 16.

¹²⁵⁴ Tr. at 222 (7/11/12 Hearing).

¹²⁵⁵ *Id.*

2004 in New Hanover County, all at the F1 or F0 level.¹²⁵⁶ The strongest tornado in the area was an F2 in a neighboring county, and no F4 or F5 tornadoes have ever been recorded in North Carolina.¹²⁵⁷ The “highly unlikely” tornado hazard (with an annual probability of 10^{-5}) would have a wind speed of 112 mph — less than the wind speed of the Category 4 hurricane.¹²⁵⁸ By having a design basis for wind of 157.5 mph, the design sufficiently protects against wind hazards and is adequately conservative to protect against wind gusts, hurricane winds, and tornadoes.

In summary, the Board concluded that the NRC Staff adequately reviewed GLE’s proposals related to external hazards and that the design basis of the proposed facility will adequately protect against floods, seismic events, and wind hazards.

D. Topic 4: Tracking and Implementation of Applicant’s Commitments

The FEIS and SER contain many license conditions, mitigation measures, and other commitments. The process for implementation and tracking of these commitments was not always clear. For this reason, the Board identified this topic for further consideration at the evidentiary hearing. Specifically, the Board wanted to review the categories of commitments, both mandatory and voluntary, that play a significant role in meeting safety and environmental requirements, and also review how the commitments in each category will be tracked and their appropriate implementation ensured. The Board also wanted to better understand the NRC Staff’s role and responsibilities in this process.

The Board was first drawn to this topic by Tables 5-1 and 5-2 in the FEIS.¹²⁵⁹ The two tables list hundreds of proposed mitigation measures that, if implemented, would reduce environmental impacts during construction, operation, and decommissioning. However, it was unclear to the Board how many of these proposed measures would necessarily be implemented or the extent to which the measures were required.¹²⁶⁰ In the Board’s Initial Questions Order, we inquired as

¹²⁵⁶ Ex. NRC121, at 12.

¹²⁵⁷ *Id.*

¹²⁵⁸ *Id.*

¹²⁵⁹ Table 5-1 is entitled “Summary of Mitigation Measures Proposed by GLE” and can be viewed in Ex. NRC003A, at 5-2 to 5-13. Table 5-2 is entitled “Summary of Potential Mitigation Measures Identified by NRC” and can be viewed in Ex. NRC003A, at 5-14 to 5-18.

¹²⁶⁰ The FEIS does not clearly set forth the tables’ applicability, stating that GLE “must comply with applicable laws and regulations, including obtaining all appropriate construction and operating permits.” Table 5.1 summarizes the “mitigation measures proposed by GLE, many of which are
(Continued)

to which mitigation measures would be implemented and asked how mitigation measures affected the NRC Staff's overall assessment that environmental impacts are small in most resource areas.¹²⁶¹ Although the parties' answers provided some clarification,¹²⁶² the Board wanted to examine further how GLE obligations are determined, implemented, tracked, and inspected.

GLE has various types of obligations to the NRC and to other regulatory entities, which carry different requirements regarding implementation, tracking, and inspection. License conditions and mandatory mitigation measures are required by the terms of the license and regulated by the NRC, unless the mandatory measure is covered by a permit issued by another federal, state, or local agency.¹²⁶³ Unlike these mandatory measures, commitments are statements in a licensing document, such as the ER, in which the applicant has promised to take certain actions.¹²⁶⁴ These commitments are not legally binding, unless the commitment is tied down.¹²⁶⁵ Because the NRC does not have legal authority over these voluntary commitments, the Staff does not ensure that voluntary commitments are implemented and tracked.¹²⁶⁶ Therefore, to the extent Tables 5-1 and 5-2 contained voluntary commitments, as opposed to mandatory ones, those measures are voluntary.

The Staff determined that if GLE only implements mandatory mitigation measures, those measures alone would be adequately protective of public health and safety and the environment.¹²⁶⁷ Ms. Davis testified that if GLE were to implement only mandatory measures, "the impacts in some resource areas could be incrementally higher than estimated in the FEIS, but the staff's overall impact conclusions would not change."¹²⁶⁸ In addition, the Staff does not give weight to the voluntary commitments when performing the cost-benefit analysis because voluntary measures go "above and beyond and [are] hard to track."¹²⁶⁹ Thus in

compliance related." Further, "[t]he NRC identified additional mitigation measures as recommendations (Table 5-2). While the NRC cannot impose mitigation outside its regulatory authority under the Atomic Energy Act, these additional mitigation measures in Table 5-2 could potentially reduce the impacts of the proposed action." *Id.* at 5-1.

¹²⁶¹ Board Initial Questions Order, Attach. B at 4.

¹²⁶² Staff Initial Question Responses — Public Attach. B at 59-62; GLE Initial Question Responses — Public at 56-58.

¹²⁶³ Ex. NRC122, at 15-16.

¹²⁶⁴ *Id.* at 3.

¹²⁶⁵ *Id.*

¹²⁶⁶ *Id.* at 17.

¹²⁶⁷ Tr. at 39 (7/12/12 Hearing).

¹²⁶⁸ Tr. at 40-41.

¹²⁶⁹ Tr. at 85-87.

the Staff's view, the mandatory measures alone are sufficiently protective to meet regulatory requirements.¹²⁷⁰

Although voluntary commitments are not required or tracked by the NRC Staff, GLE seeks to achieve and maintain standards regarding the protection of its workers, the public, and the environment, including those that go above and beyond regulatory requirements.¹²⁷¹ Ms. Olivier asserted that GLE is committed to implementing voluntary commitments and the NRC-recommended mitigation measures unless there is a clear reason GLE is unable to do so.¹²⁷² GLE will determine the feasibility of implementing voluntary commitments based on several factors: (1) practicability (including resource availability); (2) the potential for conflict between mitigation measures; (3) overall feasibility with respect to project schedule; and (4) cost-benefit analysis.¹²⁷³ GLE uses the same implementation and tracking system for voluntary measures as for mandatory ones, illustrating the seriousness with which GLE approaches all of its commitments. If a voluntary commitment is not implemented, GLE will note that in its tracking system, with a justification for why the action will not be performed.¹²⁷⁴

GLE's handling of one mandatory license condition raised a concern that GLE might be placing liability insurance on the proposed facility at a relatively low amount.¹²⁷⁵ Section 140.13b of our regulations requires a uranium enrichment facility to carry liability insurance in an amount that the NRC considers "appropriate."¹²⁷⁶

The existing fuel fabrication plant on the Wilmington site, GNF-A, currently is covered in the amount of \$200,000,000 by American Nuclear Insurers, and GLE proposes to cover the new uranium enrichment facility under the same \$200,000,000 policy.¹²⁷⁷ According to the SER, American Nuclear Insurers indicated that \$200,000,000 "is the maximum limit of liability it will provide for the [Wilmington] site because the fuel manufacturing operations create a legacy exposure that restricts how much insurance capacity ANI [American Nuclear Insurers] is willing to provide."¹²⁷⁸ On this basis, the NRC Staff found that "the

¹²⁷⁰ Tr. at 88-89.

¹²⁷¹ Ex. GLE021-R, at 6.

¹²⁷² Tr. at 21 (7/12/12 Hearing).

¹²⁷³ Ex. GLE021-R, at 13.

¹²⁷⁴ *Id.*

¹²⁷⁵ Ex. NRC001, at 1-8 to 1-9.

¹²⁷⁶ Compare 10 C.F.R. § 140.13a (requiring plutonium processing and fuel fabrication plants to carry liability insurance "in the amount of \$200,000,000"), with *id.* § 140.13b (requiring uranium enrichment facilities to have an "appropriate" amount of liability insurance).

¹²⁷⁷ Ex. NRC001, at 1-8.

¹²⁷⁸ *Id.* at 1-8 to 1-9.

\$200 million amount of liability insurance is acceptable because it is the maximum amount available from private sources.”¹²⁷⁹

The Board’s concern is twofold. First, if a \$200,000,000 policy is the required amount of liability coverage for GNF-A alone, it would appear that amount might be less satisfactory to cover potential liabilities arising from the operation of two separate facilities on the Wilmington site. Second, the testimony of Mr. Johnson suggested that the NRC Staff had not inquired whether additional liability coverage might be available from any primary or excess insurer other than American Nuclear Insurers.¹²⁸⁰

Because we do not reconsider the Staff’s findings *de novo*, and because our regulations do not require a specific amount of liability insurance for uranium enrichment facilities, the Board will not impose a formal license condition in this regard. We nonetheless encourage GLE voluntarily to explore the availability of additional liability insurance at reasonable rates, if in fact it has not already done so.

GLE has developed a comprehensive implementation and tracking system for all of its commitments — mandatory and voluntary — to ensure the facility is constructed and operated as required. GLE is developing compliance checklists for its requirements and commitments, which will identify an action owner and responsible manager and be tracked through an electronic calendar with due dates.¹²⁸¹ All compliance checklists will be transferred to a database that tracks the implementation of commitments.¹²⁸² GLE also has a Corrective Action Program, which seeks to ensure that commitments are properly implemented and noncompliances are detected, reported, and resolved.¹²⁸³ Issues that have been identified through other GLE programs will be captured and resolved through the Corrective Action Program.¹²⁸⁴ Once a noncompliance is identified, it is assessed for whether it must be reported to a regulatory agency, and a corrective action request is generated.¹²⁸⁵ The Corrective Action Program tracks issues to completion, including investigation and reporting with periodic assessments and audits.¹²⁸⁶

Although these GLE systems are intended to ensure that the facility is constructed and operated as required, the NRC Staff also has an inspection and oversight role. Once the Applicant is granted a license, the NRC’s Division of

¹²⁷⁹ *Id.* at 1-9.

¹²⁸⁰ Tr. at 92 (7/12/12 Hearing).

¹²⁸¹ Ex. GLE021-R, at 8-10.

¹²⁸² *Id.* at 12.

¹²⁸³ *Id.* at 13.

¹²⁸⁴ *Id.* at 14.

¹²⁸⁵ *Id.* at 16-17.

¹²⁸⁶ Tr. at 16 (7/12/12 Hearing).

Construction Projects in Region II will oversee the implementation of construction inspections and the Operational Readiness Review.¹²⁸⁷ The inspection program will be outlined in an inspection manual chapter that describes fuel facility construction and preoperational readiness review inspection programs and will be used to confirm that GLE has constructed the facility in accordance with applicable requirements.¹²⁸⁸ The Operational Readiness Review will be conducted prior to the start of operations to verify safety programs and operational readiness.¹²⁸⁹ These inspections will be led by a Region II team with assistance from NRC headquarters, regional inspectors, and other Division of Construction Projects inspectors.¹²⁹⁰ NRC inspectors go through extensive training and a rigorous qualification process, and the Region II inspection team ensures that an appropriate technical specialist is used for each area under review.¹²⁹¹ Once operations are authorized, the Staff continues to conduct routine inspections throughout the year.¹²⁹² As part of these routine inspections, Staff inspectors look at changes made to the facility that have been made without license amendments and perform a sampling of those to check GLE's determinations that no license amendment was required.¹²⁹³

The internal and external procedures for implementing commitments and identifying and correcting noncompliances provide adequate assurances that the proposed GLE facility will be constructed and operated as required by the license and regulations.

E. Topic 5: Need/Alternatives/Environmental Cost-Benefit Analysis

The Board is required to make an independent judgment regarding the balance between the benefits of the proposed facility and its environmental impact. Understanding the projected demand for enriched uranium, as well as the alternatives for how this demand could be met, are critical in determining the potential benefit the facility would provide. Given that both the supply and demand for uranium enrichment services are currently volatile, the Board identified this area as a topic for further consideration at the evidentiary hearing. This allowed up-to-date information to be brought to bear on the trade-offs that must be considered.

The Staff's analysis of the need for enriched uranium to fulfill electricity generation requirements in the United States is presented in section 1.3.1 of the

¹²⁸⁷ Ex. NRC122, at 2.

¹²⁸⁸ *Id.* at 25-26.

¹²⁸⁹ *Id.* at 26.

¹²⁹⁰ Tr. at 55 (7/12/12 Hearing).

¹²⁹¹ *Id.* at 66, 74-75.

¹²⁹² Ex. NRC122 at 27.

¹²⁹³ Tr. at 69 (7/12/12 Hearing).

FEIS.¹²⁹⁴ The Staff projected the need based on Energy Information Administration reports from 2003 and 2010, in conjunction with consideration of the pending and potential applications for combined licenses.¹²⁹⁵ The Energy Information Administration predicts a “continuing, if not increasing demand for enriched uranium.”¹²⁹⁶ At the time of the FEIS, the annual demand for enrichment services in the U.S. was about 14 million SWU.¹²⁹⁷ This was projected to increase to 15 to 16 million SWU by 2025.¹²⁹⁸ The Staff also considered the need for domestic sources of enrichment services that would be important to national energy security.¹²⁹⁹

The Board noted that the FEIS needs projections did not consider factors such as the economic downturn or the Fukushima accident, both of which had the potential to alter demand. The Board was also initially concerned that some of the Energy Information Administration reports used in the projections were rather old.¹³⁰⁰ To address concerns in this area, the Board asked the Staff several written questions. While the Staff’s answers sometimes involved factors and projections that were necessarily uncertain, some issues were resolved, and considerable light was shed on others.

An example of a written question where the answer resolved an issue was as follows:

As support for the need for a domestic supply of LEU, the FEIS offers evidence from 2002 and 2010 that a domestic supply of LEU is an issue of national energy security. Is there more recent support for the proposition that a domestic supply of LEU is a priority as a matter of public policy?¹³⁰¹

In response, the Staff provided two recent statements from congressional testimony by the Secretary of Energy, Stephen Chu, as well as an extensive statement by Thomas D’Agostino, Under Secretary for Nuclear Security and Administrator of the National Nuclear Security Administration.¹³⁰² All three statements support the importance, and in some cases the necessity, of the capability to enrich

¹²⁹⁴ Ex. NRC003A, at 1-6 to 1-8.

¹²⁹⁵ *Id.* at 1-6 to 1-7.

¹²⁹⁶ *Id.* at 1-6.

¹²⁹⁷ *Id.* at 1-7.

¹²⁹⁸ *Id.*

¹²⁹⁹ *Id.* at 1-8 to 1-9.

¹³⁰⁰ *Id.* at 1-6 to 1-7 (citing reports from 2003 and 2010).

¹³⁰¹ Board Initial Questions Order, Attach. B at 1.

¹³⁰² Staff Initial Question Responses — Public Attach. B at 17-18.

uranium in the United States.¹³⁰³ These statements were all made in the 3 months of 2012.¹³⁰⁴

An example of a question where the answer was helpful, but was unable to close the issue definitively, was the following:

Why are the forecasts for annual demand for enrichment services based on 2003 projections? Given the economic turmoil of the past few years, does the NRC believe these forecasts are accurate? Does the NRC staff expect domestic and international demand for low enriched uranium (LEU) to be affected by the Fukushima Dai-ichi accident and the international economic downturn?¹³⁰⁵

In its response, the Staff provided some updated information that the Board found to be helpful, particularly in considering the potential impact of the Fukushima accident.¹³⁰⁶ It expressed the view that nuclear power would continue to grow globally, although potentially at a slower rate than anticipated before the Fukushima Dai-ichi accident.¹³⁰⁷ The Staff ultimately concluded “the forecasted nuclear generation, nuclear capacity, and demand for enriched uranium (discussed in this response and in the FEIS) [was] reasonable and still applicable in the FEIS’s analysis of need.”¹³⁰⁸

The Staff’s analysis of the potential supply of enrichment services was presented in section 1.3.1 of the FEIS.¹³⁰⁹ The FEIS points out that American demand is currently being met by three sources. Domestic production supplies 16% of the demand, the Megatons-to-Megawatts program with Russia supplies 37%, and other foreign sources supply 47%. Thus, the United States currently imports about 84% of its low-enriched uranium.¹³¹⁰

At the time the FEIS was issued, the largest supplier of low-enriched uranium in the United States was the USEC’s gaseous diffusion plant at Paducah, Kentucky.¹³¹¹ This plant was scheduled to be shut down in 2012, however, because it is an aging facility with higher costs.¹³¹² The National Enrichment Facility, a gas centrifuge facility in Lea County, New Mexico, operated by Louisiana Energy

¹³⁰³ *Id.*

¹³⁰⁴ *Id.* at 17.

¹³⁰⁵ Board Initial Questions Order, Attach. B at 1.

¹³⁰⁶ Staff Initial Question Responses — Public Attach. B at 7-10.

¹³⁰⁷ *Id.* at 9-10.

¹³⁰⁸ *Id.* at 10.

¹³⁰⁹ Ex. NRC003A, at 1-6 to 1-8.

¹³¹⁰ *Id.* at 1-6 to 1-7.

¹³¹¹ *Id.* at 1-6.

¹³¹² *Id.* at 1-7 (stating “[i]n 2007, DOE projected that gaseous diffusion enrichment operations in the United States would cease in 2012 due to the higher cost of aging facilities”).

Services, began operation in June 2010.¹³¹³ It is expected to reach its licensed capacity of 3 million SWU per year in 2012.¹³¹⁴ An expansion to 5.9 million SWU per year is being considered by Louisiana Energy Services, but an application for the expansion has not been submitted to the NRC.¹³¹⁵ The NRC had issued a license to the USEC for a new gas centrifuge facility, the American Centrifuge Plant, to be built in Piketon, Ohio, with the potential to produce 3.8 million SWU per year.¹³¹⁶ A license was also issued to AREVA Enrichment Services, LLC to construct the Eagle Rock Enrichment Facility in Bonneville County, Idaho, with the potential to produce 6.6 million SWU per year.¹³¹⁷

With respect to foreign sources of supply, the FEIS pointed out that the Megatons-to-Megawatts program was set to end in 2013.¹³¹⁸ The FEIS also discussed, however, that the USEC had signed an agreement with a Russian corporation for low-enriched uranium to be supplied to USEC from Russian commercial enrichment activities.¹³¹⁹ Under the terms of the TENEX agreement, the supply of LEU would begin in 2013, with the expectation that by 2015, the level of supply would be approximately one-half the current level supplied under the Megatons-to-Megawatts program.¹³²⁰ Deliveries under the agreement were expected to continue through 2022 and potentially could reach the level of low-enriched uranium supplied through the Megatons-to-Megawatts program.¹³²¹

The 47% of LEU supplied by other countries included imports from China, France, Germany, the Netherlands, and the United Kingdom.¹³²²

The FEIS concluded that if all three of the domestic gas centrifuge plants discussed above, along with the GLE facility, were built and operated at projected capacity, and the Paducah Plant was shut down as planned, the domestic enrichment capacity would be 22.3 million SWU.¹³²³ This would exceed the projected domestic demand by about 6 million SWU.¹³²⁴ The Staff concluded, however, that given the uncertainties in future development and/or potential expansion of the proposed projects, this projected level of extra capacity would provide needed

¹³¹³ *Id.*

¹³¹⁴ *Id.*

¹³¹⁵ *Id.*

¹³¹⁶ *Id.* at 1-8.

¹³¹⁷ *Id.*

¹³¹⁸ *Id.* at 1-7.

¹³¹⁹ *Id.*

¹³²⁰ *Id.*

¹³²¹ *Id.*

¹³²² *Id.*

¹³²³ *Id.* at 1-8.

¹³²⁴ *Id.*

assurance that enriched uranium would be reliably available when needed for domestic nuclear power production.¹³²⁵

The Board posed several written questions to the Staff seeking expanded and up-to-date information on both the foreign and domestic low-enriched uranium supplies discussed in the FEIS. For example, the Board sought additional background on the USEC agreement with TENEX.¹³²⁶ The Staff's response indicated that a number of complications and agreements could impact how much low-enriched uranium would ultimately be available from this source.¹³²⁷

The Board also asked the Staff for additional information on the status of the National Enrichment Facility, the American Centrifuge Plant, and the Eagle Rock Enrichment Facility.¹³²⁸ The Staff indicated the USEC would require significant additional funding before it could complete the American Centrifuge Plant, and as a result concluded that the construction and operation of the American Centrifuge Plant "is uncertain at this time."¹³²⁹ The Staff pointed out that AREVA Enrichment Services had announced on December 13, 2011, that construction of the Eagle Rock Enrichment Facility is on hold due to financing issues.¹³³⁰ Finally, the Staff stated that Louisiana Energy Services had not announced when they would request a license amendment from the NRC authorizing an expansion of the National Enrichment Facility's enriching capacity from 3 to 5.9 million SWU per year.¹³³¹

The Alternatives analysis for the GLE facility is presented in section 2 of the FEIS.¹³³² The Staff concluded that the GLE site selection process had a rational, objective structure and was reasonable.¹³³³ The Staff also concluded that there were no alternative sites that were superior to the proposed site in Wilmington, North Carolina.¹³³⁴ Additionally, it concluded that the particular location chosen on the Wilmington site offered a lower environmental impact than other potential site locations on the Wilmington site.¹³³⁵ After probing a few of the details related to the site selection process through the written question and answer process,¹³³⁶

¹³²⁵ *Id.*

¹³²⁶ Board Initial Questions Order, Attach. B at 1.

¹³²⁷ Staff Initial Question Responses — Public Attach. B at 15-16.

¹³²⁸ Board Initial Questions Order, Attach. B at 1.

¹³²⁹ Staff Initial Question Responses — Public Attach. B at 12-13.

¹³³⁰ *Id.* at 13.

¹³³¹ *Id.* at 11-12.

¹³³² See Ex. NRC003A, at 2-1 to 2-69.

¹³³³ *Id.* at 2-42.

¹³³⁴ *Id.*

¹³³⁵ *Id.* at 2-49.

¹³³⁶ See, e.g., Initial Board Questions Order, Attach. B at 2.

the Board agreed with the Staff conclusions that GLE's process complied with regulatory requirements.¹³³⁷

Alternative enrichment technologies were examined in section 2.3.2 of the FEIS.¹³³⁸ A detailed comparison between the proposed laser-based technology and centrifuge-based technology was presented.¹³³⁹ The comparison indicated that, although the impacts would be similar in many comparison areas, the smaller footprint associated with the laser-based technology appeared to offer some environmental advantages. To probe this, the Board posed the following written question to the Staff:

The NRC Staff comments on the laser-based separations technology by stating "GE-Hitachi expects it to offer certain advantages over both the gaseous diffusion and gas centrifuge processes." From an environmental perspective, what are the advantages that are expected over the gas centrifuge process?¹³⁴⁰

In response the Staff stated, "Because of the smaller footprint, impacts in the following resource areas are estimated to be less for the proposed GLE Facility than for a gas centrifuge facility with the same enrichment capacity: land use, historic and cultural resources, air quality, geology and soil resources, and ecological resources."¹³⁴¹

Through other written questions, the Board asked the Staff to clarify why electricity consumption had not been explicitly considered in the comparison, and to address an issue related to waste generation.¹³⁴² The Staff addressed these questions and the Board was satisfied that there is no reason to select a different technology based on environmental impact considerations.¹³⁴³

The evaluation of the No Action Alternative was presented in section 2.2 of the FEIS.¹³⁴⁴ This analysis compares the environmental impact of building, operating, and decommissioning the GLE facility in Wilmington, North Carolina, versus the impact of not building it.¹³⁴⁵ The results of this comparison are summarized in Table 2-3 of the FEIS.¹³⁴⁶ This analysis assumed that certain preconstruction

¹³³⁷ GLE Initial Question Responses — Public at 35-40 (explaining in detail the site selection process).

¹³³⁸ Ex. NRC003A, at 2-50 to 2-54.

¹³³⁹ *Id.* at 2-55 to 2-64.

¹³⁴⁰ Board Initial Questions Order, Attach. B at 4 (citing Ex. NRC003A, at 7-13).

¹³⁴¹ Staff Initial Question Responses — Public Attach. B at 64.

¹³⁴² *See* Board Initial Questions Order, Attach. B at 2.

¹³⁴³ *See* Staff Initial Question Responses — Public Attach. B at 25-30.

¹³⁴⁴ Ex. NRC003A, at 2-19.

¹³⁴⁵ *Id.*

¹³⁴⁶ *Id.* at 2-20 to 2-41.

activities that had been approved by the NRC would have already been completed, and therefore the impact of these activities would occur even under the No Action Alternative.¹³⁴⁷ The environmental impacts associated with the four project phases (preconstruction, construction, operation and decommissioning) are described in section 4 of the FEIS.¹³⁴⁸ After reviewing the relevant material in the FEIS, the Board posed a number of written questions to the Staff and Applicant to clarify and expand on the evaluation of the environmental impacts.

The implementation of mitigation measures was one area of concern to the Board. While this topic was explicitly covered in the hearing under Topic 4: Tracking and Implementation of Applicant Commitments, its impact on the No Action Alternative was important. For example, the Board posed the following written question to the Staff:

Explain how the NRC Staff's overall assessment that environmental impacts are SMALL would be impacted if GLE only implemented the mitigation measures proposed in Table 5-1. How would overall impacts change if GLE only implemented mandatory mitigation measures?¹³⁴⁹

As part of the Staff's response to this question, it stated:

The NRC staff's impact analysis in the FEIS assumes that all of GLE's proposed mitigation measures would be implemented, and does not presume that GLE would implement any of the NRC's identified mitigation measures. Therefore, the NRC staff's assessment of the environmental impacts (including the overall impact conclusions) in the FEIS would not change if GLE implements only its proposed mitigation measures (which are identified in Table 5-1).¹³⁵⁰

The Staff further stated: "Accordingly, the NRC staff finds that compliance with the NRC's regulatory requirements and other permitting agencies' requirements is sufficient to be protective of human health and the environment."¹³⁵¹ The Board concluded, in its discussion above of Topic 4, that a sufficiently rigorous process would be in place to ensure that GLE's commitments would indeed be implemented.¹³⁵²

As part of its sufficiency review, the Board posed a large number of written questions that sought clarification and additional information related to the analysis of impacts in section 4 of the FEIS. For example, the Board posed several

¹³⁴⁷ *Id.* at 2-17 to 2-18.

¹³⁴⁸ *Id.* at 4-1 to 4-165.

¹³⁴⁹ Board Initial Questions Order, Attach. B at 4.

¹³⁵⁰ Staff Initial Question Responses — Public Attach. B at 61-62.

¹³⁵¹ *Id.* at 62.

¹³⁵² *See supra* Section V.D.

questions related to the analysis of radiological impacts.¹³⁵³ In one question the Board asked the Staff to justify its logic in using data from GNF-A to approximate the releases that would be expected from the GLE facility.¹³⁵⁴ In a related question, the Board asked the Staff to justify how the use of such data could be considered a conservative approach.¹³⁵⁵ The Staff's responses were helpful in satisfying the Board that a conservative approach had been used.¹³⁵⁶ Other questions probed the accuracy of the wind speed data used in radiological dispersion calculations, and the basis for assuming that UF₆ release levels would be similar to those in a gas centrifuge plant.¹³⁵⁷ Here again, the Staff's responses increased the Board's confidence that the approach used to evaluate the radiological impacts had been adequate.¹³⁵⁸

The Board was able to resolve several other areas of concern related to the evaluation of environmental impacts through the written question and answer process. Examples of such questions included:

11. Is the fresh water that could be potentially needed for cooling tower makeup . . . included in the 75,000 gal/day mentioned on page 4-27 [of the FEIS]? If not, where is the impact of the makeup water evaluated?
22. [In situations where the particulate matter concentrations during construction and preconstruction are predicted to exceed air quality standards, h]ow widespread will [the] decrease in air quality be?
26. Was there an investigation of how GLE construction and operation may affect active nearby red-cockaded woodpecker (RCW) groups beyond habitat protection? For example, will they be harmed by noise, dust, and other increased human activity in the area?
27. Did the NRC Staff consider how noise from preconstruction and construction activities may impact the threatened, endangered, and other special status species relevant to this site?
28. In Appendix B, the Fish and Wildlife Service agrees that impacts can be mitigated on RCWs by engaging in a tree mitigation programs and their agreement to finding no adverse impacts on RCWs seems conditioned on the implementation of this program. . . . Why is this program only being "considered" by GLE, and what is the status of GLE's consideration?

¹³⁵³ Board Initial Questions Order, Attach. B at 4.

¹³⁵⁴ *Id.*

¹³⁵⁵ *Id.*

¹³⁵⁶ Staff Initial Question Responses — Public Attach. B at 51-52, 57-59.

¹³⁵⁷ Board Initial Questions Order, Attach. B at 4.

¹³⁵⁸ Staff Initial Question Responses — Public Attach. B at 50-51, 53-56.

29. Is there any machinery anticipated to be used during the construction or operation of GLE likely to produce an impact of sound in frequencies outside the range of human hearing such that it would cause discomfort/disruption to humans and/or wildlife?¹³⁵⁹

Another area of Board inquiry concerned the status and impacts from the preconstruction activities discussed in the FEIS. In two of its written questions, the Board asked if preconstruction activities had begun.¹³⁶⁰ The Applicant answered in both cases that no preconstruction activities had been initiated.¹³⁶¹ The fact that no preconstruction activities had taken place led to Board concerns about a significant assumption in the No Action Alternative impact analysis. As mentioned above, the No Action Alternative assumed that certain preconstruction activities would be completed before any license would be issued.¹³⁶² Thus the impacts associated with the preconstruction activities, which were a significant part of the overall environmental impacts, were assumed to occur whether or not a license was issued. Because it appeared that this assumption would no longer apply, the preconstruction impacts should not have been scored against the No Action Alternative in Table 2-3.¹³⁶³ Based on this, the Board decided to pursue this issue at the evidentiary hearing.

The final component in balancing the potential impacts and benefits of the proposed action is the cost-benefit analysis. This analysis is presented in section 7 of the FEIS.¹³⁶⁴ The analysis focused on the various private and societal costs and benefits associated with the proposed action and the No Action Alternative. The cost-benefit analysis can provide a rationale for deciding whether or not a project is likely to have a net positive impact.¹³⁶⁵ The primary socioeconomic impact or benefit from the proposed facility would be an increase in employment and income in the local area.¹³⁶⁶ Other benefits considered included meeting the future demand for domestic uranium enrichment services and introducing a new enrichment technology that potentially has advantages over current enrichment processes.¹³⁶⁷ A monetary societal cost was the proposed state and county tax incentives provided to secure the facility's construction and operation.¹³⁶⁸ The

¹³⁵⁹ Board Initial Questions Order, Attach. B at 2-3.

¹³⁶⁰ *Id.*

¹³⁶¹ GLE Initial Question Responses — Public at 34, 52.

¹³⁶² Ex. NRC003A, at 2-19.

¹³⁶³ *Id.* at 2-1 to 2-41.

¹³⁶⁴ *Id.* at 7-1 to 7-15.

¹³⁶⁵ *Id.* at 7-1.

¹³⁶⁶ *Id.* at 7-2.

¹³⁶⁷ *Id.* at 7-12 to 7-13.

¹³⁶⁸ *Id.* at 7-3.

other societal costs considered were the environmental impacts given in section 4 of the FEIS and discussed above. The private monetary costs and benefits associated with the project are the projected project costs and revenues. This information is considered proprietary and is set forth in the nonpublic Appendix H of the FEIS.¹³⁶⁹

The Staff's conclusion with respect to the proposed action versus the No Action Alternative is set forth in section 7.2.5 of the FEIS.¹³⁷⁰ It concludes that the proposed action is preferable to the No Action Alternative in the following respects: (1) the proposed action would contribute to meeting future demand for enriched uranium from domestic sources and increased national security; (2) it would introduce a newer technology with the potential for smaller resource requirements and environmental impacts; and (3) it would have positive impacts on employment, income, and tax revenues throughout all phases of the project.¹³⁷¹ When these benefits were balanced against the impacts, which were estimated to be small to moderate, the Staff concluded that "the proposed action would be associated with net positive benefits."¹³⁷²

Because of the importance of this area to the findings that the Board must make, we decided to pursue this topic at the evidentiary hearing. This provided an opportunity to get more information concerning enrichment services supply and demand, to follow up on remaining questions, and to probe the rationale and logic underlying key conclusions in the written record.

The Board gained valuable information and insights at the evidentiary hearing. Both the Staff and the Applicant provided extensive prefiled testimony.¹³⁷³ The Applicant included a report, prepared at GLE's request, which provided an updated and integrated analysis of enrichment services supply and demand. The ERI Report was entered as an exhibit, and Mr. Schwartz, its principal author, testified at the hearing.¹³⁷⁴ The ERI Report projected future supply and demand from both American and international perspectives.¹³⁷⁵ It also considered scenarios that assumed the deployment and nondeployment of several proposed new enrichment facilities in the United States.¹³⁷⁶ It also considered the near-term and potential long-term effects of the Fukushima accident on global uranium enrichment requirements and supply.¹³⁷⁷ The ERI Report's forecast of installed

¹³⁶⁹ Ex. NRC004.

¹³⁷⁰ Ex. NRC003A, at 7-14.

¹³⁷¹ *Id.*

¹³⁷² *Id.* at 7-15.

¹³⁷³ Exs. NRC123-R1, GLE012.

¹³⁷⁴ Ex. GLE012, at 9; Ex. GLE014.

¹³⁷⁵ *Id.* at 8-28.

¹³⁷⁶ Ex. GLE012, at 9.

¹³⁷⁷ *Id.*

nuclear power generating capacity was based on a country-by-country and unit-by-unit review of current nuclear power programs and planned programs.¹³⁷⁸ It included a number of detailed factors such as license renewals, power uprates, and units under construction or ordered.¹³⁷⁹ Forecasts were made for reference, high, and low nuclear power growth scenarios.¹³⁸⁰

The ERI Report predicts that the impact of the Fukushima accident would be about a 4-year slippage in worldwide installed nuclear generating capacity by the year 2030, when compared to pre-Fukushima projections.¹³⁸¹ This amounts to about a 7.9% reduction from earlier forecasts for the year 2030.¹³⁸² Thus, the ERI Report predicts continued growth in installed capacity, but at somewhat lower rates.¹³⁸³ For the United States, the study predicts that annual enrichment requirements will increase from 12.2 million SWU in 2011 to 16.7 million SWU in 2035.¹³⁸⁴

In terms of the domestic supply of enrichment capability, the Applicant provided testimony on the current status of the two centrifuge enrichment facilities that have been licensed but not constructed. This testimony indicated that recent information on the American Centrifuge Plant and the Eagle Rock Enrichment Facility shows that construction continues to be delayed due to financial difficulties.¹³⁸⁵ Mr. Schwartz's testimony summarized the supply situation as follows:

ERI's Reference Nuclear Power Growth forecast indicates that all three proposed facilities (ACP, EREF, and GLE) are needed to avoid a shortage of U.S.-based enrichment supply relative to U.S. requirements at some point during the period 2016 through 2035. With only two of the three proposed sources of enrichment supply operating, the average shortage in supply during the period 2016 through 2025 is between 1.6 and 4.7 million SWU per year (between 10.1% and 29.7% of average annual requirements). During the period 2026 through 2035, without both the EREF and GLE facilities operating, the shortage is estimated to be about 1.7 million SWU per year (about 10.1% of average annual requirements). If the smaller ACP is not operating, but both the EREF and GLE plants are operating, then average annual supply exceeds U.S. average annual requirements by 0.5 million SWU per year (3.0% of average annual requirements). Thus, even in that situation, supply and requirements are in close balance, but with very little margin.¹³⁸⁶

¹³⁷⁸ *Id.* at 10.

¹³⁷⁹ *Id.*

¹³⁸⁰ *Id.* at 12.

¹³⁸¹ *Id.* at 13-14.

¹³⁸² *Id.*

¹³⁸³ *Id.* at 20-21.

¹³⁸⁴ *Id.* at 20.

¹³⁸⁵ *Id.* at 27-28.

¹³⁸⁶ *Id.* at 30 (citing Ex. GLE014, at 25).

The Staff witnesses' testimony summarized their analyses of American requirements for enriched uranium. Ms. Davis testified that the information in the record supported the conclusion that there will be a continued, if not increased, demand for enriched uranium.¹³⁸⁷ Ms. Davis also discussed the potential impact of the Fukushima accident on the demand for enriched uranium and concluded, "[T]he NRC staff finds that the Fukushima Dai-ichi accident does not alter the NRC staff's conclusions in the FEIS."¹³⁸⁸ Dr. Avci addressed the Board's concern regarding the impact on the No Action Alternative analysis if the planned preconstruction activities are not initiated.¹³⁸⁹ He asserted that he did not consider the differences in impacts between the proposed action and the No Action Alternative to be significant,¹³⁹⁰ and that not completing the planned preconstruction activities would not alter the decision that proceeding with the project was the preferred option.¹³⁹¹

After reviewing the entire record in this case, the Board agrees with the Staff's conclusion that the proposed action is preferable to No Action Alternative. The Board concluded that the Staff had adequately supported its evaluation that the project has a legitimate need, and that the environmental impacts will all be small, or small to moderate.

Concerning our independent balancing of the costs and benefits, the Board concluded that the project can help to meet the demands for low-enriched uranium in American power plants and support national energy security objectives by providing additional domestic enrichment capacity. The Board also concluded that introducing new enrichment technology that has the potential to lower costs and to reduce the environmental impact of enrichment is beneficial. The Board agrees that the impacts associated with constructing, operating, and (eventually) decommissioning the GLE facility at an existing industrial site, where there is already a nuclear fuel fabrication facility, will be small or small to moderate.

F. Topic 6: Environmental Monitoring Program

The environmental monitoring program is intended to ensure that the operating facility will not produce unforeseen environmental impacts. For this reason, the Board identified this area as a topic for the evidentiary hearing. The Board wanted to review the important elements of the program and the Staff's rationale for concluding that these program elements are adequate, as well as generally

¹³⁸⁷ Ex. NRC123-R1, at 4.

¹³⁸⁸ *Id.* at 6.

¹³⁸⁹ *Id.* at 17-18.

¹³⁹⁰ *Id.* at 17.

¹³⁹¹ *Id.* at 18.

ascertain whether the monitoring program will indeed ensure ongoing compliance with environmental requirements.

Overall, GLE has developed a comprehensive tracking and monitoring system, integrated with its other site programs. The GLE Environment, Health, and Safety function serves as an internal, unbiased third party, which has the authority to enforce shutdown of any GLE process or facility.¹³⁹² This entity is responsible for implementation of the Environmental Monitoring Program.¹³⁹³ Data collected from monitoring efforts are tracked and managed according to the Records Management and Quality Assurance programs.¹³⁹⁴ If any reading exceeds an internal action level or regulatory requirement, GLE will enter a corrective action request into the Corrective Action Program, which is used to correct all site-related issues.¹³⁹⁵ Under 10 C.F.R. § 70.59, GLE will be obligated to submit biannual reports to the NRC specifying “the quantity of each of the principal radionuclides released to unrestricted areas in liquid and gaseous effluents during the previous 6 months of operation, and such other information as the Commission may require to estimate maximum potential annual radiation doses to the public resulting from effluent releases.”¹³⁹⁶ The NRC will also review the environmental monitoring program before operations begin, through the Operational Readiness Review, and during operations through regular inspections.¹³⁹⁷

GLE will monitor three key environmental media pathways — air, surface water, and groundwater.¹³⁹⁸ Monitoring will occur at the points of release, with the validity of the source-point monitoring to be verified by additional measures at more distant locations.¹³⁹⁹

The air pathway is first monitored at the main GLE process building stack, the source of air effluent releases.¹⁴⁰⁰ This monitoring will occur daily during initial operation and decrease to weekly if the results during normal operations are consistently within regulatory requirements.¹⁴⁰¹ Further air monitoring will occur at the expected location of highest potential GLE impact at the property line, as well as at nine monitoring locations positioned around the GLE controlled-access area fenceline.¹⁴⁰² To select the location of highest potential impact,

¹³⁹² Tr. at 180 (7/12/12 Hearing).

¹³⁹³ *Id.*

¹³⁹⁴ Ex. GLE023, at 6.

¹³⁹⁵ *Id.*

¹³⁹⁶ 10 C.F.R. § 70.59.

¹³⁹⁷ Ex. NRC124, at 21-22.

¹³⁹⁸ Ex. GLE023 at 9.

¹³⁹⁹ *Id.* at 7-8.

¹⁴⁰⁰ *Id.* at 10.

¹⁴⁰¹ *Id.* at 16.

¹⁴⁰² GLE Follow-Up at 2.

GLE used the NRC's XOQDOQ model.¹⁴⁰³ That model indicated that the nine fenceline locations should also detect radiological releases from the GLE stack.¹⁴⁰⁴ The actual placements of the stack and fenceline monitors may be adjusted based on final facility design.¹⁴⁰⁵ In the case of design changes, GLE would rerun radiological air dispersion modeling to finalize the placement of the air monitoring locations.¹⁴⁰⁶ GLE also will also sample four soil locations on and off the Wilmington site to assess ground surface deposition.¹⁴⁰⁷ These soil samples will be collected from the upper 4 inches of soil using decontaminated hand-sampling tools.¹⁴⁰⁸

At the evidentiary hearing, the Board inquired as to whether the air monitoring locations took into account the two-tiered building design of the main GLE building.¹⁴⁰⁹ Witnesses from GLE and the Staff were unable to offer a clear answer, but following the hearing, GLE filed a supplemental response, stating that the modeling did not account for the differing heights of structures near the stack.¹⁴¹⁰

The 10 C.F.R. Part 20 regulations state that "[t]he licensee shall make or cause to be made, as appropriate, surveys of radiation levels in unrestricted and controlled areas and radioactive materials in effluents released to unrestricted and controlled areas to demonstrate compliance with the dose limits for individual members of the public in § 20.1301."¹⁴¹¹ They further state:

Each licensee shall make or cause to be made, surveys that —

- (1) May be necessary for the licensee to comply with the regulations in this part; and
- (2) Are reasonable under the circumstances to evaluate —
 - (i) The magnitude and extent of radiation levels; and
 - (ii) Concentrations or quantities of radioactive material; and
 - (iii) The potential radiological hazards.¹⁴¹²

In light of these regulations, the Board initially had some concerns that the nine fenceline monitors and the expected location of highest potential impact might fail to give accurate dose readings of potential public exposure because GLE's

¹⁴⁰³ *Id.* at 3.

¹⁴⁰⁴ *Id.*

¹⁴⁰⁵ *Id.* at 4.

¹⁴⁰⁶ *Id.*

¹⁴⁰⁷ Ex. GLE023, at 16.

¹⁴⁰⁸ *Id.* at 19.

¹⁴⁰⁹ Tr. at 222, 248 (7/12/12 Hearing).

¹⁴¹⁰ GLE Follow-Up at 4.

¹⁴¹¹ 10 C.F.R. § 20.1302(a).

¹⁴¹² *Id.* § 20.1501(a).

modeling did not properly account for the two-tiered design of the main GLE building.

Our review, however, is for sufficiency and adequacy. We ultimately conclude that the proposed air pathway monitoring system is adequate. In so finding, we rely on the fact that GLE's primary air pathway monitoring will occur at the source point and will be daily at the outset of operations.¹⁴¹³ In addition, GLE used the NRC XOQDOQ model to determine monitoring locations, and GLE has agreed to redo radiological air dispersion modeling as necessary to account for design changes.¹⁴¹⁴ While the Board would encourage GLE to account for its two-tiered building design of the main GLE building to confirm monitoring locations, we do not find GLE's plan, and the Staff's approval thereof, to be insufficient.

The groundwater monitoring system was also discussed in detail at the evidentiary hearing. In the vicinity of the GLE site, there is no clear differentiation between the Peedee and Surficial Aquifers.¹⁴¹⁵ The uppermost layers of the Peedee Aquifer are referred to as the Principal Aquifer because it is the only aquifer that provides water (including process water) to the Wilmington site.¹⁴¹⁶ The Principal Aquifer also provides potable water for the site and the surrounding communities.¹⁴¹⁷ The primary input of groundwater into the Principal Aquifer is recharge from leakage through the overlying semiconfining layer (where present) or direct seepage of rainwater in areas where the semiconfining layer is absent, including around the GLE site.¹⁴¹⁸ Therefore, a sufficiently detailed understanding of how any contamination that entered this system might be dispersed and how contamination will be monitored is necessary to ensure that the water supply for the site and surrounding communities will be protected.

The proposed GLE groundwater monitoring system includes twenty-one wells (thirteen are new) in seven clusters.¹⁴¹⁹ Each three-well-cluster location was selected on the basis of groundwater flow directions.¹⁴²⁰ Based on the initial data, the first well in each cluster would be shallow, at water table level; the second would be at a 30- to 40-foot depth; and the deepest may go as deep as 50 feet.¹⁴²¹ The Board was initially concerned that the depths of the second and third wells were not established. However, modeling that determined groundwater flow and groundwater contaminant transport will be used to determine the ultimate

¹⁴¹³ Ex. GLE023, at 16.

¹⁴¹⁴ GLE Follow-Up at 3-4.

¹⁴¹⁵ Ex. GLE023, at 30.

¹⁴¹⁶ *Id.*

¹⁴¹⁷ Tr. at 193 (7/12/12 Hearing).

¹⁴¹⁸ Ex. GLE023, at 33.

¹⁴¹⁹ *Id.* at 34.

¹⁴²⁰ *Id.* at 34-35.

¹⁴²¹ Tr. at 214 (7/12/12 Hearing).

well depths.¹⁴²² This modeling, in addition to GLE's demonstration of knowledge of site hydrogeology and groundwater flows, adequately addressed the Board's concerns.

Surface-water monitoring will occur at the release point in the effluent channel and upstream and downstream of the site through an existing partnership with the Lower Cape Fear River Program.¹⁴²³ The North Carolina Department of the Environment and Natural Resources, Division of Water Quality also maintains monitoring stations upstream and downstream of the site.¹⁴²⁴ Surface water at or downstream of the GLE site is not potable.¹⁴²⁵ GLE will also monitor stormwater and sediment in the surface water to ensure contaminants do not enter surface water through those pathways.¹⁴²⁶

Although the Board had some concerns about the accuracy of the model used to place distant air monitors, we do not conclude that the proposed plan is inadequate or insufficient. GLE appears to have a sufficient understanding of site topography, which, coupled with the historical knowledge from the existing GNF-A facility, should allow GLE to adequately monitor the environment. GLE has enacted a comprehensive program that allows for shutdown, if necessary, and tracks monitoring and corrective action from beginning to end. In addition, the NRC Staff will assess the Environmental Monitoring Program in both the Operational Readiness Review and regular environmental inspections, ensuring additional checks on GLE's monitoring plan and results.

VI. FINDINGS

For the foregoing reasons, the Board determines as follows the five issues that the Commission has directed us to address:

1. The Board determines, without conducting a *de novo* evaluation of the application, that (a) the application and record of the proceeding contain sufficient information to support license issuance; and (b) the NRC Staff's review of the application has been adequate to support findings made by the Director of the Office of Nuclear Materials Safety and Safeguards that (i) the application satisfies the standards set forth in the applicable Notice and Commission Order¹⁴²⁷ and the applicable standards in 10 C.F.R. Parts 30, 40, and 70, and (ii) the requirements of

¹⁴²² Tr. at 219.

¹⁴²³ Ex. GLE023, at 22.

¹⁴²⁴ *Id.*

¹⁴²⁵ *Id.* at 24.

¹⁴²⁶ *Id.* at 27-29.

¹⁴²⁷ 75 Fed. Reg. at 1819.

NEPA and the NRC's implementing regulations in 10 C.F.R. Part 51 have been met.

2. The Board determines, without conducting a *de novo* evaluation of the application, that the review conducted by the NRC Staff pursuant to 10 C.F.R. Part 51 has been adequate.

3. In accordance with Subpart A of 10 C.F.R. Part 51, the Board determines that the requirements of sections 102(2)(A), (C), and (E) of NEPA and Subpart A of 10 C.F.R. Part 51 have been complied with in the proceeding.

4. In accordance with Subpart A of 10 C.F.R. Part 51, the Board has independently considered the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken.

5. In accordance with Subpart A of 10 C.F.R. Part 51, the Board determines, after weighing the environmental, economic, technical, and other benefits against the environmental and other costs, and considering reasonable alternatives, that a license should be issued.

VII. ORDER

1. Pursuant to 10 C.F.R. § 2.340(k), if the Directors of the Office of Nuclear Materials Safety and Safeguards and of the Office of Federal and State Materials and Environmental Management Programs have made all findings necessary for license issuance that are not within the scope of this Initial Decision, they are hereby authorized to issue the appropriate licenses authorizing construction and operation of GLE's proposed facility.

2. Pursuant to 10 C.F.R. § 2.341(a)(2), this Initial Decision will constitute a final decision of the Commission 120 days from the date of issuance, unless a petition for review is filed in accordance with 10 C.F.R. § 2.341(b) or the Commission directs otherwise. Any party wishing to file a petition for review on the grounds specified section 2.341(b) must do so within 25 days after service of this Initial Decision.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Paul S. Ryerson, Chairman
ADMINISTRATIVE JUDGE

Dr. James F. Jackson
ADMINISTRATIVE JUDGE

Dr. Michael O. Garcia
ADMINISTRATIVE JUDGE

Rockville, Maryland
September 19, 2012

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Allison M. Macfarlane, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of

**Docket Nos. 50-247-LR
50-286-LR**

**ENTERGY NUCLEAR
OPERATIONS, INC.
(Indian Point, Units 2 and 3)**

October 12, 2012

The Commission denies a petition for interlocutory review of an Atomic Safety and Licensing Board order granting a motion for cross-examination of witnesses.

INTERLOCUTORY APPEALS

Pursuant to 10 C.F.R. § 2.341(f)(2), the Commission may, at its discretion, grant a party's request for interlocutory review of a Board decision. Review may be granted only where the party demonstrates that the issue for which it seeks review: (1) threatens the party with immediate and serious irreparable impact which cannot be alleviated through an appeal following the presiding officer's final decision; or (2) affects the basic structure of the proceeding in a pervasive or unusual way.

CROSS-EXAMINATION

Subpart L hearing rules are intended to shift most questioning of witnesses from parties to the Board itself. Given that the parties provide prefiled direct testimony in Subpart L cases, and further submit a list of confidential proposed

questions for the board to ask the witnesses, the need for the parties themselves also to conduct questioning should be a rare circumstance, except where questions of credibility, motive, or intent are at issue. Cross-examination should be reserved for cases where the Board determines that it is truly necessary to develop a sound record.

MEMORANDUM AND ORDER

I. INTRODUCTION

The Atomic Safety and Licensing Board recently issued an order granting, in part, the State of New York's motion for cross-examination of witnesses at the upcoming evidentiary hearing in this proceeding on Entergy Nuclear Operations, Inc.'s (Entergy) application for the renewal of its operating licenses for Indian Point Nuclear Generating Units 2 and 3.¹ In response, Entergy filed an "emergency petition for interlocutory review" of the Board's order, and additionally requested expedited briefing on its petition.² We granted Entergy's request for expedited briefing.³ New York opposes Entergy's petition for interlocutory review.⁴ The NRC Staff supports the petition.⁵ For the reasons outlined below, we deny Entergy's request for interlocutory review of the Board's order, but provide guidance to the Board as it moves forward with evidentiary hearings in this case.

¹ See Order (Order Granting, in Part, New York's Motion for Cross Examination) (Sept. 21, 2012) (unpublished) (corrected Sept. 25, 2012) (Board Order).

² Entergy's Emergency Petition for Interlocutory Review of Board Order Granting Cross-Examination to New York State and Request for Expedited Briefing (Sept. 28, 2012) (Entergy Petition). Entergy also filed an application to stay the Board's order or the hearing pending our resolution of its petition. See Entergy's Application to Stay Board Order Granting Cross-Examination to New York State or, in the Alternative, to Grant a Partial Stay of the Hearing Pending the Commission's Decision on Entergy's Emergency Petition for Interlocutory Review (Sept. 28, 2012). Our decision today renders moot Entergy's stay request.

³ See Order (Oct. 2, 2012) (unpublished).

⁴ See State of New York Combined Opposition to Entergy's Requests for Emergency Stay and Interlocutory Review of the Board Order Granting Limited Cross Examination (Oct. 1, 2012). Entergy replied in opposition to New York's answer. See Entergy's Reply to New York State's Opposition to Entergy's Emergency Petition for Interlocutory Review (Oct. 8, 2012).

⁵ See NRC Staff's Answer to Entergy's Emergency Petition for Interlocutory Review, and Application for Stay, of the Board's Order of September 21, 2012 (Oct. 5, 2012).

II. ANALYSIS

Pursuant to 10 C.F.R. § 2.341(f)(2), we may at our discretion grant a party's request for interlocutory review of a Board decision. We grant review only where the party demonstrates that the issue for which it seeks review:

- (i) Threatens the party . . . with immediate and serious irreparable impact which, as a practical matter, could not be alleviated through [an appeal following] the presiding officer's final decision; or
- (ii) Affects the basic structure of the proceeding in a pervasive or unusual manner.⁶

Here, Entergy claims that the Board's order will have a "pervasive" and "unusual" effect on the basic structure of the proceeding.⁷ Entergy notes that the Board's order did not identify "specific individuals" who may be subject to New York's cross-examination, and claims that it therefore will need to spend time preparing each of its witnesses "on a broad number of topics for which New York *might* seek cross examination."⁸ Entergy further claims that the parties at the hearing will be "likely to disagree on the scope, duration, and substance of the testimony on cross-examination," and that "[a]dditional hearing time dedicated to these issues is assured."⁹

Entergy also argues that the Board's order threatens Entergy with immediate and irreparable harm. Entergy claims that the order grants New York an "essentially unfettered right to examine witnesses without granting Entergy the same right."¹⁰ Entergy states that the Board's order is "silent on Entergy's conditional request that if New York's Motion for cross-examination were granted, Entergy should be granted the same opportunity."¹¹ Entergy additionally claims that Judge Lawrence McDade (the Board Chair), in a recent teleconference, indicated that New York will be able to conduct cross-examination without any "demonstration" of need, while other parties would have an opportunity to cross-examine on "discrete issues through oral motions at hearing," but only if they demonstrate a "sufficiently compelling request."¹² Entergy therefore argues that by "subjecting Entergy's witnesses to wide-ranging cross-examination by New York," without

⁶ See 10 C.F.R. § 2.341(f)(2).

⁷ Entergy Petition at 9.

⁸ *Id.* at 8-9.

⁹ *Id.* at 9.

¹⁰ *Id.*

¹¹ *Id.* at 7.

¹² See *id.* 7-8.

according Entergy the same “reciprocal right,” the order prejudices Entergy “in a way that cannot be undone after the hearing.”¹³

We find that Entergy’s petition does not meet our standards for interlocutory review. We view the Board’s order in light of Judge McDade’s clarifying statements made at the September 24 teleconference. Judge McDade explained that he expected the cross-examination to be limited given the nature of a Subpart L proceeding, where the Board itself will first conduct its own “thorough” questioning of the witnesses based on written questions that the parties themselves already have submitted to the Board.¹⁴ Judge McDade further stated that cross-examination would be permitted “if New York is able to identify areas that the Board missed,” and if the questions and answers prove of value to the Board’s understanding of the issues; the process would not be an occasion to “ask anything you want if you’re curious.”¹⁵ He further emphasized that cross-examination would not be “open-ended,” and that the Board will “cut off” any questioning that is “repetitive” or “not relevant to the issues.”¹⁶ Both Judge McDade and New York suggest that if the Board’s questioning of the witnesses proves to be sufficiently complete, additional questions on cross-examination may be unnecessary.¹⁷

While the Board’s order failed to provide any explanatory details, Judge McDade’s comments at the teleconference reflect an intent to allow only limited, supplemental questions, not an “unfettered” opportunity to pose extensive, unfocused, or immaterial questions. Whether the Board’s ruling was reasonable or not, its result — a potential for limited cross-examination — cannot be said to impact the “basic structure of the proceeding in a pervasive or unusual manner” warranting interlocutory review. We fully expect the Board to conform to Judge McDade’s stated intention to prohibit open-ended, lengthy cross-examination, and to restrict any permitted cross-examination to material inquiries that the Board did not already cover.

We turn next to Entergy’s claim of irreparable, prejudicial harm. As Entergy points out, the Board’s order curiously did not address Entergy’s request for a reciprocal opportunity to cross-examine witnesses. Judge McDade, however, made clear at the teleconference that counsel for Entergy *can* request the opportunity to question witnesses at the hearing. Outlining the approach he anticipates, Judge

¹³ *Id.* at 10.

¹⁴ *See* Teleconference Transcript (Sept. 24, 2012) at 1236 (Tr.).

¹⁵ Tr. at 1238.

¹⁶ *Id.*

¹⁷ Tr. at 1236; State of New York Combined Opposition to Entergy’s Requests for Emergency Stay and Interlocutory Review of the Board Order Granting Limited Cross-Examination (Oct. 1, 2012), at 6 (because the Board has “likely . . . already . . . prepared extensive cross-examination plans, it is possible that neither the State nor other parties will see fit to ask additional questions at the conclusion of the Board’s examination of the parties’ experts).

McDade described that after the Board concludes its questioning, counsel for the parties would have a “reasonable opportunity to interrogate the witnesses” in the event that “the Board has missed something,” but again, questions could not be “repetitive” or “just going over the same ground as the Board.”¹⁸ We hold the Board to its word that it will provide Entergy and the Staff (as well as any other parties participating on these contentions) a full and fair opportunity to request cross-examination, and we expect that the Board will act on any such requests fairly and evenhandedly, including taking into consideration any cross-examination opportunities granted to New York. While there is no right to “reciprocal” cross-examination, the parties should be accorded equivalent treatment under the applicable regulatory standard.¹⁹

We conclude on a note of caution. Without the additional assurances that Judge McDade provided at the teleconference, we would have been inclined to vacate the Board’s decision as unduly vague and overbroad. The only reason the Board gave for granting cross-examination — the observation that the proceeding involves a “voluminous and technical record”²⁰ — does not, without more, support ordering cross-examination in a Subpart L proceeding. The Statement of Considerations for the Subpart L hearing rules even specifies that “the complexity and number of issues” in a proceeding do *not* “per se, lead ineluctably to the conclusion that cross-examination is necessary to ensure a fair and adequate hearing.”²¹

If large records and complexity justified cross-examination, such questioning would be commonplace at many, if not most, Subpart L hearings. That was not the intent of Subpart L, which was designed to shift most questioning of witnesses from parties to the Board itself. The Commission envisioned a need for cross-examination principally “in circumstances involving disputes over the occurrence of an activity or the credibility of a material witness.”²² Given that the parties provide prefiled direct testimony in Subpart L cases, and further submit a list of confidential proposed questions for the Board to ask the witnesses, the need for the parties themselves also to conduct questioning should be a “rare circumstance,” except where questions of witness credibility, motive, or intent

¹⁸ See Tr. at 1236-37, 1242-43.

¹⁹ For example, we find troubling that the Board did not base its decision on any specific showing by New York, and also did not address Entergy’s request for cross-examination or its offer to submit its own cross-examination plan.

²⁰ Board Order at 6.

²¹ Final Rule: “Changes to Adjudicatory Process,” 69 Fed. Reg. 2182, 2196 (Jan. 14, 2004).

²² *Id.*

are at issue.²³ Cross-examination, in other words, should be reserved for cases where the Board determines that it is truly necessary to develop a sound record.

We recognize, however, that it is the Board that has the responsibility in the first instance to oversee the development of the case record and to ensure that it has adequate information to issue a reasoned decision on the contested matters. And the Board is in the best position to determine whether cross-examination is necessary to ensure a fair and complete record. Here the Board has determined that cross-examination is “necessary to ensure development of an adequate record.”²⁴ While we will not disturb the Board’s decision, we fully expect future boards to explain the necessity of cross-examination in greater detail than a broad-brush reference to a proceeding’s “voluminous” or “technical” nature.²⁵

III. CONCLUSION

Entergy’s petition for interlocutory review is *denied*. We expect that the Board will rigorously oversee any cross-examination it allows and limit the cross-examination by all parties to supplemental and genuinely material inquiries, necessary to develop an adequate and fair record for decision.

IT IS SO ORDERED.²⁶

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 12th day of October 2012.

²³ See *id.*, 69 Fed. Reg. at 2196, 2205. See also *id.* at 2204-05 (rejecting the proposed rule’s “numerous and complex issues” criterion for the use of formal procedures). See generally 10 C.F.R. § 2.1207(a).

²⁴ Board Order at 6.

²⁵ We note, additionally, that boards considering a departure from the usual hearing format should issue rulings sufficiently in advance of a scheduled hearing, so that the parties have adequate time for any necessary preparations, and so that we have a meaningful opportunity to exercise our oversight role.

²⁶ Commissioner Apostolakis did not participate in this matter.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Allison M. Macfarlane, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of

**Docket Nos. 50-352-LR
50-353-LR**

**EXELON GENERATION
COMPANY, LLC
(Limerick Generating Station, Units 1
and 2)**

October 23, 2012

RULES OF PRACTICE: APPEALS

The Commission's rules of practice provide an appeal as of right on the question whether a hearing request should have been wholly denied.

STANDARD OF REVIEW: ADMISSIBILITY OF CONTENTIONS

The Commission generally defers to board contention admissibility rulings in the absence of an error of law or abuse of discretion.

HEARING REQUESTS

In order to grant a hearing request, a board must find that the petitioner has standing and has proposed at least one admissible contention.

WAIVER OF RULE

Section 2.335(a) provides that a contention may not challenge an agency rule or regulation in any adjudicatory proceeding absent a waiver from the Commission; subsections (b) through (d) set forth the procedure for obtaining a waiver.

LICENSE RENEWAL APPLICATIONS: SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS

Section 51.53(c)(3)(ii)(L) requires a license renewal applicant's environmental report to include a consideration of alternatives to mitigate severe accidents if the Staff has not previously considered them for the applicant's plant in an environmental impact statement or related supplement or in an environmental assessment.

WAIVER OF RULE

As in any case where the viability of an existing rule is questioned in an adjudication, the Commission's waiver provision in section 2.335(b) provides an avenue for a petitioner who seeks to litigate a contention in an adjudicatory proceeding that otherwise would be outside the permissible scope of the proceeding. Section 2.335(b) requires a showing of "special circumstances" demonstrating that application of the rule would not serve the purpose for which it was adopted.

MEMORANDUM AND ORDER

Exelon Generation Company, LLC (Exelon) and the NRC Staff have appealed the Atomic Safety and Licensing Board's decision in LBP-12-8,¹ which granted the Natural Resources Defense Council's (NRDC) request for hearing.² For the reasons set forth below, we reverse the Board's decision. However, we remand the proceeding to the Board for the limited purpose of considering a waiver petition in accordance with 10 C.F.R. § 2.335(b) through (d), which NRDC may submit by Tuesday, November 27, 2012.

¹ Exelon's Notice of Appeal of LBP-12-08 (Apr. 16, 2012) (Exelon Notice of Appeal); Exelon's Brief in Support of the Appeal of LBP-12-08 (Apr. 16, 2012) (Exelon Appeal); NRC Staff's Notice of Appeal of LBP-12-08 (Apr. 16, 2012); NRC Staff's Appeal of LBP-12-08 (Apr. 16, 2012) (NRC Staff Appeal).

² LBP-12-8, 75 NRC 539 (2012).

I. BACKGROUND

In response to a notice of opportunity for hearing,³ NRDC filed a request for hearing and petition to intervene in this license renewal proceeding, submitting four proposed contentions.⁴ Although Exelon and the Staff did not challenge NRDC's standing, they argued that NRDC had not submitted an admissible contention, and therefore opposed the hearing request.⁵ In LBP-12-8, the Board admitted a narrowed version of Contention 1-E, which asserts that Exelon's Environmental Report both fails to consider, and inappropriately rejects as insignificant, new and significant information that calls into question the adequacy of the 1989 severe accident mitigation design alternatives (SAMDA) analysis that the Staff completed in support of its approval of Limerick's initial operating licenses.⁶ The Board dismissed the remaining portions of Contention 1-E, as well as Contentions 2-E and 3-E, which raise similar challenges to the 1989 SAMDA analysis.⁷

On appeal, Exelon and the Staff ask us to reverse the Board's admission of Contention 1-E, which would result in the denial of NRDC's hearing request. NRDC opposes the appeals.⁸

II. DISCUSSION

Our rules of practice provide an appeal as of right on the question whether — as relevant here — a hearing request should have been “wholly denied.”⁹ We generally defer to board contention admissibility rulings in the absence of an error

³ Notice of Acceptance for Docketing of the Application and Notice of Opportunity for Hearing Regarding Renewal of Facility Operating License Nos. NPF-39 and NPF-85 for an Additional 20-Year Period; Exelon Generation Company, LLC, Limerick Generating Station, 76 Fed. Reg. 52,992 (Aug. 24, 2011).

⁴ Natural Resources Defense Council Petition to Intervene and Notice of Intention to Participate (Nov. 22, 2011) (Hearing Request). The Secretary of the Commission extended the time for NRDC to submit its hearing request until November 22, 2011. Order (Oct. 17, 2011) at 2 (unpublished).

⁵ See Exelon's Answer Opposing NRDC's Petition to Intervene (Dec. 20, 2011) at 1 (Exelon Answer to Hearing Request); NRC Staff's Answer to Natural Resource[s] Defense Council Petition to Intervene and Notice of Intention to Participate (Dec. 21, 2011) at 1.

⁶ See generally NUREG-0974, “Final Environmental Statement Related to the Operation of Limerick Generating Station, Units 1 and 2,” Supplement (Aug. 1989) (ADAMS Accession No. ML11221A204).

⁷ See LBP-12-8, 75 NRC at 570-71. The Board also dismissed Contention 4-E, which challenges the Environmental Report's discussion of the “no-action alternative.” See *id.* at 571.

⁸ Natural Resources Defense Council's Response to Appeals by Exelon, Inc. and NRC Staff of LBP-12-08 (Apr. 26, 2012) (NRDC Answer).

⁹ 10 C.F.R. § 2.311(d)(1).

of law or abuse of discretion.¹⁰ We apply this standard of review today in ruling on Exelon's and the Staff's appeals.

In order to grant a hearing request, a board must find that the petitioner has standing and has proposed at least one admissible contention.¹¹ NRDC's standing is not before us on appeal, and we do not address it. However, as discussed below, this case presents a difficult question on the issue of contention admissibility, whose resolution depends on the interplay between two provisions of our license renewal regulations. We ultimately find that the Board erred in admitting Contention 1-E.

Our Part 2 rules of practice govern the admissibility of contentions. Relevant here, section 2.335(a) provides that a contention may not challenge an agency rule or regulation in any adjudicatory proceeding absent a waiver from the Commission; subsections (b) through (d) set forth the procedure for obtaining a waiver.¹² At bottom, the parties disagree over whether Contention 1-E impermissibly challenges 10 C.F.R. § 51.53(c)(3)(ii)(L), which requires a license renewal applicant's environmental report to include a consideration of alternatives to mitigate severe accidents "[i]f the staff has not previously considered [them] for the applicant's plant in an environmental impact statement or related supplement or in an environmental assessment."¹³

A. Relevant History

In 1989, the Staff conducted a SAMDA analysis as part of its review of Limerick's operating license application, in response to a remand from a decision by the U.S. Court of Appeals for the Third Circuit the same year.¹⁴ The court had invalidated a Commission policy statement that would have precluded the consideration of SAMDAs at the operating license stage. It found that the policy statement was not a sufficient vehicle to preclude the consideration of SAMDAs, and held that the Commission must take the requisite "hard look" at SAMDAs,

¹⁰ See, e.g., *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 307 (2012).

¹¹ 10 C.F.R. § 2.309(a).

¹² *Id.* § 2.335(a)-(d). Exelon and the Staff also assert that Contention 1-E fails to meet the general admissibility criteria in 10 C.F.R. § 2.309(f)(1). See Exelon Appeal at 22-27 (citing 10 C.F.R. § 2.309(f)(1)(iv)); NRC Staff Appeal at 10-19 (citing 10 C.F.R. § 2.309(f)(1)(iv), (vi)). We need not address this issue today. The applicability of section 2.335(a) is dispositive of the appeals, for the reasons discussed below.

¹³ 10 C.F.R. § 51.53(c)(3)(ii)(L).

¹⁴ See *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 741 (3d Cir. 1989).

giving them “the careful consideration and disclosure required by [the National Environmental Policy Act (NEPA)].”¹⁵

Later, as part of our 1996 rulemaking to amend Part 51, we decided to address severe accident mitigation on a site-specific basis.¹⁶ With the goal of increasing efficiency in our review of license renewal applications, the Part 51 amendments codified impact findings for certain “Category 1” environmental issues that generically apply to all plants or a subset of plants.¹⁷ The environmental analysis of Category 1 issues is contained in our Generic Environmental Impact Statement for License Renewal (GEIS).¹⁸ For other environmental issues, or “Category 2” issues, we require individual applicants to include a site-specific environmental analysis in their license renewal applications.¹⁹ We designated severe accident mitigation alternatives (SAMA) analysis as a “Category 2” issue.²⁰ However, we provided an exception in section 51.53(c)(3)(ii)(L) for plants for which the Staff already had conducted a severe accident mitigation analysis (which at that time included Limerick Units 1 and 2, Comanche Peak Units 1 and 2, and Watts Bar Unit 1), stating that “severe accident mitigation alternatives need not be reconsidered for these plants for license renewal.”²¹ At the same time, we recognized in promulgating the Part 51 amendments that, consistent with our obligations under NEPA, we must “review and consider any new and

¹⁵ *Id.* at 736-37, 739 (quoting *Baltimore Gas & Electric Co. v. Natural Resources Defense Council*, 462 U.S. 87, 98 (1983)).

¹⁶ See Final Rule: “Environmental Review for Renewal of Nuclear Power Plant Operating Licenses,” 61 Fed. Reg. 28,467, 28,480-82 (June 5, 1996) (Part 51 Amendments).

¹⁷ See *id.* at 28,467-68. Category 1 issues are those for which the Staff has determined that: “(1) the environmental impacts associated with the issue . . . apply either to all plants or, for some issues, to plants having a specific type of cooling system or other specified plant or site characteristics; (2) a single significance level (i.e., small, moderate, or large) has been assigned to the impacts . . . ; and (3) . . . additional plant-specific mitigation measures are likely not to be sufficiently beneficial to warrant implementation.” NUREG-1437, “Generic Environmental Impact Statement for License Renewal of Nuclear Plants — Main Report” (Final Report), Vol. 1 (May 1996), at 1-5 (GEIS) (ADAMS Accession No. ML040690705).

¹⁸ A license renewal applicant need not include analyses of the environmental impacts of Category 1 issues in its environmental report; the Staff incorporates the GEIS analysis of Category 1 issues as part of the overall cost-benefit balance in the supplemental environmental impact statement (SEIS) for license renewal. 10 C.F.R. §§ 51.53(c)(3)(i), 51.95(c)(4); GEIS at 1-5.

¹⁹ 10 C.F.R. § 51.53(c)(3)(ii); GEIS at 1-5 to 1-6.

²⁰ See 10 C.F.R. Part 51, Subpart A, App. B (Postulated Accidents); *id.* § 51.53(c)(3)(ii)(L); Part 51 Amendments, 61 Fed. Reg. 28,480. The GEIS addresses severe accident *consequences* for all plants, which we have determined to have a small environmental impact after factoring in their low probability of occurrence. The Category 2 issue, then, focuses on severe accident *mitigation*, to further reduce severe accident risk (probability or consequences). See 10 C.F.R. Part 51, Subpart A, App. B; GEIS at 1-6. See generally *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-1, 75 NRC 39, 41-43 (2012).

²¹ Part 51 Amendments, 61 Fed. Reg. at 28,481. See also GEIS at 5-106 to 5-107.

significant information presented during the review of individual license renewal applications.”²² To aid us in this endeavor, we added a requirement that license renewal applicants include in their environmental reports any new and significant information of which they are aware.²³

Because the Staff already considered SAMAs (albeit SAMDAs, or mitigation alternatives relating to the plant’s design) as part of its review of the Limerick operating licenses, Exelon and the Staff both argue that NRDC’s attempt to litigate SAMA-related issues now presents an improper challenge to section 51.53(c)(3)(ii)(L).²⁴ NRDC, on the other hand, argues that these issues may be challenged in this license renewal proceeding despite the exception in section 51.53(c)(3)(ii)(L), because 10 C.F.R. § 51.53(c)(3)(iv), a subsection of the same regulation, requires Exelon to include in its environmental report any new and significant information.²⁵ NRDC asserts that Contention 1-E permissibly challenges the adequacy of the new information relating to severe accident mitigation that Exelon identified in its Environmental Report.²⁶

B. Analysis of the Board’s Ruling

Contention 1-E, as originally proposed, described several areas of purportedly new and significant information that, according to NRDC, Exelon either failed to consider or improperly dismissed as insignificant.²⁷ The Board rejected all but

²² Part 51 Amendments, 61 Fed. Reg. at 28,468. *See also id.* at 28,470 (explaining that in response to comments on the proposed rule, including those from the Council on Environmental Quality and the Environmental Protection Agency, “the framework for consideration of significant new information has been revised and expanded”).

²³ *See id.* at 28,488; 10 C.F.R. § 51.53(c)(3)(iv).

²⁴ *See* Exelon Appeal at 11-12 (“The threshold legal issue on appeal is whether the adequacy of Exelon’s analysis of new and significant information related to SAMAs is litigable in a license renewal proceeding, absent a waiver from the Commission under [s]ection 2.335.”); NRC Staff Appeal at 5 (“Contention 1-E as admitted by the Board is outside the scope of this proceeding because it claims that new and significant information impacts a generic determination in the Commission’s regulations without seeking a rule waiver pursuant to 10 C.F.R. § 2.335.”).

²⁵ *See* NRDC Answer at 10 (“A recurring, in fact the central, theme of [Exelon’s and the Staff’s] appeals is that because an NRC rule, 10 C.F.R. § 51.53(c)(3)(ii)(L), purportedly absolves Exelon of the legal obligation to conduct a SAMA [analysis], Exelon cannot be compelled to [do so] absent a waiver of that rule. The fundamental flaw in this argument is that . . . [what] is sought by NRDC is that Exelon properly analyze new and significant information related to the continuing applicability of the environmental conclusions stemming from the 1989 SAMDA analysis.”).

²⁶ *See id.* *See generally* License Renewal Application, Limerick Generating Station, Units 1 and 2, Appendix E, Applicant’s Environmental Report — Operating License Renewal Stage (June 22, 2011) at 5-1 to 5-9 (ADAMS Accession No. ML11179A104) (Environmental Report).

²⁷ *See* Hearing Request at 16-19.

two.²⁸ As admitted, Contention 1-E asserts that Exelon’s Environmental Report is deficient because it: (1) fails to include new and significant information regarding potential mitigation alternatives that have been considered for other boiling water reactors with Mark II containments; and (2) incorrectly dismisses new economic cost risk data as insignificant because Exelon relies on data from Three Mile Island — a pressurized water reactor.²⁹ Specifically, NRDC concludes that if Exelon were to consider this information, “individually and especially in combination,” it “would plausibly cause a materially different result in the SAMA analysis for Limerick and render the [1989] SAMDA analysis upon which Exelon relies incomplete.”³⁰

In ruling on the contention’s admissibility, the Board distinguished between challenges to the 1989 SAMDA analysis — which, the Board reasoned, were impermissible based on section 51.53(c)(3)(ii)(L) — and challenges to the new and significant information in Exelon’s Environmental Report based on section 51.53(c)(3)(iv).³¹ The Board thus admitted those portions of Contention 1-E that it found to be proper challenges to the new and significant information in Exelon’s Environmental Report, but rejected the portions that it found to be improper challenges to the 1989 SAMDA analysis. In doing so, the Board reasoned that the requirement to include new and significant information essentially trumps the codified exception that certain plants, like Limerick, for which the Staff already had considered mitigation alternatives under NEPA, need not include another SAMA analysis in their environmental reports.³² Accordingly, for the admitted portions of Contention 1-E that claim the existence of new and significant information, the Board held that NRDC was not required to submit a petition for waiver or satisfy the waiver criteria in section 2.335(b).³³

On appeal, Exelon and the Staff urge us to apply precedent from the *Vermont Yankee* and *Pilgrim* license renewal proceedings.³⁴ In those cases, we resolved a similar issue concerning the interplay between two subsections of 51.53(c)(3) and, particularly, whether purported new and significant information could be litigated

²⁸ LBP-12-8, 75 NRC at 571.

²⁹ *Id.* at 556-57, 559-60, 571.

³⁰ See Declaration of Thomas B. Cochran, Ph.D., Matthew G. McKinzie, Ph.D. and Christopher J. Weaver, Ph.D., on Behalf of the Natural Resources Defense Council (Nov. 22, 2011) at 3 (NRDC Declaration) (appended to Hearing Request).

³¹ See LBP-12-8, 75 NRC at 550-62.

³² See, e.g., *id.* at 556 (observing that “[d]etermining whether information regarding SAMAs is ‘new’ and ‘significant’ does not involve . . . performing an entirely new SAMA analysis”).

³³ See *id.* at 561.

³⁴ See Exelon Appeal at 21; NRC Staff Appeal at 9-10.

in an adjudicatory proceeding absent a waiver.³⁵ The contention in *Vermont Yankee* and *Pilgrim*³⁶ involved a challenge to a “Category 1” environmental issue, meaning that the Staff had considered the underlying issue in the GEIS and determined that licensees of all plants, or a subset of plants, need not consider the issue anew in their license renewal applications.³⁷ There, the petitioner argued that new and significant information rendered the GEIS analysis of the environmental impacts of spent fuel pool storage inadequate, and asserted that the applicants therefore were required to discuss the issue in their environmental reports.³⁸

We upheld the *Vermont Yankee* and *Pilgrim* Boards’ rejection of the contention as an improper challenge to 10 C.F.R. § 51.53(c)(3)(i).³⁹ We found that the new and significant information requirement in 10 C.F.R. § 51.53(c)(3)(iv) did not override, for the purposes of litigating the issues in an adjudicatory proceeding, the exclusion of Category 1 issues in 10 C.F.R. § 51.53(c)(3)(i) from site-specific review.⁴⁰ As we explained, “[a]djudicating Category 1 issues site by site based merely on a claim of ‘new and significant information,’ would defeat the purpose of resolving generic issues in a GEIS.”⁴¹ Therefore, we determined that a waiver was required to litigate any new and significant information relating to a Category 1 issue.⁴² Because the petitioner had not requested a waiver, we affirmed the Boards’ rejection of the contention.⁴³

Although the Board in this proceeding took our decision in *Vermont Yankee* and *Pilgrim* into account, the Board distinguished that decision from the circumstances presented here.⁴⁴ The Board placed particular emphasis on the fact that the *Vermont Yankee/Pilgrim* decision involved litigation of an issue that Part 51 (which codifies the GEIS findings) “explicitly declares [to be] Category 1,” thereby excluding it

³⁵ See *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 16 (2007) (*Vermont Yankee/Pilgrim*).

³⁶ The petitioner filed the same contention in both proceedings. *Id.* at 16, 18.

³⁷ *Id.* at 16-17.

³⁸ *Id.* at 18-19.

³⁹ See *id.* at 20 (“Fundamentally, any contention on a ‘Category 1’ issue amounts to a challenge to our regulation that bars challenges to generic environmental findings.”).

⁴⁰ See *id.* at 21.

⁴¹ *Id.* The *Vermont Yankee* and *Pilgrim* Boards had based their decision on our ruling in *Turkey Point*, which also involved an attempt to litigate a Category 1 issue in a license renewal proceeding. See *id.* at 19-20 (citing *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3 (2001)). In *Turkey Point*, we affirmed the Board’s rejection of the contention, noting that the petitioner had not requested a waiver. See *Turkey Point*, CLI-01-17, 54 NRC at 22-23. In *Vermont Yankee/Pilgrim*, we noted with approval the Boards’ reliance on *Turkey Point*. See *Vermont Yankee/Pilgrim*, CLI-07-3, 65 NRC at 16, 20-21.

⁴² *Vermont Yankee/Pilgrim*, CLI-07-3, 65 NRC at 20.

⁴³ *Id.* at 19-21.

⁴⁴ See LBP-12-8, 75 NRC at 552.

from case-by-case litigation.⁴⁵ Observing that Contention 1-E raises issues related to mitigation of severe accidents — a site-specific, Category 2 issue — the Board determined that the *Vermont Yankee/Pilgrim* decision could not be applied to preclude NRDC’s attempt to litigate a SAMA issue unless Exelon or the Staff “establish[ed] that SAMAs are . . . Category 1 issues for Limerick.”⁴⁶

The Board was not persuaded, however, by Exelon’s and the Staff’s arguments that the provision in section 51.53(c)(3)(ii)(L) that exempts Exelon from preparing a fresh SAMA analysis for Limerick is the functional equivalent of a Category 1 issue. The Board noted that for another Category 2 issue — the environmental impacts of groundwater quality degradation at plants with cooling ponds at inland sites — the GEIS and Part 51 expressly label groundwater quality degradation Category 1 for plants with cooling ponds in salt marshes.⁴⁷ Based on this example, the Board reasoned that the absence of such an express Category 1 designation for plants falling within the 51.53(c)(3)(ii)(L) exception implies that we did not intend the same “Category 1” treatment for Limerick or similarly exempt plants.⁴⁸ As the Board explained, “[i]f the Commission intended SAMAs to be a Category 1 issue[,] . . . it would have said so explicitly.”⁴⁹ Thus the Board concluded that NRDC may litigate its SAMA contention without a waiver, notwithstanding the fact that section 51.53(c)(3)(ii)(L) exempts Exelon from having to include a discussion of SAMAs in its Environmental Report for the Limerick license renewal application.⁵⁰

At first blush, the Board’s analysis highlights a potential ambiguity in our regulations. On the one hand, Exelon is permitted, by rule, not to prepare a site-specific supplemental SAMA analysis in conjunction with the Limerick license renewal application. On the other hand, our rules also provide that the license renewal application must contain any significant new information relevant to the environmental impacts of license renewal of which the applicant is aware; new information, as a general matter, may be challenged in individual adjudications.⁵¹ Confronted with this apparent ambiguity, the Board reconciled the provisions by allowing NRDC to litigate SAMAs in this proceeding without a waiver. But after careful analysis of the regulatory history underlying this question, we find that

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *See id.*

⁴⁸ *Id.* at 552-53.

⁴⁹ *Id.* at 553 (emphasis omitted).

⁵⁰ *See id.* at 561.

⁵¹ *See, e.g., Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002) (characterizing an originally admissible contention as claiming “that there was new, significant information that [the applicant] should have taken into account or acknowledged when performing its SAMA cost-benefit analyses.”).

the rules are better interpreted to require a waiver in the circumstances presented here.

We agree with Exelon and the Staff that our decision in the *Vermont Yankee* and *Pilgrim* proceedings is analogous to the question before us today. As the Board observed, *Vermont Yankee/Pilgrim* arguably is distinguishable because it involved a “Category 1” generic issue, whereas SAMAs are designated as “Category 2” site-specific issues. However, our decision in *Vermont Yankee/Pilgrim* fundamentally was predicated on the fact that the contention amounted to a challenge to an NRC regulation, contrary to section 2.335(a).⁵² Similarly, Contention 1-E, reduced to its simplest terms, amounts to a challenge to section 51.53(c)(3)(ii)(L). The assumption underlying Contention 1-E is that Exelon’s 1989 SAMDA analysis is out-of-date, which Exelon then must remedy in its Environmental Report, even though this is something that section 51.53(c)(3)(ii)(L) otherwise exempts Exelon from having to do.

For Limerick and similarly situated plants for which SAMAs were already considered in an Environmental Impact Statement or Environmental Assessment, the SAMA issue has been resolved by rule. Indeed, Limerick is specifically named in the Statement of Considerations as a plant for which SAMAs “need not be reconsidered . . . for license renewal.”⁵³ Consequently, the exception in section 51.53(c)(3)(ii)(L) operates as the functional equivalent of a Category 1 issue, removing SAMAs from litigation in this, as well as certain other, case-by-case license renewal adjudications.

At the same time, however, Exelon has put forward in its license renewal application new information regarding its SAMDA analysis. Exelon claims that this information — which it argues reinforces the validity of its existing SAMDA analysis — may not be challenged in this adjudication, given that no further analysis is permitted by rule. For its part, NRDC finds insufficient the information provided by Exelon, and therefore seeks to challenge the validity of the decades-old SAMDA analysis. To date, we have not been presented with precisely this factual scenario. In our view, NRDC may challenge the adequacy of the new information provided in the Limerick Environmental Report. However, based on the circumstances present here and given that our rules expressly provide that a supplemental SAMA analysis need not be performed in this case, the proper procedural avenue for NRDC to raise its concerns is to seek a waiver of the relevant provision in section 51.53(c)(3)(ii)(L).⁵⁴

⁵² *Vermont Yankee/Pilgrim*, CLI-07-3, 65 NRC at 18 n.15, 20.

⁵³ Part 51 Amendments, 61 Fed. Reg. at 28,481.

⁵⁴ That is not to say that a supplemental SAMA analysis *may never* be performed for Limerick or another facility exempted by virtue of section 51.53(c)(3)(ii)(L). We would expect that, if the Staff had in hand new information that could render invalid the original site-specific analysis, then such

(Continued)

As in any case where the viability of an existing rule is questioned in an adjudication, our waiver provision in section 2.335(b) provides an avenue for a petitioner who seeks to litigate a contention in an adjudicatory proceeding that otherwise would be outside the permissible scope of the proceeding. Section 2.335(b) requires a showing of “special circumstances” demonstrating that application of the rule — here, the exception in section 51.53(c)(3)(ii)(L) — would not serve the purpose for which it was adopted.⁵⁵ Alternatively, the petitioner may seek rulemaking to rescind the exception in section 51.53(c)(3)(ii)(L), in accordance with 10 C.F.R. § 2.802.⁵⁶ And of course, a petitioner always has the option to participate outside of the adjudication by submitting comments on the Staff’s draft SEIS.⁵⁷ For the reasons discussed above, we find that, in the absence of a waiver, the Board erred in admitting Contention 1-E.

information should be identified and evaluated by the Staff for its significance, consistent with our NEPA requirements. *See* 10 C.F.R. § 51.95(c)(3). We also note that we have asked “the Staff to review generically an applicant’s duty to supplement or correct its environmental report.” *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-12-13, 75 NRC 681, 687 n.32 (2012).

⁵⁵ 10 C.F.R. § 2.335(b). *See also* *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 559-60 (2005) (outlining a four-factor test based on section 2.335(b)). Before the Board, NRDC explained that it had not submitted a waiver petition because it believed section 2.335(b) applies to admitted parties only. *See* Hearing Request at 25 n.7; Natural Resources Defense Council (“NRDC”) Combined Reply to Exelon and NRC Staff Answers to Petition to Intervene (Jan. 6, 2012) at 11 n.6. Our case law demonstrates that petitioners, not just parties, may request a waiver in our adjudicatory proceedings. *See, e.g., Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 444-45 (2011); *Vermont Yankee/Pilgrim*, CLI-07-3, 65 NRC at 20-21; *Turkey Point*, CLI-01-17, 54 NRC at 21-23. As Exelon points out, there are places in our rules where “party” is used not as a term of art, but rather as a substitute for “participant.” *See* Exelon Appeal at 16-17 n.72; Exelon Answer to Hearing Request at 20 n.113 (citing *Massachusetts v. United States*, 522 F.3d 115, 129 (1st Cir. 2008)). That is the case with section 2.335(b). Indeed, we recently approved corrections and clarifications to 10 C.F.R. Part 2, including a revision to section 2.335(b) that replaces “party” with “participant.” *See* Final Rule: “Amendments to Adjudicatory Process Rules and Related Requirements,” 77 Fed. Reg. 46,562, 46,583 (Aug. 3, 2012).

⁵⁶ *See* 10 C.F.R. § 2.802(a) (“Any interested person may petition the Commission to issue, amend or rescind any regulation.”).

⁵⁷ *See id.* §§ 51.73, 51.74. *See also* Part 51 Amendments, 61 Fed. Reg. at 28,470 (“[T]he NRC will review comments on the draft SEIS and determine whether such comments introduce new and significant information not considered in the GEIS analysis. All comments on the applicability of the analyses of impacts codified in the rule and the analysis contained in the draft [SEIS] will be addressed by NRC in the final [SEIS] in accordance with 40 CFR 1503.4, regardless of whether the comment is directed to impacts in Category 1 or 2.”); GEIS at 1-10 to 1-11. NRDC filed comments on the SAMA analysis during the Staff’s environmental scoping process. *See* Fettus, Geoffrey H., Senior Project Attorney, NRDC, et al., Letter to Cindy Bladley, U.S. Nuclear Regulatory Commission (Oct. 28, 2011) (ADAMS Accession No. ML11307A456).

That said, however, the circumstances presented here lead us to remand the proceeding to the Board for the limited purpose of permitting NRDC an opportunity to petition for waiver of section 51.53(c)(3)(ii)(L) as it applies to the Limerick SAMDA analysis. We include in the remand Contentions 1-E, 2-E, and 3-E, to the extent the Board dismissed them as challenges to the rule.⁵⁸

Ordinarily, our review of the Board's dismissal of Contentions 2-E and 3-E would await the end of the case.⁵⁹ But the very analysis that we reverse today runs throughout these claims as well.⁶⁰ We find that it would be inefficient to wait until the Board's final decision in this matter only to reach the same result.

In view of this ruling, we do not consider Exelon's or the Staff's remaining challenges to the Board's application of the general contention admissibility factors in 10 C.F.R. § 2.309(f)(1) — either Exelon's argument that NRDC's economic cost risk claim does not raise a genuine dispute with the application,⁶¹ or the Staff's arguments that NRDC has not raised an issue material to the findings the NRC must make to support its decision on the application.⁶² Until the waiver question has been decided, we dismiss these portions of Exelon's and the Staff's appeals without prejudice. Exelon and the Staff may renew their arguments following the decision on any waiver petition that may be filed by NRDC.

III. CONCLUSION

Contention 1-E, as admitted by the Board, amounts to an impermissible

⁵⁸ We do not include NRDC's claims relating to population data, core damage frequency, cleanup costs, or the quality of the human environment that the Board dismissed for insufficient support. *See* LBP-12-8, 75 NRC at 555, 558, 560-61. Additionally, we do not include Contention 4-E, because it concerns the no-action alternative, an unrelated issue. *See id.* at 566-70; Hearing Request at 23.

⁵⁹ *See generally* 10 C.F.R. §§ 2.311, 2.341.

⁶⁰ *See, e.g.*, LBP-12-8, 75 NRC at 550-62, 564, 566. The balance of Contention 1-E involves the use of additional population data, the use of historical data to calculate core damage frequency, cleanup cost estimates, and the analysis of impacts to the quality of the human environment. The issues in Contentions 1-E, 2-E, and 3-E overlap to a certain extent, but differ in their ultimate conclusions. In addition to the issues identified in Contention 1-E, Contention 2-E also includes claims involving meteorological data and evacuation time estimates. Contention 2-E argues that because the 1989 SAMDA analysis relies on inadequate and outdated data and methodologies, the Environmental Report does not provide a reliable basis for the conclusion that there are no cost-beneficial mitigation alternatives. Contention 3-E includes the issues identified in Contentions 1-E and 2-E, as well as claims involving severe accident scenarios and probabilistic risk assessment methodology. Contention 3-E argues that because the 1989 SAMDA analysis relies on inadequate and outdated data and methodologies, the Environmental Report incorrectly concludes that the 1989 analysis qualifies for the exception in 10 C.F.R. § 51.53(c)(3)(ii)(L). *See* Hearing Request at 16-23.

⁶¹ *See* Exelon Appeal at 22-27 (citing 10 C.F.R. § 2.309(f)(1)(iv)).

⁶² *See* NRC Staff Appeal at 10-19 (citing 10 C.F.R. § 2.309(f)(1)(iv), (vi)).

collateral attack on our regulations. We therefore find that the Board erred in admitting the contention in the absence of a waiver, and we *reverse* the Board's decision granting NRDC's intervention petition. For the reasons discussed above, we *remand* the proceeding to the Board for the limited purpose of considering a waiver petition in accordance with section 2.335(b) through (d), which NRDC may submit by Tuesday, November 27, 2012.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 23d day of October 2012.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

Eric J. Leeds, Director

In the Matter of

Docket Nos. 50-338
50-339
(License Nos. NPF-4,
NPF-7)

VIRGINIA ELECTRIC AND
POWER COMPANY
(North Anna Power Station,
Units 1 and 2)

October 19, 2012

By letter dated October 20, 2011, and supplements, Paul Gunter et al. (the Petitioners) filed a 10 C.F.R. § 2.206 petition. The Petitioners requested that the NRC suspend the operating licenses of North Anna Power Station, Units 1 and 2, until the completion of a set of activities described in the petition are completed.

A final Partial Director's Decision (DD) on this petition was issued on October 19, 2012. The final Partial DD addresses the Petitioners' requested action as follows: With respect to the Petitioners' request, the NRC Staff concluded that it has partially granted that request in that the NRC issued CAL No. 2-2011-001 dated September 30, 2011, which documented that North Anna 1 and 2 could not be restarted unless and until the Licensee had demonstrated to the NRC Staff's satisfaction that "no functional damage has occurred to those features necessary for continued operation without undue risk to the health and safety of the public," consistent with the requirements of 10 C.F.R. Part 100, Appendix A, § V(a)(2).

Issues in the petition, identified and discussed in the Partial Director's Decision as Concerns 1, 2, 3, 4, and 5, were discussed and substantially addressed, either in the inspection reports issued October 31, 2011, and November 30, 2011, or in the NRC technical evaluation dated November 11, 2011. The activities by the NRC Staff were completed before restart to ensure that, before resuming operations, the Licensee had demonstrated no functional damage had occurred to those features

at North Anna 1 and 2 necessary for continued operation without undue risk to the health and safety of the public. In that respect, these concerns described in the petition as requiring completion before the restart of North Anna 1 and 2 were addressed before restart, consistent with the request for enforcement action described in the petition.

The issue in the petition, identified and discussed in the Partial Director's Decision as Concern 6, was evaluated by the NRC Staff before restart of North Anna 1 and 2, but disposition of this concern by the NRC Staff differs from the course of action requested in the petition. In that respect, this aspect of the petition was denied.

Six of the issues in the petition, identified and discussed in the Partial Director's Decision as Concerns 7, 8, 9, 10, 11, and 12, were accepted for review by the NRC Staff and were initially identified as concerns that may take longer than the target time frame for reaching a decision on a petition based on the fact that these concerns were undergoing NRC review as part of the agency's response to the Fukushima event in Japan. After reviewing the NRC's progress in responding to the Fukushima event since acceptance of the petition for review, the NRC Staff has determined that Concerns 10 and 12 have been addressed by NRC activities which responded to the Fukushima event. Concerns 7, 8, 9, and 11 are still identified as concerns that will take longer than the target time frame for reaching a decision. The NRC Staff commits to providing periodic status updates to the Petitioners on the resolution of these concerns. Concerns 7, 8, 9, and 11 were not fully addressed in the Partial DD. Therefore, this DD was partial.

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

I. INTRODUCTION

By letter dated October 20, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML11293A116), Paul Gunter, Kevin Kamps, Thomas Saporito, Paxus Calta, Alex Jack, Scott Price, and John Cruickshank (Petitioners) filed a petition under Title 10 of the *Code of Federal Regulations* (10 C.F.R.) § 2.206, "Requests for Action Under This Subpart." Upon their request, the U.S. Nuclear Regulatory Commission (NRC, the Commission) added Eleanor Amidon, Erika Kretzmer, Lovell King II, David Levy, Hilary Boyd, G. Paul Blundell, Erica Gray, Edmund Frost, and Richard Ball to the list of Petitioners. The Petitioners requested in the petition that the NRC suspend the operating licenses for the North Anna Power Station, Units 1 and 2 (North Anna 1 and 2), until the completion of a set of activities described in the petition.

A letter dated November 2, 2011 (ADAMS Accession No. ML11308A027), and an e-mail message dated December 15, 2011 (ADAMS Accession No. ML12060A197), supplemented the petition. Two meetings with the NRC Petition Review Board (PRB), held on December 12, 2011 (meeting transcript at ADAMS Accession No. ML12033A025), and February 2, 2012 (meeting transcript at ADAMS Accession No. ML12047A240) further supplemented the petition. Section II of this Director's Decision (DD) describes the bases for the request.

The PRB met on November 7, 2011, to discuss the petition and it denied the petition's request for immediate action, because it identified no immediate safety concern to North Anna 1 and 2 and no undue risk to the health and safety of the public. The PRB concluded that the requirement "to demonstrate to the Commission that no functional damage has occurred to those features necessary for continued operation without undue risk to the health and safety of the public" already exists in Appendix A, "Seismic and Geologic Siting Criteria for Nuclear Power Plants," to 10 C.F.R. Part 100, "Reactor Site Criteria." The PRB communicated this decision to the Petitioners in an e-mail dated November 10, 2011, and the Petitioners requested an opportunity to address the PRB before its initial meeting to provide supplemental information for the PRB's consideration.

The Petitioners met with the PRB at a public meeting on December 12, 2011, to discuss the petition. The PRB met on January 9, 2012, to consider if it would accept or reject the petition based on the criteria in the NRC Staff's Management Directive (MD) 8.11, "Review Process for 10 CFR 2.206 Petitions" (ADAMS Accession No. ML041770328). The PRB made an initial recommendation to partially accept the petition based on the fact that some of the concerns identified in the petition met the criteria in MD 8.11, while other concerns did not. The PRB communicated its initial recommendation to the Petitioners in an e-mail dated January 19, 2012. The Petitioners received additional information about the PRB's recommendation through an e-mail dated January 30, 2012. During the public meeting held on December 12, 2011, the Petitioners requested a second opportunity to address the PRB at a public meeting. The Petitioners met with the PRB on February 2, 2012, to provide supplemental information in support of the petition request.

The PRB considered the results of these discussions, along with the additional information, in determining its final recommendation to partially accept the petition for review and in establishing the schedule for reviewing the petition. In an acknowledgment letter dated March 16, 2012 (ADAMS Accession No. ML12060A090), the NRC informed the Petitioners that it had partially accepted the petition for review under 10 C.F.R. § 2.206 and that the petition had been referred to the Office of Nuclear Reactor Regulation for appropriate action. This Partial DD addresses the concerns raised in the original petition, along with the additional concerns raised during the public meetings between the Petitioners and the PRB held on December 12, 2011, and February 2, 2012, and in the

supplemental letter and e-mail message to the NRC dated November 2, 2011, and December 15, 2011, respectively.

The NRC has treated the transcripts of these meetings between the PRB and the Petitioners as supplements to the petition and made them available in ADAMS for inspection at the Commission's Public Document Room (PDR), located at One White Flint North, Public File Area O1F21, 11555 Rockville Pike (first floor), Rockville, MD 20852. Publicly available documents created or received at the NRC are accessible electronically through ADAMS in the NRC Library section of the website at <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems accessing the documents located in ADAMS should contact the NRC PDR reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail at PDR.Resource@nrc.gov.

The NRC Staff sent a copy of the proposed Partial DD to the Petitioners and to the Licensee for comment on July 10, 2012 (ADAMS Accession Nos. ML12165A208 and ML12165A209, respectively). The Licensee indicated by letter dated July 30, 2012 (ADAMS Accession No. ML12219A120), that it had no comments. By e-mail dated July 31, 2012 (ADAMS Accession No. ML12261A228), Paul Gunter and Kevin Kamps of Beyond Nuclear, one of the parties to the petition, sent comments on the proposed Partial DD. By e-mail dated July 31, 2012 (ADAMS Accession No. ML12261A227), Scott Price of the Alliance for Progressive Values (APV), another party to the petition, indicated that the comments submitted by Beyond Nuclear "accurately describe[] APV's concerns as well" and restated the comments contained in the letter by Beyond Nuclear. The comments by the Petitioners and the NRC Staff's response to them are included in the attachment to this Partial DD.

II. DISCUSSION

A. Background

On August 23, 2011, with North Anna 1 and 2 operating at 100% power, the site experienced ground motion from a seismic event (a magnitude 5.8 earthquake reported by the U.S. Geological Survey) in Mineral, VA, approximately 11 miles from the site. Shortly after the earthquake, both of the North Anna reactors tripped, and the station lost offsite power. After the earthquake, both units were stabilized, taken to a hot shutdown condition, and offsite power was restored. During the loss of offsite power, the four emergency diesel generators, along with the one alternate alternating current (AC) diesel generator, were activated to provide onsite AC power. Subsequent analysis indicated that the spectral and peak ground accelerations for the operating-basis earthquake (OBE) and design-basis earthquake (DBE) for North Anna 1 and 2 were exceeded at certain frequencies for a short time.

In accordance with 10 C.F.R. Part 100, Appendix A, § V(a)(2), a licensee is required to shut down a nuclear power plant when the vibratory ground motion exceeds that of the OBE. In addition, the regulations state that “prior to resuming operations, the licensee will be required to demonstrate to the Commission that no functional damage has occurred to those features necessary for continued operation without undue risk to the health and safety of the public.” As the August 23, 2011 earthquake resulted in ground accelerations greater than those assumed in the design of North Anna 1 and 2, 10 C.F.R. Part 100, Appendix A, § V(a)(2) required North Anna 1 and 2 to be shut down and to remain shut down until the Licensee for this plant demonstrated to the NRC that no functional damage occurred to those features necessary for continued operation without undue risk to the health and safety of the public.

Following the earthquake, the NRC dispatched an augmented inspection team (AIT) to North Anna 1 and 2 to better understand the event and the Licensee’s response. The AIT’s findings included the following: (1) operators responded to the event in accordance with established procedures and in a manner that protected public health and safety, (2) the ground motion from the earthquake exceeded the plant’s licensed design basis, (3) no significant damage to the plant was identified, (4) safety system functions were maintained, and (5) some equipment issues were experienced. Overall, the AIT concluded that the event did not adversely impact the health and safety of the public. Safety limits were not approached and there was no measurable release of radioactivity associated with the event. The NRC Staff published an inspection report summarizing the AIT findings October 31, 2011 (ADAMS Accession No. ML113040031).

To demonstrate that no functional damage occurred as a result of the earthquake and that it was safe to operate North Anna 1 and 2 without undue risk to the health and safety of the public, the Licensee performed a number of inspections, tests, and analyses to address the requirements of Appendix A to 10 C.F.R. Part 100. This demonstration also aligned with the guidance in the Electric Power Research Institute (EPRI) document NP-6695, “Guidelines for Nuclear Plant Response to an Earthquake.” In Regulatory Guide (RG) 1.167, “Restart of a Nuclear Power Plant Shut Down by a Seismic Event,” the NRC endorsed EPRI NP-6695, with exceptions, as an acceptable way of performing inspections and tests of nuclear power plant equipment and structures prior to restart of a plant that has been shut down by a seismic event. A letter from the Licensee dated September 17, 2011 (ADAMS Accession No. ML11262A151), described the Licensee’s activities in support of the restart of North Anna 1 and 2 after the earthquake of August 23, 2011. In the letter, the Licensee enclosed its Restart Readiness Determination Plan for North Anna 1 and 2. (The Licensee later supplemented its plan numerous times in response to NRC requests for additional information (RAIs) issued to support the development of the NRC’s independent technical evaluation).

To further ensure compliance with regulatory requirements, the NRC issued

confirmatory action letter (CAL) No. 2-2011-001 to the Licensee of North Anna 1 and 2 on September 30, 2011 (ADAMS Accession No. ML11273A078), which confirmed the Licensee's commitment that the reactors at North Anna 1 and 2 would not be restarted until the NRC Staff had completed its review of the Licensee's demonstration to the Commission that no functional damage occurred to those features necessary for continued operation of North Anna 1 and 2 without undue risk to the health and safety of the public. In addition, the Licensee performed other testing and inspections not included in the NP-6695 guidelines, some of which it performed as a result of questions raised by the NRC Staff.

Following completion of the AIT inspection, the NRC sent another team of inspectors, the restart readiness inspection team (RRIT), to assess the Licensee's inspection program and readiness for restarting North Anna 1 and 2. The RRIT began its inspection on October 5, 2011. The RRIT followed Inspection Procedure 92702, "Followup on Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, and Alternative Dispute Resolution Confirmatory Orders." The following sources provided supplemental guidance to this inspection procedure: EPRI NP-6695, NRC RG 1.166, "Pre-Earthquake Planning and Immediate Nuclear Power Plant Operator Post-Earthquake Actions," RG 1.167; the AIT inspection report dated October 31, 2011; and input from NRC subject-matter experts.

The objectives of the RRIT included the following: (1) assess the Licensee's inspection process to ensure damage attributable to the event would be identified, (2) ensure the underlying causes of the dual-unit reactor trip and failure of the 2H diesel generator were properly identified and the appropriate corrective actions were assigned, (3) review how Licensee-identified issues were evaluated and dispositioned, (4) observe and review Licensee testing of plant systems and selected surveillance test data packages completed since the seismic event, (5) review the tracking and completion of the Licensee's committed actions, and (6) support a final determination as to the overall condition of the plant to support restart.

The RRIT completed its onsite inspection activities on October 14, 2011. They observed some earthquake-related damage to nonsafety-related equipment at North Anna 1 and 2 (e.g., limited damage to main generator stepup transformer bushings); however, this damage was considered minor (i.e., it was not functional damage that would preclude safe operation of the facility). In addition, the inspections led to the identification of nonearthquake-related issues. The NRC reviewed these issues through established Licensee and NRC processes to ensure they were adequately addressed without undue risk to the health and safety of the public.

The Licensee and the NRC Staff discussed the resolution of issues that the RRIT identified at an exit meeting held on November 7, 2011, that was documented in the RRIT's inspection report dated November 30, 2011 (ADAMS

Accession No. ML113340345). The RRIT concluded that the Licensee performed adequate inspections, walkdowns, and testing to ensure that the August 23, 2011, earthquake had not adversely affected safety-related structures, systems, and components (SSCs). The NRC's independent inspection of plant equipment, observation of selected surveillance testing, and its review of completed test data, calculations, root-cause evaluations, and other documents associated with the station's corrective action process and work order programs confirmed the Licensee's process to properly evaluate the operability and functionality of the plant's SSCs. The RRIT reviewed the unresolved items from the AIT and determined that the Licensee had completed the corrective actions necessary to support the restart of North Anna 1 and 2.

In addition to the onsite inspection activities, the NRC performed an independent technical evaluation of the information submitted by the Licensee to demonstrate that no functional damage occurred at North Anna 1 and 2 as a result of the August 23, 2011, earthquake. The regulatory requirements and guidance used in the NRC's independent technical evaluation of the Licensee's restart readiness determination included the following: (1) Appendix A of 10 C.F.R. Part 100, § V(a)(2); (2) the North Anna 1 and 2 updated final safety analysis report (UFSAR); (3) RG 1.167; (4) RG 1.166; (5) NRC Generic Letter (GL) 88-20, Supplement 4, "Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities," along with the Licensee's response to GL 88-20, Supplement 4; (6) International Atomic Energy Agency Safety Reports Series No. 66, "Earthquake Preparedness and Response for Nuclear Power Plants"; and (7) NRC Inspection Manual, Part 9900, "Operability Determinations and Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety," and the associated NRC Regulatory Issue Summary (RIS) 2005-20, Revision 1, "Revision to NRC Inspection Manual Part 9900 Technical Guidance, 'Operability Determinations and Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety.'" In the summary to the independent technical evaluation issued November 11, 2011 (ADAMS Accession No. ML11308B406), the NRC Staff concluded that the Licensee acceptably demonstrated that no functional damage occurred at North Anna 1 and 2 to those features necessary for continued operation and that North Anna 1 and 2 could be operated without undue risk to the health and safety of the public.

Although the NRC Staff concluded that North Anna 1 and 2 could be safely restarted, the Licensee identified several activities (inspections and tests) that would be performed as part of the restart process. The NRC monitored the startup of North Anna 1 and 2 to confirm that the plant would be safely operated (see inspection report at ADAMS Accession No. ML113540520). In addition to these startup activities, the Licensee identified several long-term action items. These long-term action items include those identified in section 6.3 of NP-6695

and include changes to the North Anna 1 and 2 UFSAR. The NRC-issued CAL No. NRR-2011-002 (ADAMS Accession No. ML11311A201) documents these actions, which are independent of the NRC's conclusion that the Licensee demonstrated that no functional damage occurred to North Anna 1 and 2 and that the plant could be restarted safely.

B. Concerns Raised by the Petitioners and the Response by the NRC

The Petitioners raised a total of sixteen concerns in the petition dated October 20, 2011, and in supplements to the original petition. Of these sixteen concerns, twelve were accepted for review, although the NRC Staff noted in its acceptance letter dated March 16, 2012, that six of these twelve concerns were undergoing NRC review as part of the lessons learned from the Fukushima event in Japan. The NRC Staff noted that this activity may take longer than the standard of 120 days for reaching a decision. The concerns that are deferred for consideration by this Partial DD will remain open and the NRC Staff will provide periodic updates on the status of their resolution.

This section discusses in detail the Petitioners' concerns and the NRC response to these concerns. Many of the concerns are addressed, either in full or in part, by the NRC inspections and technical evaluation that reviewed the Licensee's actions after the earthquake of August 23, 2011, to support completion of its Restart Readiness Determination Plan to demonstrate that no functional damage occurred at North Anna 1 and 2 to those features necessary for continued operation and that the units could be operated without undue risk to the health and safety of the public. The Petitioners' concerns and the NRC's resolution are described below.

Concern 1

Prior to the approval of restart for North Anna 1 and 2 after the earthquake of August 23, 2011, Virginia Electric and Power Company (the Licensee) should be required to obtain a license amendment from the NRC that reanalyzes and reevaluates the plant's design basis for earthquakes and for associated necessary retrofits.

The NRC Staff has stated its position in RIS 2005-20, and in the accompanying revision to Inspection Manual Part 9900, that the Licensee is permitted to start up from an outage as long as it can confirm operability of SSCs described in the technical specifications (TS) and demonstrate functionality for other safety-related and important-to-safety SSCs not described in the TS. As such, structures or components may exceed certain design-basis limits and still be considered acceptable for restart if the Licensee can confirm that they are operable or functional. In the RRIT inspection report dated November 30, 2011, and in the

NRC's technical evaluation dated November 11, 2011, the NRC found that the Licensee properly confirmed the SSCs as operable or functional before plant startup. None of the inspections conducted indicated any significant damage that would render systems inoperable.

In addition, the provisions of 10 C.F.R. Part 100, Appendix A, § V(a)(2), require that "if vibratory ground motion exceeding that of the OBE occurs, shutdown of the nuclear power plant will be required." The Licensee complied with that regulatory requirement on August 23, 2011. This regulation also states that "prior to resuming operations, the Licensee will be required to demonstrate to the Commission that no functional damage has occurred to those features necessary for continued operation without undue risk to the health and safety of the public." As documented in its technical evaluation of November 11, 2011, and in its RRIT inspection report of November 30, 2011, the NRC Staff determined through its independent evaluation that the Licensee met that requirement. Although the NRC Staff is monitoring and evaluating the Licensee's update of current licensing basis documentation (scheduled to be complete by April 30, 2013) to ensure its adequacy in light of the earthquake of August 23, 2011, there is no requirement for the Licensee to submit a license amendment request following an earthquake that exceeds its DBE.

Concern 2

Prior to the approval of restart for North Anna 1 and 2 after the earthquake of August 23, 2011, the Licensee should be required to ensure that North Anna 1 and 2 are subjected to thorough inspections of the same level and rigor.

To demonstrate that no functional damage occurred as a result of the earthquake and that it was safe to operate North Anna 1 and 2 without undue risk to the health and safety of the public, the Licensee performed detailed walkdowns of all the major systems at North Anna 1 and 2 and focused inspections of selected structures and components. In addition, NRC inspectors from the AIT and RRIT, NRC fuel experts, and the North Anna 1 and 2 NRC resident inspectors performed independent inspections and walkdowns. Nuclear industry seismic experts and nuclear systems personnel from another utility also conducted independent inspections and walkdowns of limited scope. These inspections sought to identify any physical damage or deformation that could potentially impact the operability or functionality of station SSCs.

Following each of the walkdowns and inspections performed by Licensee, industry, and NRC personnel, the Licensee reviewed any issues identified to determine if they were seismically related. If so, the Licensee entered them into the corrective action program (CAP) for evaluation to determine if they had been seismically induced and if so, what additional inspections or testing were required

to ensure operability or functionality. Before the station's staff conducted the walkdowns, the Licensee provided training to each engineer who took part in the inspection teams to ensure that they used a consistent approach in the walkdowns.

There were some differences in the exact number and level of inspections conducted at North Anna 1 in comparison with North Anna 2 based on plant status (e.g., the Licensee was already performing inspections for the North Anna 2 refueling outage and it took credit, where appropriate, for the scope of these inspections when they also addressed readiness for restart). The Licensee identified more than 400 surveillance procedures to be performed before declaring North Anna 1 "ready for restart," to demonstrate the availability and operability of components and systems important to nuclear safety or required to mitigate the consequences of an accident as defined in the UFSAR and TS. For North Anna 2 to achieve this demonstration, the Licensee identified more than 150 surveillance procedures for performance, in addition to those already scheduled to support the refueling outage before restarting the unit. While there were differences in the inspections conducted at each unit, the Licensee defined a methodology to be used in its walkdowns and communicated this methodology to the engineers involved in the inspection effort through a training module to ensure consistent performance of the procedures. In instances in which the level of inspection differed between the two units (e.g., the North Anna 2 reactor core was inspected, while the North Anna 1 reactor core was not), the Licensee provided an adequate rationale for the differences.

The RRIT concluded that the Licensee's staff adequately inspected plant SSCs to ensure that any damage from the August 23, 2011, seismic event was identified and, if found, was properly evaluated and corrected before initiating restart activities. As a result of the inspections performed by Licensee, industry, and NRC personnel, no significant seismically induced damage was identified that could affect the operability or functionality of plant SSCs. Only some instances of lesser issues were identified during these inspections, as described in the RRIT's inspection report, dated November 30, 2011. Based on the results of its inspections, the RRIT concluded that the Licensee's staff adequately inspected plant SSCs to ensure that any damage from the August 23, 2011, seismic event was identified and if found, was properly evaluated and corrected prior to initiating restart activities.

Concern 3

The Licensee should be required to reanalyze and reevaluate the North Anna Independent Spent Fuel Storage Installation (ISFSI) because of damage caused by the earthquake of August 23, 2011, and ensure that no threat is posed to public health and safety by its operation.

The Licensee has taken action to assess the structural integrity and radiation shielding capability of both the TN-32 cask and NUHOMS HD dry cask storage systems after the earthquake of August 23, 2011. The Licensee reviewed this event for reportability under 10 C.F.R. § 72.75, "Reporting requirements for significant events and conditions" (significant reduction in effectiveness of any spent fuel storage cask confinement system), and determined that the TN-32 displacement and the damage to the NUHOMS HD 32PTH caused by the earthquake of August 23, 2011, were not reportable. In addition, the Licensee completed an extensive operability evaluation and determined that the dry storage systems continue to perform their design safety functions.

The operability evaluation included extensive walkdowns to determine the condition of the spent fuel dry storage systems, ISFSI pads, and auxiliary equipment for the ISFSIs. The operability evaluation determined that: (a) ISFSI pads did not reveal any cracking or damage; (b) twenty-five of twenty-seven TN-32 casks moved slightly, with one moving by as much as 4.5 inches; (c) visual inspections of the casks did not reveal any damage; (d) spalling damage to the horizontal storage modules (HSMs) was minimal and did not impact the structural integrity or radiation shielding capability of the HSMs; (e) no movement occurred at the bases of the loaded HSMs (spacing between several HSM roofs indicated some very slight movement); (later surveys, conducted after the operability evaluation, indicated that all but one of the loaded HSMs exhibited a slight (less than 1 inch) sideways shift); (f) inlet and outlet vents were inspected and no abnormal blockage was found; (g) thermal performance measurements for all loaded HSM's were performed and no abnormal temperature differences were found; and (h) radiological surveys of both pads (Pad 1 supporting twenty-seven TN-32 casks, Pad 2 supporting twenty-six TN NUHOMS-HD 32PTH HSMs) indicated no changes to cask surface dose. Postseismic inspection results concluded that the NUHOMS HD 32PTH HSMs and TN-32 casks remain operable and continue to perform their intended design and safety functions.

The NRC Staff did not discover any significant safety issues at the North Anna ISFSI. This is based on (1) initial AIT confirmatory inspections to assess the condition of the ISFSIs, which concluded that there are no immediate safety issues associated with the movement of the vertical casks and horizontal storage ISFSI systems; and (2) the Licensee's actions to ensure that regulatory requirements continue to be met. In addition, radiological conditions at the ISFSI remain normal and monitoring systems are functional.

Licensee actions are under way to evaluate and repair, as necessary, the ISFSI dry-cask storage systems and components. In response to the NRC Staff's request, the Licensee has submitted an action plan that includes completion target dates for its evaluations and HSM repairs. Some actions identified in this plan have been completed (i.e., detailed visual inspections and HSM concrete repairs), while others remain ongoing. Ongoing actions include translation of seismic parameters

from the plant's power block to the ISFSI and analysis of the seismic event (using the resulting seismic acceleration response spectra), including an analysis of both systems (on Pads 1 and 2). These ongoing actions also include resolution of generic issues, such as seismic instrumentation and locations, pressure monitoring systems, and radiological surveys.

The NRC is monitoring and independently assessing the Licensee's analyses and corrective actions described in the action plan to ensure that the Licensee adequately addresses short- and long-term ISFSI issues. As part of this effort, the NRC Staff conducted an inspection of the ISFSI on January 19, 2012 (inspection report at ADAMS Accession No. ML12062A012). The NRC inspection report identified no findings. The NRC inspection team concluded that the Licensee's staff adequately inspected the plant's ISFSI, including associated SSCs, to ensure that any damage from the August 23, 2011 seismic event was identified and was being properly evaluated and corrected prior to initiating the next fuel loading campaign. The NRC inspectors did not identify any significant seismically induced damage. The inspectors also noted that items had been entered into the corrective action or work control programs as required; that required root-cause evaluations had been, or were being, conducted following the seismic event; and that the action plan established by the Licensee's staff was adequate and would be completed prior to introducing additional spent fuel into the ISFSI. The NRC Staff will continue to monitor the Licensee's progress in completing its action plan.

Concern 4

The Licensee should ensure the reliability and accuracy of the seismic instrumentation at North Anna 1 and 2.

The NRC Staff and the Licensee have evaluated the reliability and accuracy of the seismic instrumentation at North Anna 1 and 2, and the Licensee has taken a number of actions to address this issue. The AIT inspection report identified an unresolved issue (URI), URI 05000338, 339/2011011-06, "Seismic Alarm Panel," and this URI was later documented as a Green inspection finding (see inspection report at ADAMS Accession No. ML12131A545), although the finding did not involve a violation of NRC requirements. Following the seismic event, the Licensee installed a temporary uninterruptible power supply (UPS) to ensure that the seismic monitoring panel and its associated alarms, which are used to determine if an emergency plan entry is required, will remain operable during periods when power is being transferred between the normal supply and the emergency power supply. While the long-term corrective action calls for the UPS to be replaced with a different configuration, the immediate issue has been addressed and functionally tested. The Licensee is evaluating ways to upgrade the

existing seismic monitoring system as a long-term option. The RRIT inspectors determined that the Licensee had taken appropriate actions to address the issue and documented it in its CAP. Therefore, the RRIT identified no restart concerns.

In section 2.3, "Seismic Instrumentation," of the NRC Staff's technical evaluation dated November 11, 2011, the NRC Staff evaluated a number of issues associated with the seismic instrumentation at North Anna 1 and 2. As described in this report, there are two types of seismometers, Engdahl and Kinometrics, located at different elevation levels of the North Anna 1 containment and auxiliary buildings (as indicated in Figure 5 of the NRC Staff technical evaluation dated November 11, 2011). The seismic monitors for both types of equipment at the North Anna 1 basemat were connected to the seismic instrumentation panel located in the control room with indication of OBE exceedance. During the earthquake, the annunciation panel lost power for about 8 seconds. Therefore, the Licensee's plant operators were not informed about the occurrence or magnitude of the earthquake through the panel annunciator.

Several issues raised in the AIT inspection report about the seismometers and annunciation panel in the main control room (MCR) led the NRC Staff to develop an RAI regarding the Licensee's plans for modernization of the seismic instrumentation at both North Anna 1 and 2 for both rock- and soil-supported structures, to provide a reliable system and to accommodate onsite data interpretation. The Licensee's response indicated that the plan for modernization of the seismic instrumentation at North Anna 1 and 2 consists of completed and scheduled work. First, the Licensee seismically qualified and installed a UPS in the control room in September 2011. This UPS provides backup power to the Kinometrics equipment and Engdahl peak shock alarms in the control room. The seismic switch event alarm and peak shock alarms provide control room operators with immediate feedback on whether the OBE has been exceeded. Second, the Licensee installed an autonomous, temporary free-field seismic monitor within the North Anna 1 and 2 owner-controlled area, east of the training building, in September 2011. In addition, the Licensee updated the station abnormal procedure for seismic events to include reference to, and use of, the free-field monitor. Also, it put in place a procedure for obtaining and evaluating free-field seismic data as it relates to cumulative average velocity (CAV) and an OBE or DBE exceedance determination. Although the Licensee has not formally adopted RG 1.166 into its licensing basis, both of these actions facilitate the Licensee's ability to assess earthquake data within 4 hours of an earthquake as described in RG 1.166.

The Licensee also has initiated a project to replace the existing seismic equipment and MCR indication with more modern equipment. Permanent, free-field seismic equipment will be installed to facilitate the performance of CAV calculations. The upgrade will include installation of seismic recording instrumentation at the station's ISFSI pad. The Licensee completed the first phase

of equipment installation during the North Anna 1 spring 2012 refueling outage and is scheduled to complete the final phase by December 31, 2012.

As described in the AIT inspection report dated October 31, 2011, the NRC Staff found that Engdahl seismometers at North Anna 1 and 2 are less reliable than Kinometrics. The Licensee installed the free-surface and free-field seismometer with temporary settings. While this does not have the direct connection to the MCR instrument panel to alert plant operators immediately during an earthquake event, the plant operator still can make an appropriate operating and reporting decision within the 4-hour limit. Therefore, with the combination of Kinometrics and free-field seismometer, the NRC Staff considered the Licensee response acceptable. In addition, the Licensee had connected the MCR instrument panel with noninterruptible seismically qualified backup power; therefore, power disruption is not expected in a future earthquake event.

The Licensee indicated that the Kinometrics seismometers at the plant did not have accurate timing for the recorded time history because the start time of seismic data is estimated. The NRC Staff asked the Licensee to address how this potential uncertainty impacts the use of the seismic time history when matching it to other recorded events (e.g., the nuclear instrumentation signal changes) for the reactor shutdown root-cause analysis. In evaluating this issue, the NRC Staff had asked the Licensee to discuss any plans to update seismic instrumentation at the plant to provide better ground motion recordings for any future earthquake events.

Furthermore, the NRC Staff asked the Licensee to confirm the operability and reliability of the seismic instrumentation (specifically, channel orientation, sensor calibration, and sensitivity test implementation) and alarming systems to ensure they accurately record earthquake ground motion and provide real-time alarm notifications to the plant operators during any earthquake events.

The Licensee responded that the applicable Technical Requirements Manual (TRM) TS-required surveillances have been completed satisfactorily for the seismic instrumentation and alarming systems following the earthquake. These include channel functional testing and channel checks of installed instrumentation for functionality. This also included channel calibrations of all peak acceleration and response spectrum recorders and the associated control room alarm indications. Channel calibrations were completed for the time-history accelerographs and the seismic switch control room alarm indications. The Licensee identified a channel orientation issue for the time-history accelerographs whereby the horizontal sensors were 90 degrees off specified orientation. The Licensee entered this discrepancy into the CAP for resolution; however, there is no issue with either affected channel's functionality or the ability to record an earthquake event. Further investigation found no identifiable issues of a vertical recording channel interchanged for a horizontal recording channel for any of the installed systems.

Based on completed inspections and testing following the August 23, 2011

earthquake, the NRC Staff presently has no concerns with the functionality or reliability of the installed seismic instrumentation at North Anna 1 and 2. In addition, the Licensee indicated in its response dated October 10, 2011 (ADAMS Accession No. ML11286A019), that the seismic instrumentation at North Anna 1 and 2 will be upgraded to enhance the station's ability to monitor and assess seismic events. The NRC Staff agrees with the Licensee's short-term transitional usage of the current seismic instrumentation.

Concern 5

The NRC Staff made hasty decisions about the restart of North Anna 1 and 2 and gave priority to economic considerations. The long-term action plan was not even complete before the NRC Staff gave authorization to restart.

As discussed above, the Licensee based its schedule for restart of North Anna 1 and 2 after the August 23, 2011 earthquake on completion of all activities necessary to demonstrate to the NRC that no functional damage had occurred to those features necessary for continued operation of North Anna 1 and 2 without undue risk to the health and safety of the public. In both the RRIT's inspection report dated November 30, 2011, and the technical evaluation by the NRC Staff dated November 11, 2011, the NRC Staff found that the Licensee had performed the actions necessary to demonstrate meeting this standard. The purpose of the CAL dated November 11, 2011, was to respond to the earthquake of August 23, 2011, with a set of actions above and beyond those needed to ensure the safe startup and operation of North Anna 1 and 2.

Concern 6

Regulatory commitments are an inadequate regulatory tool for ensuring that the critical long-term tasks identified in the NRC Staff's confirmatory action letter dated November 11, 2011, are completed.

The Licensee identified several actions for completion in a letter dated November 7, 2011 (ADAMS Accession No. ML11314A069). These commitments are documented in the NRC-issued CAL No. NRR-2011-002, and are unrelated to the NRC's conclusion that the Licensee demonstrated that no functional damage occurred to North Anna 1 and 2 and that the plant could be safely restarted. The CAL lists a series of commitments with milestones ranging from December 31, 2011, to April 30, 2013.

As per the NRC's Enforcement Manual (ADAMS Accession No. ML-102630150), CALs are letters that the NRC Staff issues to licensees or vendors to emphasize and confirm a licensee's or vendor's agreement to take certain

actions in response to specific issues. Furthermore, the NRC expects licensees and vendors to adhere to any obligations and commitments addressed in a CAL. In the process of issuing CAL No. NRR-2011-002, the NRC Staff determined that the actions in it are consistent with the NRC Enforcement Policy and Enforcement Manual.

Concern 7

The Licensee needs to address the possibility of both boildown and rapid draindown events at the North Anna 1 and 2 spent fuel pool.

Concern 7 of this petition will be addressed by the scope of Recommendation 7 of the Near Term Task Force (NTTF) report dated July 12, 2011 (ADAMS Package No. ML11186A950). At the time of this Partial DD, the NRC Staff is still in the process of reaching a decision on this concern, and resolution of this issue is forthcoming. The NRC Staff will provide periodic status updates to the Petitioners concerning progress on its resolution. The most recent status report on Recommendation 7 of the NTTF can be found in SECY-12-0095, dated July 13, 2012 (ADAMS Accession No. ML12208A210).

Concern 8

The long-term storage of spent fuel in the spent fuel pool at North Anna 1 and 2 and at the North Anna ISFSI poses challenges to the public health and safety.

Concern 8 of this petition is addressed by the scope of Recommendation 7 of the Near Term Task Force (NTTF) report and by Additional Recommendation 5, "Program Plan for Transfer of Spent Fuel to Dry Cask Storage," of SECY-11-0037. A description of Additional Recommendation 5 and its status can be found in Enclosure 3 to SECY-12-0095. At the time of this Partial DD, the NRC Staff is still in the process of reaching a decision on this concern and resolution of this issue is forthcoming. The NRC Staff will provide periodic status updates to the Petitioners concerning progress on its resolution.

Concern 9

"Hardened onsite storage" strategies for spent fuel should be used at North Anna 1 and 2.

Concern 9 of this petition will be addressed substantially by Additional Recommendation 5 of SECY-11-0037. A description of Additional Recommendation 5 and its status can be found in Enclosure 3 to SECY-12-0095. At the time of this Partial DD, the NRC Staff is still in the process of reaching a decision on this

concern, and resolution of this issue is forthcoming. The NRC Staff will provide periodic status updates to the Petitioners concerning progress on its resolution.

Concern 9 also has been addressed by the NRC Staff's consideration of a petition for rulemaking (PRM) regarding hardened onsite storage, PRM 72-6, "Petition for Rulemaking Submitted by C-10 Research and Education Foundation, Inc." (The NRC's evaluation of Petitioner Request 11 of PRM 72-6, in particular, addresses hardened onsite storage). The status of the NRC's consideration of Petitioner Request 11 of PRM 72-6 can be found in the *Federal Register* notice dated October 16, 2012 (77 Fed. Reg. 63,254).

Concern 10

Concerns exist about the response of North Anna 1 and 2 to a prolonged station blackout (SBO).

At the time of the proposed Partial DD, the NRC Staff had issued an advanced notice of proposed rulemaking (ANPR) dated March 20, 2012 (77 Fed. Reg. 16,175), which addressed the substance of this concern. The NRC issued this ANPR to begin the process of considering amendments of its regulations that address a condition known as SBO, which involves the loss of all onsite and offsite AC power at a nuclear power plant. Since the issuance of the proposed Partial DD, the public comment period for this ANPR has ended and the NRC Staff may consider potential rulemaking regarding SBO in the future.

Concern 11

The current emergency evacuation plans for North Anna 1 and 2 need to be revised to reflect the possible need to evacuate a larger area than that identified in the current emergency planning zone.

Concern 11 of this petition will be addressed by the scope of SECY-11-0137, Additional Recommendation 3, "Program Plan for Basis of Emergency Planning Zone Size," described in Enclosure 3 of SECY-12-0095, dated July 13, 2012. At the time of this Partial DD, the NRC Staff is still in the process of reaching a decision on this concern, and resolution of this issue is forthcoming. The NRC Staff will provide periodic status updates to the Petitioners concerning progress on its resolution.

Concern 12

Concerns exist about damage to the structural integrity of the spent fuel pool structure at North Anna 1 and 2 as represented on pages 41 and 42 of the

NRC Staff's technical evaluation for the restart of North Anna 1 and 2, dated November 11, 2011.

Although Concern 12 was addressed by the technical evaluation for the restart of North Anna 1 and 2, dated November 11, 2011, Concern 12 also is addressed by the evaluation of spent fuel pool integrity required by Order EA-12-049 (ADAMS Accession No. ML12054A736) and the associated request for information (ADAMS Accession No. ML12073A348), dated March 12, 2012. In particular, Enclosure 1, "Recommendation 2.1: Seismic," to the request for information (ADAMS Accession No. ML12056A047) requires a detailed evaluation of the Licensee's spent fuel pool integrity.

C. Enforcement Actions Requested by the Petitioners and the Response by the NRC

The NRC Staff has evaluated the Petitioners' request to take escalated enforcement action against the Licensee and suspend the operating licenses for North Anna 1 and 2 until the completion of a set of activities described in the petition. With respect to the Petitioners' request for enforcement action, the NRC Staff concludes that it has partially granted this request in that the NRC issued CAL No. 2-2011-001, dated September 30, 2011, which stated the following:

This Confirmatory Action Letter (CAL) confirms that NAPS [North Anna Power Station] Units 1 and 2 will not enter Modes 1-4 (as defined in the technical specifications), until the Commission has completed its review of your information, performed confirmatory inspections, and completed its safety evaluation review. The permission to resume operations will be formally communicated to Virginia Electric and Power Company (VEPCO) in a written correspondence.

VEPCO shall submit to the NRC all documentation requested by the NRC as being necessary to demonstrate that NAPS Units 1 and 2 can be operated safely following the seismic event that exceeded the safe shutdown event analyzed in the current revision of the UFSAR.

This CAL will remain in effect until the NRC has (1) reviewed your information, including responses to staff's questions and the results of your evaluations, and (2) the staff communicates to you in written correspondence that it has concluded that NAPS can be operated without undue risk to the health and safety of the public or the environment.

This CAL, therefore, confirmed the Licensee's understanding that North Anna 1 and 2 could not be restarted unless and until the Licensee had demonstrated to the NRC Staff's satisfaction that "no functional damage has occurred to those features necessary for continued operation without undue risk to the health and safety of the public," consistent with the requirements of 10 C.F.R. Part 100,

Appendix A, § V(a)(2). Restart was contingent upon the Licensee addressing a number of issues before startup, many of which were identified in whole or in part as concerns in the petition.

Issues in the petition, identified and discussed above as Concerns 1, 2, 3, 4, and 5, were discussed and substantially addressed, either in the inspection reports issued October 31, 2011, and November 30, 2011, or in the NRC technical evaluation dated November 11, 2011. The NRC Staff completed its activities before restart to ensure that, before resuming operations, the Licensee had demonstrated that no functional damage had occurred to those features at North Anna 1 and 2 necessary for continued operation without undue risk to the health and safety of the public. In that respect, these concerns described in the petition as requiring completion before the restart of North Anna 1 and 2 have been addressed before restart.

The NRC Staff evaluated the issue in the petition, identified and discussed above as Concern 6. Disposition of this concern by the NRC Staff differs from the course of action requested in the petition. In that respect, this aspect of the petition is denied for the reasons discussed above.

Six of the issues in the petition, identified and discussed above as Concerns 7, 8, 9, 10, 11, and 12, were accepted for review by the NRC Staff and were initially identified as concerns that may take longer than the target time frame for reaching a decision on a petition based on the fact that these concerns were undergoing NRC review as part of the agency's response to the Fukushima event in Japan. After reviewing the NRC's progress in responding to the Fukushima event since acceptance of the petition for review, the NRC Staff has determined that Concerns 10 and 12 have been addressed by NRC activities associated with the NTTF. Concerns 7, 8, 9, and 11 are still identified as concerns that will take longer than the target time frame for reaching a decision. The NRC Staff commits to providing periodic status updates to the Petitioners on the resolution of these concerns. Concerns 7, 8, 9, and 11 are not fully addressed in the DD. Therefore, this DD is partial.

III. CONCLUSION

Based on the above, the Office of Nuclear Reactor Regulation has decided to partially grant the Petitioners' request. As provided in 10 C.F.R. 2.206(c), a copy of this Partial DD will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, the Decision will constitute the final action of the Commission 25 days after the date of the Decision

unless the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE NUCLEAR
REGULATORY COMMISSION

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 19th day of October 2012.

ATTACHMENT

RESOLUTION OF COMMENTS ON THE PROPOSED PARTIAL DIRECTOR'S DECISION ISSUED JULY 10, 2012

By letter dated July 10, 2012 (Agencywide Documents Access and Management System (ADAMS) Package No. ML12165A205), the Staff of the U.S. Nuclear Regulatory Commission (NRC) issued a proposed Partial Director's Decision (DD) regarding a petition submitted by letter dated October 20, 2011 (ADAMS Accession No. ML11293A116), as supplemented November 2, 2011 (ADAMS Accession No. ML11308A027), December 12, 2011 (ADAMS Accession No. ML12033A025), December 15, 2011 (ADAMS Accession No. ML12060A197), and February 2, 2012 (ADAMS Accession No. ML12047A240).

The NRC Staff sent a copy of the proposed Partial DD to the Petitioners and to the Licensee for comment on July 10, 2012 (ADAMS Accession Nos. ML12165A208 and ML12165A209, respectively). By letter dated July 30, 2012 (ADAMS Accession No. ML12219A120), the Licensee indicated that it had no comments. By electronic mail dated July 31, 2012 (ADAMS Accession No. ML12261A228), Paul Gunter and Kevin Kamps of Beyond Nuclear, one of the parties to the petition, sent comments on the proposed Partial DD. By electronic mail dated July 31, 2012 (ADAMS Accession No. ML12261A227), Scott Price of the Alliance for Progressive Values (APV), another party to the petition, indicated that the comments submitted by Beyond Nuclear "accurately describes APV's concerns as well" and restated the comments contained in the letter by Beyond Nuclear. The comments by the Petitioners and the NRC Staff's response to them are discussed below.

(Note: The comments and NRC responses are divided into sections to more clearly organize and address the comments. These divisions were not in the original letter by the Petitioners.

Comment 1

Beyond Nuclear takes this opportunity to identify two ongoing federal actions that pertain to the onsite storage of high level nuclear waste at the seismically active North Anna nuclear power station.

- 1) The NRC Japan Lessons Learned Directorate Compliance with NRC Order [EA-]2012-049 [ADAMS Accession No. ML12054A736] Modifying Licenses with Regard to Requirements for Mitigating Strategies broadly addresses strategies for developing, implementing and maintaining reactor core cooling, containment and spent fuel pool cooling in a three phase

approach basically; 1) using installed equipment, 2) bringing in portable equipment and; 3) indefinite sustainment using off site resources.

Specific to the spent fuel pool issue, EA-12-049 at 4.0 lays out the “Spent Fuel Pool Cooling Strategies.”

Beyond Nuclear notes that the focus of this action is to increase the reliability to utilize existing fire protection equipment rather than enhancing and maintaining emergency back-up power (AC [alternating current] and DC [direct current] as a Class E-1 system for maintaining reliable spent fuel pool cooling during sustained station blackout conditions. Beyond Nuclear maintains that allowing the spent fuel pool to boil off cooling water inventory and falling back to providing reliable make up water capability still introduces potential unintended consequences from the condensation of water in the boil off process. These unintended consequences can include the precipitation leading to the failure of electrical circuits, sump clogging and other adverse impacts.

Beyond Nuclear further notes that none of these actions involve Dominion Nuclear reconfiguring the current high-density storage irradiated fuel inventories of [North Anna Power Station (North Anna)] Units 1 and 2 to open frame, low density storage by accelerating the transfer of irradiated fuel >5 years to independent dry storage casks in Hardened On-Site Storage (HOSS) configurations also described as “Robust Storage of Spent Nuclear Fuel” which Beyond Nuclear continues to strive for.

Thus, EA-2012-049 fails to address the more fundamental problem and substantial risk from overcrowded high-density storage of high level radioactive waste in the spent fuel pools.

- 2) The Japan Lessons Learned Directorate Compliance with Order EA-2012-051 [ADAMS Accession No. ML12233A698] Spent Fuel Pool Cooling focuses on simply enhancing spent fuel pool monitoring instrumentation and similarly fails to address the much more significant and fundamental problem of over crowded high density storage of high level radioactive waste in the Unit 1 and 2 spent fuel pools.

These Orders constitute the NRC and industry actions (including Dominion) and commitments and simply focus on make-up water capability and enhancing spent fuel pool instrumentation.

Beyond Nuclear finds these Orders fundamentally defective and, as such, do not constitute sufficient and adequate enforcement action as requested by Beyond Nuclear and joint petitioners in their October 20, 2011 as supplemented.

Response to Comment 1

The proposed partial DD is not based on either order EA-12-049 or EA-12-051, with

the exception of concern 12, where it stated that EA-12-049 and a related request for information dated March 12, 2012, addressed the substance of this concern.

The proposed partial DD deferred decisions on concern 7, related to spent fuel pool boil off, and concern 9, related to hardened onsite storage, in part because these concerns were not fully addressed by the scope of these current orders. The NRC staff is not crediting EA-12-049 to address concern 7 or concern 9. It is anticipated that these concerns will be addressed by ongoing efforts by the NRC staff associated with the lessons-learned from the Fukushima event.

The NRC did not modify the partial DD as a result of this comment.

Comment 2

Irradiated fuel pools containing high-level radioactive waste in nuclear power reactors were designed for temporary storage only and to store only a small fraction of the inventories they currently hold. The failure to establish a scientifically accepted and licensed nuclear waste management strategy has resulted in North Anna 1 and 2, as at other U.S. plants containing several times as much spent fuel as the one at Fukushima's Unit 4, and stored in a densely packed configuration that would be harder to cool in the event of a rapid loss of pool water. The emergency enforcement action sought by the petitioner(s) is that the spent fuel pool hazard be decreased by accelerating the transfer of irradiated fuel >5 years out of the reactor into Hardened On-Site Storage in qualified and robust dry casks, thereby reducing the density of the fuel remaining in the pools and segregating the hazardous material into smaller inventories. To the contrary, NRC has instead assigned accelerated transfer of spent fuel to dry storage issues to Tier 3 — effectively placing it at the agency's lowest priority. Moreover, the [NRC] staff has determined that the current regulatory approaches to these issues are acceptable (including maintaining high-density storage in spent fuel pools) only to "review" new information as it becomes available as a result of specific ongoing activities to confirm this conclusion and gain additional insights.

In fact, the Orders do not demonstrate what effectively can be done if the newly ordered irradiated fuel pool monitors show that the level is not adequate to support operation of the normal fuel pool cooling system, the level is not adequate to provide substantial radiation shielding for a person standing on the spent fuel pool operating deck, and the level where the fuel remains covered and actions to implement make-up water addition should not longer be deferred." (Order, Appendix 2)

Beyond Nuclear maintains that jury-rigged systems do not provide reasonably adequate protection and can therefore fail to maintain and add water to an affected pool in sufficient quantity to prevent a pool fire under certain circumstances. Therefore, reducing the probability of a pool fire should be NRC's top priority by maintaining reliable cooling functions. Beyond Nuclear supports and maintains the argument that the most reasonable, effective and reliable measure to prevent a high-level radioactive waste storage pool fire would be to reconfigure and re-equip

the pool with low-density, open-frame racks with the transfer to Hardened On Site Storage casks.

Response to Comment 2

Issues regarding hardened onsite storage, concern 9 of the petition, are being addressed as part of ongoing efforts by the NRC staff associated with the lessons-learned from the Fukushima event and by the NRC's evaluation of a petition for rulemaking. By letter dated December 15, 2011 (ADAMS Accession No. ML113490055), the NRC Commissioners issued a memorandum regarding NRC staff requirements associated with SECY-11-0137, which provided a prioritization of recommended action to be taken in response to Fukushima lessons learned (e.g. according to tier). The current approach to resolution of concern 9 outlined in the Partial DD is consistent with current NRC policy as expressed in the NRC staff requirements memorandum dated December 15, 2011.

The NRC did not modify the partial DD as a result of this comment.

Comment 3

Therefore, Beyond Nuclear submits that NRC's assumptions about North Anna's operator's (as generically applicable to all US reactor operators') capability to mitigate an accident as presented in EA-2012-049 and EA-2012-051 are unrealistically optimistic and unreliable. The operator's ability to carry out mitigative measures can be severely degraded in an accident environment involving fuel damage. Therefore, Beyond Nuclear maintains the argument that the aforementioned Orders as referenced must be supplemented as part of a Tier 1 strategy to include a requirement for open-frame, low-density pool storage and place assemblies >5 years out of the reactor in dry casks.

Therefore, Beyond Nuclear does not find the NRC proposed partial DD of July 10, 2012 to adequately or acceptably address its request for emergency enforcement action at the North Anna Nuclear Generating Station as pertains to high-level nuclear waste storage pools on a seismically active site.

Response to Comment 3

With respect to safe operation of North Anna 1 and 2, the NRC staff has evaluated the licensee's ability to safely operate North Anna 1 and 2, in the inspection reports issued October 31, 2011 (ADAMS Accession No. ML113040031), and November 30, 2011 (ADAMS Accession No. ML113340345), and in the NRC technical evaluation dated November 11, 2011 (ADAMS Accession No. ML11308B406). These activities by the NRC staff were completed before restart to ensure that, before resuming operations, the licensee had demonstrated no functional damage

had occurred to those features at North Anna 1 and 2, necessary for continued operation without undue risk to the health and safety of the public.

The NRC did not modify the partial DD as a result of this comment.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

Eric J. Leeds, Director

In the Matter of

Docket Nos. 50-003

50-247

50-286

**(License Nos. DPR-5,
DPR-26, DPR-64)**

**ENTERGY NUCLEAR
OPERATIONS, INC.,
ENTERGY NUCLEAR
INDIAN POINT 2, LLC,
and ENTERGY NUCLEAR
INDIAN POINT 3, LLC
(Indian Point Units 1, 2,
and 3)**

October 24, 2012

By e-mail dated March 28, 2011, the Attorney General of the State of New York submitted a 10 C.F.R. § 2.206 petition. The Petitioner asked the NRC to take immediate action and issue an Order requiring the following actions regarding Indian Point Nuclear Generating Units No. 1, 2, and 3:

- Identify any violations at Indian Point of paragraphs F and G of section III of Appendix R, “Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979,” to 10 C.F.R. § Part 50, “Domestic Licensing of Production and Utilization Facilities,” that have existed as of the date of the petition (March 28, 2011).
- Compel Entergy Nuclear Operations, Inc. (Entergy), and its affiliates to comply on or before September 20, 2011, with the requirements of paragraphs F and G for all fire zones at Indian Point Units 2 and 3, and any

Indian Point Unit 1 fire zone or system, structure, or component that Indian Point Units 2 and 3 rely upon.

- Convene an evidentiary hearing before the Commission to adjudicate the violations at Indian Point by Entergy and its affiliates of paragraphs F and G of 10 C.F.R. Part 50, § III of Appendix R.

A final Director's Decision was issued on October 24, 2012.

With respect to the Petitioner's request, the NRC Staff concluded that there were no violations of the Commission's fire protection regulations on March 28, 2011. However, through subsequent inspections, NRC inspectors identified violations and the Licensee agreed to take appropriate actions to be in full compliance by spring 2014. Therefore, the NRC granted the Petitioner's request to identify violations of fire protection regulations and to take appropriate enforcement actions.

The NRC Staff denied the Petitioner's request to compel full compliance with all fire protection requirements by September 20, 2011. However, subsequent violations were identified and the Licensee has provided its plans and schedules for resolution. Therefore, the NRC granted the Petitioner's request that the Licensee be brought into full compliance with the Commission's fire protection regulations. This is planned to be accomplished by spring 2014.

The NRC Staff denied the Petitioner's request for an evidentiary hearing before the Commission.

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

I. INTRODUCTION

By electronic transmission dated March 28, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML110890871), Eric T. Schneiderman, Attorney General for the State of New York, the Petitioner, submitted a petition under section 2.206 of Title 10 of the *Code of Federal Regulations* (10 C.F.R.), "Requests for Action under This Subpart," to Mr. R. W. Borchardt, Executive Director for Operations, U.S. Nuclear Regulatory Commission (NRC, or the Commission). The Petitioner requested that the NRC take enforcement action to correct alleged noncompliance with fire protection regulations at Indian Point Nuclear Generating, Units 1, 2, and 3.

A. Actions Requested

The Petitioner asked the NRC to take immediate action and issue an Order

requiring the following actions regarding Indian Point Nuclear Generating Units 1, 2, and 3:

- Identify the violations of paragraphs F and G of section III of Appendix R, “Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979,” to 10 C.F.R. Part 50, “Domestic Licensing of Production and Utilization Facilities,” which exist as of the date of the petition (March 28, 2011) at Indian Point Units 1, 2, and 3.
- Compel Entergy Nuclear Operations, Inc. (Entergy, or the Licensee), and its affiliates to comply on or before September 20, 2011, with the requirements in paragraphs F and G for all fire zones in Indian Point Units 2 and 3, and any Indian Point Unit 1 fire zone or system, structure, or component that Indian Point Units 2 and 3 rely upon.
- Convene an evidentiary hearing before the Commission to adjudicate the violation of paragraphs F and G at Indian Point Units 1, 2, and 3, by Entergy and its affiliates.

As the basis for the request, the Petitioner stated, in part, the following:

- The Petitioner noted that the NRC’s fire safety regulations found in 10 C.F.R. § 50.48(b) and Appendix R to 10 C.F.R. Part 50 have been in effect since 1980 and the Indian Point reactors still do not comply with the prescriptive requirements.
- The Petitioner cited the population centers adjacent to the Indian Point facility and the associated consequences of a major fire and radiological release at Indian Point. According to the Petitioner, more than 17 million people live within 50 miles of the Indian Point site, which has the highest surrounding population of any operating reactor site in the country. The Petitioner also notes that Indian Point is located within 5 miles of the New Croton Reservoir in Westchester County, which provides drinking water for New York City.
- The Petitioner noted that Indian Point was built before the NRC or its predecessor, the Atomic Energy Commission, developed siting criteria. The Petitioner questioned if the Commission would approve a reactor facility at this site today.
- The Petitioner opined that approximately half of the core damage risk at operating reactors results from accident sequences initiating from fires.
- The Petitioner described past investigations on fire barriers, specifically Thermo-Lag and Hemyc, by both the NRC’s Office of the Inspector General and the Government Accountability Office. The Petitioner observed

that both products failed to meet their endurance ratings during extended testing. The Petitioner stated that the NRC Staff has not been aggressive in resolving fire barrier issues or in taking meaningful enforcement action against the Indian Point facility.

- The Petitioner focused on the proposed exemptions to Appendix R to 10 C.F.R. Part 50 submitted by the Licensee on March 6, 2009. These exemption requests would require NRC approval of operator manual actions (OMAs) in many fire areas at Indian Point. The Petitioner stated that NRC regulations do not authorize OMAs as a way to protect a redundant system from fire, and it recommended that the NRC deny the OMAs.
- The Petitioner referred to the accident at the Fukushima Dai-ichi Nuclear Power Plant that resulted from the March 11, 2011, Great Tohoku Earthquake and subsequent tsunami. The Petitioner questioned whether plant operators at Indian Point would be capable of performing the necessary manual actions during a similar disaster.
- In conclusion, the Petitioner stated that (1) the NRC should reserve exemptions for extraordinary circumstances, (2) the NRC should not approve the Licensee's proposed exemptions, and (3) Entergy had not made a serious effort to comply with federal regulations.

Representatives of the Petitioner met with the Office of Nuclear Reactor Regulation's (NRR's) Petition Review Board (PRB) on May 9, 2011, to clarify the bases for the petition. The transcript of this meeting, included in the meeting summary dated June 8, 2011 (ADAMS Accession Nos. ML111520459 and ML111520469), has been added as a supplement to the petition and is available for inspection at the NRC's Public Document Room (PDR), located at One White Flint North, Room O1-F21, 11555 Rockville Pike (first floor), Rockville, Maryland 20852. Publicly available documents created or received at the NRC are accessible electronically through ADAMS in the NRC Library at <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC's PDR reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by sending an e-mail to PDR.Resource@nrc.gov.

In a letter dated June 30, 2011 (ADAMS Accession No. ML111520393), the NRC informed the Petitioner that the agency denied the request for immediate action. The NRC informed the Petitioner that the agency identified no safety concerns when considering compensatory measures in place. Therefore, the NRC had no basis for taking immediate actions. Finally, the NRC informed the

Petitioner that the agency was referring the issues in the petition to NRR for appropriate action.

On July 2, 2012, the NRC issued the proposed Director's Decision (ADAMS Accession No. ML120880203) and requested comments from the Petitioner (ADAMS Accession No. ML120880169) and Entergy (ADAMS Accession No. ML120880186). On August 1, 2012, the NRC received comments from both the Petitioner (ADAMS Accession No. ML12222A134) and Entergy (ADAMS Accession No. ML12219A307). Additional comments were received from the Petitioner by letter dated September 19, 2012 (ADAMS Accession No. ML-12272A287). The attachment to this final Director's Decision addresses these comments. Finally, the NRC modified its proposed Director's Decision based on the points raised in the comments.

II. DISCUSSION

Plants licensed to operate before January 1, 1979, must meet the fire safety regulations in section III.G of Appendix R to 10 C.F.R. Part 50. Indian Point Nuclear Generating Unit 1 was permanently shut down on October 31, 1974, and it has remained in safe storage (SAFSTOR) status. The NRC does not review Unit 1 for compliance with Appendix R because fuel has been permanently removed from the reactor vessel. The NRC's program for overseeing the safe operation of a nuclear power reactor that has been permanently shut down is described in Inspection Manual Chapter 2561, "Decommissioning Power Reactor Inspection Program." On January 31, 1996, Amendment No. 45 revised the Indian Point Unit 1 license to possession-only status and revised the technical specifications. Technical Specification 2.11, "Fire Protection," states that Units 1 and 2 share a common fire protection program, which is addressed in Appendix A to the Indian Point Unit 2 Facility Operating License No. DPR-26. Therefore, any system, structure, or component located at Unit 1 that supports the fire protection program at Unit 2, will be documented in Unit 2 inspection activities.

The Unit 2 station blackout diesel generator, which also supports alternative shutdown capability for Appendix R requirements, is located in a Unit 1 structure. However, neither the diesel generator fire zone nor any OMAs related to the Unit 2 station blackout diesel generator were included in the Licensee's request for exemptions. As a result, the agency does not consider systems, structures, and components at Unit 1 applicable to this petition.

Indian Point Nuclear Generating Units 2 and 3 were licensed before January 1, 1979, and must meet the established level of protection as intended by section III.G of Appendix R to 10 C.F.R. Part 50. The NRC reviewed inspection reports issued from January 1, 2010, to the present and found that there were no violations of fire protection requirements at Indian Point Units 2 and 3, effective

on March 28, 2011, the date of the petition. The Triennial Fire Protection Inspection Report at Unit 2, issued on May 7, 2010 (ADAMS Accession No. ML101270240), identified two Green (very low safety significance) noncited violations (NCVs). The Triennial Fire Protection Inspection for Unit 3, issued on July 11, 2011 (ADAMS Accession No. ML111920339), identified a Green NCV. Most recently, the inspection report dated August 16, 2012 (ADAMS Accession No. ML12229A128), which the Director's Decision will discuss further, identified violations at both operating units for reliance on unapproved OMAs.

The underlying purpose of section III.G of Appendix R to 10 C.F.R. Part 50 is to ensure that the ability to achieve and maintain safe shutdown is preserved following a fire event. Section II of Appendix R to 10 C.F.R. Part 50 states that a Licensee's fire protection program shall extend the concept of defense-in-depth to fire protection with the following objectives:

- to prevent fires from starting;
- to rapidly detect, control, and promptly extinguish fires that do occur; and
- to provide protection for structures, systems, and components important to safety so that a fire not promptly extinguished by the fire suppression activities will not prevent the safe shutdown of the plant.

Paragraph III.G.2 of Appendix R to 10 C.F.R. Part 50 requires one of the following means to ensure that a redundant train of safe-shutdown cables and equipment is free of fire damage in instances in which redundant trains are located in the same fire area outside of primary containment:

- a. separation of cables and equipment by a fire barrier having a 3-hour rating;
- b. separation of cables and equipment by a horizontal distance of more than 20 feet with no intervening combustibles or fire hazards and with fire detectors and an automatic fire suppression system installed in the fire area; and
- c. enclosure of cables and equipment of one redundant train in a fire barrier having a 1-hour rating and with fire detectors and an automatic fire suppression system installed in the fire area.

However, as a result of safe-shutdown-focused inspections conducted in 2000, the NRC identified that, in lieu of the methods specified in paragraph III.G.2, some Licensees, including Indian Point, were crediting OMAs to achieve and maintain safe shutdown in the event of a fire affecting areas in which both trains of a safe-shutdown system or component are colocated. On June 30, 2006, the NRC issued Regulatory Issue Summary (RIS) 2006-10, "Regulatory Expectations with Appendix R Paragraph III.G.2 Operator Manual Actions" (ADAMS Accession

No. ML061650389), which stated that the use of OMAs in lieu of the protection methods specified in paragraph III.G.2 of Appendix R to 10 C.F.R. Part 50, is not consistent with the regulations and that plants need regulatory approval for each specific OMA proposed.

On June 30, 2007, the NRC issued Enforcement Guidance Memorandum (EGM) 07-004, "Enforcement Discretion for Post-Fire Manual Actions Used as Compensatory Measures for Fire Induced Circuit Failures" (ADAMS Accession No. ML071830345). EGM 07-004 established March 6, 2009, as the date by which Licensees must complete corrective actions for OMA noncompliances to qualify for enforcement discretion for those violations. As per EGM 07-004, available Licensee corrective actions included submission of exemption requests. In accordance with EGM 07-004, enforcement discretion continues for the duration of the NRC Staff review of licensing actions, including exemption requests.

On March 6, 2009, Entergy submitted requests for exemptions from the requirements of section III.G of Appendix R to 10 C.F.R. Part 50, consistent with information provided in Regulatory Issue Summary (RIS) 2006-10 and EGM 07-004, for Indian Point Nuclear Generating Units 2 and 3 (ADAMS Accession Nos. ML090770151 and ML090760993). The exemptions proposed OMAs as a permanent resolution for credited safe-shutdown components that could be rendered incapable of performing their safety function if either the component or supporting electrical cables were damaged by fire in a fire area. Since EGM 07-004 provided enforcement discretion, NRC inspectors did not cite violations for these potential noncompliances during the Staff's review.

As previously discussed, the Petitioner focused on the NRC Staff review of the Licensee's proposed exemptions that would rely on OMAs. In addition, the Petitioner requested that the NRC identify all violations from sections III.F and III.G of Appendix R to 10 C.F.R. Part 50. However, the Licensee did not request any exemptions from section III.F of Appendix R to 10 C.F.R. Part 50. Section III.F requires that fire detection systems shall be automatic and capable of operating with or without offsite power. The Licensee requested exemptions from the safe shutdown requirements of Section III.G of Appendix R to 10 C.F.R. Part 50. Furthermore, the Staff guidance documents (i.e., RIS 2006-10 and EGM 07-004) only address section III.G and not III.F. There were no violations associated with section III.F and, as a result, this Director's Decision does not address violations with respect to section III.F of Appendix R to 10 C.F.R. Part 50.

In May 2011, NRC regional inspection Staff performed an inspection at Indian Point in accordance with Inspection Procedure 71111.05T, "Fire Protection (Triennial)." In the ensuing inspection report dated July 11, 2011 (ADAMS Accession No. ML111920339), NRC inspectors reviewed the Licensee's proposed OMAs in accordance with the inspection procedure.

By letters dated February 1, 2012 (ADAMS Accession Nos. ML112140509 and ML112200442), the NRC completed its review, approving some exemption requests but denying others at Indian Point Nuclear Generating, Units 2 and 3. By separate letter, also dated February 1, 2012 (ADAMS Accession No. ML12031A176), the NRC informed the Licensee that the period of enforcement discretion for noncompliance with NRC fire protection requirements ended with the issuance of these letters. It also notified the Licensee that the OMAs not approved represented potential noncompliances with 10 C.F.R. 50.48(b) and section III.G of Appendix R to 10 C.F.R. Part 50, pending completion of inspections by NRC Region I inspectors. The NRC directed that, within 30 days, the Licensee provide its schedule and plans to achieve and verify compliance with the requirements of section III.G of Appendix R to 10 C.F.R. Part 50, for those areas in which the NRC denied the Licensee's request for an exemption. The NRC informed the Licensee that, following receipt and review of the Licensee's response, the NRC would complete appropriate inspection activities relating to this issue and then inform the Licensee of its enforcement decisions.

By letter dated March 1, 2012 (ADAMS Accession No. ML12074A028), the Licensee provided its schedule and planned actions for completing corrective actions that will resolve each issue related to protection of redundant safe shutdown trains and thereby comply with the applicable requirements of paragraph III.G.2 of Appendix R to 10 C.F.R. Part 50, for both Indian Point operating units. Compliance with section III.G of Appendix R to 10 C.F.R. Part 50, would be without the use of exemptions to justify reliance upon OMAs. The Licensee informed the NRC that it will accomplish its planned resolution through a combination of engineering analysis and plant modifications. The engineering analysis will consist of revisions to the respective post-fire safe-shutdown analysis and methodology. Plant modifications will involve installation of appropriately rated fire barriers, potential rerouting of circuits, and potential modification of circuit protection or control schemes. The Licensee informed the NRC that, with few exceptions, it expects to complete all engineering analyses and plant modifications by the end of calendar year 2012. Exceptions to projected completion involve plant modifications for Indian Point Units 3 and 2, which will not be completed until the spring 2013 and 2014 refueling outages, respectively, because those modifications involve activities that require plant outages to install.

In a letter dated March 22, 2012 (ADAMS Accession No. ML120820384), the NRC responded to the Licensee's letter of March 1, 2012. The NRC informed the Licensee that a near-term inspection would verify that plans for achieving full compliance with fire protection regulations have been entered into the Licensee's corrective action program, compensatory measures are appropriate and remain in place, and that the schedule for achieving full compliance will adequately assure public health and safety. The NRC also advised the Licensee that the

agency would perform additional inspections to monitor progress in completing corrective actions.

In April 2012, NRC inspectors reviewed the ongoing implementation of the Licensee's corrective actions to restore full compliance with paragraph III.G.2 of Appendix R to 10 C.F.R. Part 50 regarding denied exemptions to implement OMAs. The inspection report the NRC issued on August 16, 2012 (ADAMS Accession No. ML12229A128), cited violations at both operating units for use of unapproved OMAs to mitigate safe shutdown equipment malfunctions caused by a fire-induced single spurious actuation in lieu of protecting the equipment in accordance with applicable regulations. The inspection report also included a noncited violation of Unit 2 for the inappropriate storage of combustible materials. The Licensee's letter, dated September 17, 2012 (ADAMS Accession No. ML12268A057), provided its response to the violations and their proposed corrective actions.

III. CONCLUSION

The Petitioner sought enforcement action to achieve compliance with NRC regulations governing fire protection at Indian Point Nuclear Generating, Units 1, 2, and 3. The Petitioner recommended that the NRC deny exemptions requested by the Licensee that relied on OMAs, and that the NRC issue an Order taking enforcement action.

The Petitioner requested that the NRC identify violations of sections III.F and III.G of Appendix R to 10 C.F.R. Part 50 that exist at Indian Point as of the date of the petition. As previously discussed, there were no violations of fire protection requirements at Indian Point effective on March 28, 2011. Following Staff review of the Licensee's proposed exemptions, the NRC identified potential areas of noncompliance for which the Licensee has provided a schedule for achieving full compliance. The NRC's inspectors have monitored the Licensee's corrective actions and recently issued violations consistent with the NRC's ongoing reactor oversight process. Therefore, as specified above, the NRC is granting the Petitioner's request to identify violations of fire protection regulations at Indian Point and to take appropriate enforcement actions as part of planned inspection activities.

The Petitioner further requested the NRC to compel the Licensee and its affiliates to comply on or before September 20, 2011, with the requirements in sections III.F and III.G of Appendix R to 10 C.F.R. Part 50 for all fire zones in Indian Point Units No. 2 and 3, and any Indian Point Unit No. 1 fire zone or system, structure, or component relied on by Indian Point Units No. 2 and 3. The NRC's letter of June 30, 2011, which denied the Petitioner's request for immediate action, had already denied the Petitioner's request to order compliance by September 20,

2011. The Licensee has provided its plans and schedules to resolve the denied exemptions. The Licensee's schedule currently anticipates full compliance with the Commission's fire protection regulations at both operating units following the spring 2014 refueling outage at Indian Point Unit No. 2. Therefore, as specified above, the NRC is granting the Petitioner's request that the Licensee be brought into compliance inasmuch as the Licensee's earlier reliance on denied exemptions will be resolved through this schedule for achieving compliance.

The Petitioner requested that the NRC convene an evidentiary hearing to adjudicate the violations by the Licensee and its affiliates of sections III.F and III.G of Appendix R to 10 C.F.R. Part 50 at Indian Point Units 1, 2, and 3. The NRC Staff will disposition violations as part of its ongoing reactor oversight process. Evidentiary hearings before the NRC at the request of third parties are not a part of this process. Therefore, the Petitioner's request to convene a hearing before the Commission is denied.

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

FOR THE NUCLEAR
REGULATORY COMMISSION

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 24th day of October 2012.

ATTACHMENT

COMMENTS RECEIVED FROM THE PETITIONER STATE OF NEW YORK OFFICE OF THE ATTORNEY GENERAL LETTER OF AUGUST 1, 2012

Comment 1

The Proposed Director's Decision is not responsive to the Attorney General's request that NRC identify all fire safety violations at Indian Point. The final Director's Decision should identify all Indian Point fire safety violations.

Response

The U.S. Nuclear Regulatory Commission (NRC) has been responsive to the issues and has handled both the exemption request and your petition in accordance with our processes and with a focus on public health and safety. The petition focused on the NRC staff review of the licensee's proposed exemptions that relied upon operator manual actions (OMAs). The proposed exemptions reflected non-compliance with the Commission's regulations for fire protection; non-compliance is not synonymous with violations. As stated in the proposed Director's Decision, the licensee acted within the enforcement discretion granted to all licensees by EGM 07-004 during the staff's review of the proposed exemptions. Therefore, NRC inspectors did not cite the licensee for violations of fire protection regulations during the staff review.

In response to the request to identify violations of fire protection requirements, a review of NRC inspection reports indicates that the licensee did not violate fire protection requirements at Indian Point Unit Nos. 1, 2, and 3, effective on March 28, 2011, the date of the petition. The only violations of fire protection regulations the NRC identified during the past two years were two non-cited violations (NCVs) of very low safety significance (Green) at Unit No. 2 discussed in the May 7, 2010, Unit No. 2 Triennial Fire Protection Inspection Report (ADAMS Accession No. ML101270240), one NCV of very low safety significance (Green) at Unit No. 3 discussed in the July 11, 2011, Unit No. 3 Triennial Fire Protection Inspection Report (ADAMS Accession No. ML111920339), and three violations discussed in the most recent August 16, 2012, inspection report (ADAMS Accession No. ML12229A128). The NRC modified the final Director's Decision accordingly.

Comment 1.a

The Proposed Director's Decision provides no rational basis for not addressing fire safety violations at Indian Point Unit 1.

The Proposed Director's Decision refusal to identify Indian Point Unit No. 1 fire safety violations is also arbitrary and capricious because Entergy's schedule for correcting Indian Point Unit No. 2 fire safety violations includes two violations in an Indian Point Unit No. 1 structure. Entergy proposes to correct fire safety violations in the Indian Point Unit 1 Superheater Building at Fire Area J, Zones 25-23 (*so in the original*) and 270.

Response

On January 31, 1996, Amendment No. 45 revised the Indian Point Unit No. 1 license to possession-only status and revised the technical specifications. Technical Specification 2.11, "Fire Protection," states that Unit Nos. 1 and 2 share a common fire protection program, which is addressed in Appendix A to the Indian Point Unit No. 2 Facility Operating License No. DPR-26. Therefore, any system, structure, or component located at Unit No. 1 that supports the fire protection program at Unit No. 2, will be documented in Unit No. 2 inspection activities.

The NRC conducted a fire inspection at Indian Point in April 2012. The NRC issued the inspection report on August 16, 2012 (ML12229A128). Part of the inspection scope was to review all OMAs and walk down all circuits that were not protected in accordance with Paragraph III.G.2 of Appendix R to 10 CFR Part 50 requirements. Specifically, for circuits that traversed Unit No. 1 (i.e., Fire Area J, Zone 25, 23 Battery Room), the staff reviewed the circuits associated with OMA No. 12. OMA No. 12 was a manual action to transfer instrument busses 23 and 23A to their emergency power sources.

Although these circuits were in Unit No. 1, if these circuits caused a malfunction of Unit No. 2 safe shutdown systems, structures, or components, this would be a violation of Unit 2's fire protection program license condition, not a violation of Unit No. 1. Upon further review, the staff concluded that the circuits in Unit No. 1 fire zones J/25 and J/270 would not actually cause a maloperation of equipment and, therefore, the instrument busses would automatically swap to their emergency power sources. As a result, the NRC determined this OMA was unnecessary because the automatic operation is not in the fire zones of interest and could be credited to maintain power to the instrument busses. In conclusion, our inspectors did not identify a violation of the Unit No. 2 fire protection program with respect to Paragraph III.G.2 of Appendix R to 10 CFR Part 50 for fire zones J/25 and J/270. A violation of Unit No. 1 was not applicable.

Comment 1.b

The Proposed Director's Decision implies that the fire safety violations Entergy identified in its 2009 exemption requests are the only such violations at Indian Point, but does not make an explicit finding that these are the only such violations.

Response

The exemption requests submitted by Entergy on March 6, 2009, were within the enforcement discretion granted to all licensees by EGM 07-004 and were handled as non-compliances with Appendix R as opposed to violations. The period of enforcement discretion ended with the issuance of the staff's safety evaluation on February 1, 2012. As stated in item 1 above, there were no violations of 10 CFR Part 50, Appendix R, at Indian Point effective on March 28, 2011. The NRC modified the final Director's Decision accordingly.

Comment 2

The Proposed Director's Decision is unenforceable, but the final Director's Decision should be enforceable.

Response

This comment misconceives the purpose of requests for enforcement actions under 10 CFR 2.206. Section 2.206 serves as "an effective, equitable, and credible mechanism for the public to prompt Commission investigation and resolution of potential health and safety problems." *Sec. 2.206 Petitions Requesting Institution of a Proceeding to Modify, Suspend or Revoke a License, or for Such Other Action as May Be Proper; Workshop*, 1993 WL 270694, *2 (June 23, 1993) 58 FR 34726-01. Therefore, not every safety concern identified by a petitioner in the 2.206 process necessarily results in a show cause proceeding and issuance of a proposed enforcement order.

Often, as here, measures short of an enforcement order are sufficient. As the comment itself notes, enforcement orders stand atop the hierarchy of NRC's enforcement tools. Inasmuch as a formal enforcement order requires issuance of a show cause order that triggers the right of the licensee to demand a formal hearing (*see generally* 10 C.F.R. § 2.202), it would be inefficient and inequitable for NRC to conclude every enforcement investigation — including responses to Section 2.206 petitions — with a formal order.

Here, the public health and safety is adequately assured for the reasons explained in the Director's Decision without issuance of a show cause order and conduct of a proceeding. The comment offers no basis for NRC to conclude that the licensee's commitment will not adequately protect public health and safety, or that licensee will not honor its commitments. In short, the Director's Decision describes the issues raised by the Petitioner, discusses the safety significance of the issues, and explains the staff's disposition of and future oversight of those issues. Violations identified during NRC inspections will be handled through the reactor oversight process (ROP).

In NUREG-1649, Revision 4, "Reactor Oversight Process," the NRC describes its

established oversight process to inspect, measure, and assess the safety performance of commercial nuclear power plants and to respond to any decline in plant performance. The ROP focuses inspections on areas of greatest risks, applies greater regulatory attention where there are plant performance problems, uses objective measurements of performance, gives the public timely and understandable assessments of plant performance, and provides responses to violations in a predictable and consistent manner that corresponds to the safety significance of the problem.

Comment 3

The Proposed Director's Decision does not contain a target date for full fire safety compliance at Indian Point, but the final Director's Decision should.

Response

The NRC requested the licensee to describe its plans to restore compliance as part of our inspection planning process. By letter dated March 1, 2012, and later modified by letter dated July 11, 2012, the licensee provided its schedule and planned actions for completing corrective actions that will resolve each issue related to protection of redundant safe shutdown trains and thereby comply with the applicable requirements of Paragraph III.G.2 of Appendix R to 10 CFR Part 50, for both Indian Point operating units. As described in the licensee's letters, a combination of engineering analysis and plant modifications will result with Unit No. 2 being in compliance by the end of the 2014 refueling outage and Unit No. 3 being in compliance by the end of the 2013 refueling outage.

The NRC performed inspections and issued two Notices of Violations (NOVs). Upon receiving the licensee's NOV responses, we will make conclusions regarding the adequacy of the licensee's corrective actions to restore compliance. In determining whether the licensee is making reasonable efforts to complete corrective actions promptly, the NRC will consider safety significance, the effects on operability, the significance of the degradation, and what is necessary to implement the corrective action.

The licensee's commitment management process will track actions to restore compliance to a schedule we conclude is acceptable. The NRC will schedule and complete further inspections using inspection procedure 92702, "Followup on Corrective Actions for Violations and Deviations." We will document our inspection findings in future inspection reports. This process will assure that full fire safety compliance is achieved within a time frame necessary for protection of public health and safety. Accordingly, a specific date beyond that described above is not considered necessary.

Comment 4

The Proposed Director's Decision endorses permanent fire safety exemptions that forego regulatory compliance that would make Indian Point safer.

Response

Safety evaluations issued on February 1, 2012, provided justification for approving the exemptions as permanent. The criteria for granting exemptions in 10 CFR 50.12(a) ensures adequate protection of public health and safety and protection of the environment. The NRC determined that the licensee met the regulatory standard and that the authority of the NRC to grant exemptions was upheld in *Brodsky v. NRC*, 783 F. Supp. 2d 448, 455-58 (S.D.N.Y. 2011) (appeal pending). The final Director's Decision will not reopen the staff's review of the exemptions. Just as the Section 2.206 process may not be used to challenge licensing decisions collaterally. *In re Envirocare of Utah, Inc.*, 45 NRC 63, 68-69 (1997) ("section 2.206 is not a venue for presenting licensing contentions"), Section 2.206 likewise may not be used to challenge grant or denial of an exemption.

Comment 5

Despite 30 years of noncompliance with fire safety regulations at Indian Point, the Proposed Director's Decision does not propose any financial penalty.

Response

The NRC enforcement actions for the fire protection violations at Indian Point are in accordance with the NRC Enforcement Policy and the ROP. Typically, violations assessed under the ROP are not considered for civil penalties. However, civil penalties are considered for violations associated with inspection findings evaluated through the ROP's Significance Determination Process (SDP) that involve actual consequences.

As evaluated under the ROP, the NRC determined the violations at Indian Point Units 2 and 3, regarding OMAs did not involve actual consequences and are of very low safety significance. Therefore, civil penalties were not warranted. If the NRC determines the licensee's actions to restore compliance are not adequate, further enforcement action may be considered in accordance with the NRC Enforcement Policy.

**COMMENTS RECEIVED FROM THE PETITIONER
STATE OF NEW YORK
OFFICE OF THE ATTORNEY GENERAL
LETTER OF SEPTEMBER 19, 2012**

Comment 1 Entergy Effort to Recharacterize NRC Enforcement

The proposed Director's Decision concluded that the Petitioner's requests to identify violations of fire protection requirements and bring the licensee into compliance were granted. The licensee's letter of August 1, 2012, objected to concluding that the Petitioner's request was being granted and indicated that the NRC would make similar findings via the reactor oversight process without the impetus of a petition.

The Petitioner's letter of September 19, 2012, is supportive of the original wording and states that Entergy improperly seeks to recharacterize the final Director's Decision.

Response

As discussed in responding to the licensee's comments, the staff's practice has been to grant the request in a Section 2.206 petition whenever the Petitioner's requests are consistent with the staff's final actions. Therefore, the NRC staff did not revise the original wording of the proposed Director's Decision and concludes that the Petitioner's requests were granted insofar as consistent with the staff's actions.

Comment 2 New York Requested Identification and Correction of All Fire Safety Violations at Indian Point

The Petitioner objected to an email sent by the NRC staff (ADAMS Accession No. ML122650249) seeking clarification to the original petition regarding violations with respect to Sections III.F and III.G of Appendix R to 10 CFR Part 50. The Petitioner believed the staff was limiting consideration of violations to the proposed exemptions of March 6, 2009, and was mistakenly omitting violations with respect to Section III.F.

Response

The NRC staff did not limit its consideration of violations to the proposed exemptions. The staff simply informed the Petitioner by email in advance that the final Director's Decision would not address violations with respect to Section III.F. NRC so informed the Petitioner because (1) Section III.F only requires that fire detection systems shall be automatic and capable of operating with or without offsite power, (2) the licensee did not request any exemptions from Section III.F, and (3) all of the requested exemptions were from the safe shutdown requirements of Section III.G.

The final Director's Decision was modified to clarify the differences between Sections III.F and III.G.

Comment 3 Identification and Correction of All Fire Safety Violations at Indian Point Is Needed

The licensee's letter dated July 11, 2012 (ADAMS Accession No. ML12220A006), states that OMAs 20 and 21 were inadvertently omitted from the March 6, 2009, request for exemptions. The Petitioner cites this letter as further justification for a comprehensive identification and correction of Indian Point fire safety violations.

Response

The NRC staff agrees that the licensee's letter dated July 11, 2012, states that two OMAs that were being relied upon to achieve and maintain safe shutdown were inadvertently omitted from the licensee's request for exemptions dated March 6, 2009. The licensee further stated that the omitted OMAs would be treated as unapproved or denied OMAs and that additional plant modifications during the Unit No. 2 refueling outage during the Spring of 2014 would be necessary. The licensee's letter did not provide any explanation for the omission nor did it provide an extent of condition for this omission.

As discussed in the NRC inspection report dated August 16, 2012 (ADAMS Accession No. ML12229A128), NRC inspectors identified that the licensee failed to identify OMAs 20 and 21 in their March 6, 2009, request for exemptions (see page 5 of Enclosure 2). As further stated, similar to the OMAs for which exemptions were denied, the licensee committed to resolve the omitted OMAs and establish compliance with Section III.G to Appendix R of 10 CFR part 50.

By letter dated September 17, 2012 (ADAMS Accession No. ML12268A057), the licensee provided its explanation for the omission of OMAs 20 and 21 in their March 6, 2009, request for exemptions (see page 4 of Attachment 1). The licensee stated that the use of non-standard nomenclature and presentation resulted in the error of omission. The licensee further indicated that it performed an extent of condition review and concluded that the use of non-standard nomenclature did not result in the omission of any additional OMAs. The NRC staff will review the licensee's letter as part of the overall reactor oversight process.

Comment 4 New Indian Point Fire Safety Violations Identified

The Petitioner again cites the licensee's letter of July 11, 2012, as a further example of the need to perform a comprehensive identification and correction of Indian Point fire safety violations. The Petitioner also notes that the NRC apparently discovered the omission of OMAs 20 and 21 and that the licensee's letter did not provide any explanation for the occurrence.

Response

See the staff's previous response to comment 3 above. As previously stated, NRC inspectors made this discovery and the licensee has committed to resolve the omitted OMAs and establish compliance with Section III.G to Appendix R of 10 CFR part 50.

Comment 5 Confirmation of Indian Point Unit 1 Involvement in Fire Safety Violations

The licensee's letter dated August 1, 2012, offered clarification for the use of "fire areas" versus "fire zones" in the proposed Director's Decision. The Petitioner cited the licensee's explanation as a further example that fire violations exist at Indian Point Unit No. 1. This is similar to the Petitioner's Comment 1.a in the Petitioner's letter dated August 1, 2012.

Response

See the staff's response to Comment 1.a from the Petitioner's letter dated August 1, 2012. As previously stated, any system, structure, or component located at Unit No. 1 that supports the fire protection program at Unit No. 2, will be documented in Unit No. 2 inspection activities.

Comment 6 Unjustified Delay in Eliminating Indian Point Fire Safety Violations

The licensee's letter dated August 1, 2012, offered clarification to the proposed Director's Decision for their schedule to restore full compliance with fire safety regulations at Indian Point. The Petitioner objected to the licensee's schedule and explanation that full compliance will not be achieved before the Unit No. 2 refueling outage in the spring of 2014.

Response

See the staff's response to Comment 3 from the Petitioner's letter dated August 1, 2012. As previously stated, in determining whether the licensee is making reasonable efforts to complete corrective actions promptly, the NRC has considered safety significance, the effects on operability, the significance of the degradation, and what is necessary to implement the corrective action. As a result, the NRC has determined that the public health and safety will be adequately assured in the interim while full compliance is being achieved. These same considerations will continue to guide NRC enforcement discretion during its oversight as the licensee proceeds with its scheduled compliance.

**COMMENTS RECEIVED FROM THE LICENSEE
ENTERGY NUCLEAR OPERATIONS, INC.**

A. General Comments

1. Section III, Conclusion, Pages 9 and 10

The letter indicates the NRC is granting the Petitioner's request for identifying violations and taking enforcement actions as well as bringing IPEC [Indian Point Energy Center] into compliance. It is Entergy's belief that the NRC is following the requirements and protocols established in the regulatory oversight process (ROP) as relates to these actions, and is not granting the Petitioner's request. The letter should indicate that the ROP is a mature process that provides guidance to the NRC and licensees. The items identified by NY State were items the NRC staff was well aware of and the actions taken by the NRC would have been taken regardless of the NY State petition.

Response

The NRC does not disagree with the premise of the licensee's comment. The petition did not present facts previously unknown to the NRC staff, and the staff would likely have reached the same conclusions through the ROP without the impetus of the petition. Regardless, the staff's practice has been that whenever the Petitioner's requests are consistent with the staff's final actions, whether in whole or in part, they are considered to be granted.

B. Specific Comments — Suggested Changes

[Suggested changes are shown as [DELETED (deletions)] and underlines for additions.]

1. Section II, Discussion, Page 5

"However, neither the diesel generator fire [DELETED (area)] zone. . . ."

Response

- Fire zones are subsets of larger fire areas. The suggested change provides a more definitive description of the concern. The NRC modified the final Director's Decision accordingly.

2. Section II, Discussion, Page 8

"Exceptions to projected completion involve plant modifications for Indian

Point Units No. 3 and No. 2, which will not be completed until the spring 2013 and 2014 refueling outages respectively because those modifications involve [DE-LETED (access to plant areas accessible only during a plant shutdown)] activities that require plant outages to install said modifications.”

Response

- The suggested changes provide a more complete description of the planned modifications. The NRC modified the final Director’s Decision accordingly.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Allison M. Macfarlane, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of

Docket Nos. 50-361-CAL
50-362-CAL

SOUTHERN CALIFORNIA
EDISON COMPANY
(San Onofre Nuclear Generating
Station, Units 2 and 3)

November 8, 2012

RULES OF PRACTICE: 2.206 PETITIONS

The Atomic Safety and Licensing Board is not the appropriate vehicle for reviewing 2.206 petitions. Instead, interested persons must follow the established 2.206 practice.

RULES OF PRACTICE: AVAILABILITY OF HEARINGS

A confirmatory action letter (CAL) may constitute a *de facto* license amendment that triggers hearing rights. It is appropriate for the Atomic Safety and Licensing Board to evaluate the hearing petition, determine whether the CAL proceeding is, in effect, a license amendment proceeding, and then ultimately determine whether the intervention petition can satisfy the standing and contention admissibility requirements of 10 C.F.R. § 2.309.

MEMORANDUM AND ORDER

Friends of the Earth has filed an intervention petition and hearing request,¹ as well as an application for stay,² in relation to the restart of San Onofre Nuclear Generating Station (SONGS) Units 2 and 3. As described below, we refer a portion of the petition to the Atomic Safety and Licensing Board Panel, as well as a portion to the Nuclear Regulatory Commission Staff. Additionally, we deny, without prejudice, Friends of the Earth's stay application and its request that we exercise our supervisory authority to order a discretionary hearing.

I. BACKGROUND

SONGS Units 2 and 3 are currently shut down as Southern California Edison (SCE) evaluates the cause of a steam generator tube leak that led to the rapid shutdown of Unit 3. The NRC Staff issued a "Confirmatory Action Letter" (CAL) to SCE, which provides that SCE is to take certain actions prior to restarting the reactors.³

Friends of the Earth seeks a hearing on the restart and a stay of any decision to authorize restart pending the conclusion of the requested hearing.⁴ Friends of the Earth also maintains that SCE's replacement of its steam generators in 2010 and 2011 pursuant to 10 C.F.R. § 50.59, without first obtaining NRC approval via a license amendment, was unlawful.⁵ The Natural Resources Defense Council

¹ Petition to Intervene and Request for Hearing by Friends of the Earth (June 18, 2012) (Friends of the Earth Petition).

² Application to Stay Any Decision to Restart Units 2 or 3 at the San Onofre Nuclear Generating Station Pending Conclusion of the Proceedings Regarding Consideration of the Safety of the Replacement Steam Generators (June 18, 2012) (Friends of the Earth Stay Request).

³ See Elmo E. Collins, Regional Administrator, Region IV, U.S. NRC, Letter to Peter T. Dietrich, Senior Vice President and Chief Nuclear Officer, Southern California Edison Company, Confirmatory Action Letter — San Onofre Nuclear Generating Station, Units 2 and 3, Commitments to Address Steam Generator Tube Degradation (Mar. 27, 2012) (ADAMS Accession No. ML12087A323) (Confirmatory Action Letter); Peter T. Dietrich, Senior Vice President & Chief Nuclear Officer, SCE, Letter to Elmo E. Collins, Regional Administrator, Region IV, U.S. NRC, Docket Nos. 50-361 and 50-362, Steam Generator Return-to-Service Action Plan, San Onofre Nuclear Generating Station (Mar. 23, 2012) (ADAMS Accession No. ML12086A182) (Action Plan).

⁴ Friends of the Earth Petition at 1.

⁵ See *id.* at 2. Section 50.59 sets forth the circumstances under which a licensee may make changes to the facility as described in its Updated Final Safety Analysis Report (UFSAR), make changes in the procedures described in the UFSAR, and conduct tests or experiments not otherwise described in the UFSAR, without obtaining a license amendment under 10 C.F.R. § 50.90. See 10 C.F.R. § 50.59(c)(1).

(NRDC) supports Friends of the Earth's hearing request.⁶ The NRC Staff and SCE oppose both the petition to intervene and request for hearing,⁷ as well as the stay request.⁸

II. DISCUSSION

Friends of the Earth makes several different requests. We address each of them in turn below.

A. 10 C.F.R. § 50.59 Violation

Friends of the Earth argues that SCE violated 10 C.F.R. § 50.59 when the steam generators for Units 2 and 3 were replaced in 2010 and 2011 without a license amendment.⁹ Friends of the Earth requests a hearing on its section 50.59 claim, and asks that its petition not be construed as a request for enforcement relief under 10 C.F.R. § 2.206.¹⁰

Friends of the Earth states in its reply that the section 2.206 process is not a "viable alternative" for obtaining relief.¹¹ We disagree. The 2.206 process provides

⁶ Natural Resources Defense Council's (NRDC) Response in Support of Friends of the Earth Petition to Intervene and NRDC's Notice of Intent to Participate (June 27, 2012).

⁷ NRC Staff's Answer to Petition to Intervene and Request for Hearing by Friends of the Earth on the Restart of the San Onofre Reactors (July 13, 2012); Southern California Edison Company's Answer Opposing Friends of the Earth's Hearing Request and the Natural Resources Defense Council Response Regarding San Onofre Nuclear Generating Station Units 2 and 3 (July 13, 2012).

⁸ NRC Staff's Answer to Friends of the Earth's Application to Stay Any Decision to Restart Unit 2 or 3 at the San Onofre Nuclear Generating Station Pending Conclusion of the Proceedings Regarding Consideration of the Safety of the Replacement Steam Generators (June 28, 2012); Southern California Edison's Answer Opposing Friends of the Earth's Application to Stay Any Decision to Restart Units 2 or 3 at the San Onofre Nuclear Generating Station (June 28, 2012). Friends of the Earth replied to SCE and the Staff's answers. Reply to SCE's and NRC Staff's Answer to Petition to Intervene and Request for Hearing by Friends of the Earth (July 20, 2012) (Friends of the Earth Reply).

⁹ See Friends of the Earth Petition at 16.

¹⁰ Section 2.206 provides that "[a]ny person may file a request to institute a proceeding . . . to modify, suspend, or revoke a license, or for any other action as may be proper." Except where the Commission determines that a discretionary hearing is warranted, section 2.206 provides the means to challenge licensee actions under 10 C.F.R. § 50.59. *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-94-3, 39 NRC 95, 101 n.7 (1994) ("A member of the public may challenge an action taken under 10 C.F.R. § 50.59 only by means of a petition under 10 C.F.R. § 2.206.").

¹¹ See Friends of the Earth Reply at 11-12; see also Friends of the Earth Petition at 13 n.11. Friends of the Earth points chiefly to Administrative Judge Rosenthal's pointed criticism of NRC's 2.206 process in a recent "additional opinion" he issued in *All Operating Boiling Water Reactor Licensees with Mark I and Mark II Containments: Order Modifying Licenses with Regard to Reliable Hardened* (Continued)

stakeholders a forum to advance their concerns and to obtain full or partial relief, or written reasons why the requested relief is not warranted. We may then review the NRC Staff's findings on our own motion.¹² If Friends of the Earth prevails on its section 2.206 argument that SCE needed a license amendment to replace the SONGS steam generators, then it may be able to obtain the adjudicatory hearing it seeks. Section 189a of the Atomic Energy Act (AEA) grants an opportunity for a hearing on (among other things) license amendments. Moreover, the NRC Staff is already evaluating whether these SCE actions required a license amendment. We therefore deny Friends of the Earth's request and refer this portion of Friends of the Earth's petition to the EDO for consideration as a petition under 10 C.F.R. § 2.206.¹³

B. The Confirmatory Action Letter

Friends of the Earth contends that the "Confirmatory Action Letter" issued to SCE, including the process for resolving the issues raised in the Letter, constitutes a *de facto* license amendment proceeding within the hearing provision of section 189a of the AEA, and therefore an adjudicatory hearing is required pursuant to 10 C.F.R. § 2.309.¹⁴ We refer this portion of the petition to the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel for appropriate action consistent with section 189a of the AEA and 10 C.F.R. § 2.309. Specifically, we direct the Board to consider whether: (1) the Confirmatory Action Letter issued to SCE constitutes a *de facto* license amendment that would be subject to a hearing

Containment Vents (Effective Immediately), LBP-12-14, 76 NRC 1 (2012) (appeal pending). Notably, the Board majority in the *All Operating Boiling Water Reactor* case did not subscribe to Judge Rosenthal's view. They found that "the record before the Board falls far short of rebutting the presumption that 10 C.F.R. § 2.206 is a meaningful avenue for seeking administrative relief." *Id.* at 8 n.36.

¹² See 10 C.F.R. § 2.206(a), (b), (c).

¹³ Such a referral is consistent with agency practice:

[Referrals] may be made when a petition does not satisfy the legal requirements for a hearing or intervention and [it is determined] that referral to the 10 CFR 2.206 process is appropriate. For these referrals, the substantive issues in the request for a hearing or intervention will be read as an implicit request for enforcement-related action, thus satisfying the criteria for treatment under the 10 CFR 2.206 review process.

Management Directive 8.11, Review Process for 10 C.F.R. 2.206 Petitions, Handbook Part III.C (Oct. 25, 2000). See also *Sequoyah Fuels Corp.* (Gore, Oklahoma), LBP-03-24, 58 NRC 383 (2003) (dismissing hearing requests as untimely and referring them to the EDO for consideration under section 2.206), *aff'd*, CLI-04-2, 59 NRC 5 (2004).

¹⁴ See Friends of the Earth Petition at 2.

opportunity under section 189a; and, if so, (2) whether the petition meets the standing and contention admissibility requirements of 10 C.F.R. § 2.309.¹⁵

C. Discretionary Hearing Request

Alternatively, Friends of the Earth has requested that we initiate a discretionary adjudicatory public hearing as an exercise of our inherent supervisory authority.¹⁶ However, our referral to the Licensing Board Panel (to consider the Confirmatory Action Letter claim) could result in a determination that a license amendment is necessary. Such a determination would require the NRC to publish a *Federal Register* notice providing an opportunity to seek a public hearing that Friends of the Earth seeks, and would render the request for a discretionary hearing moot. We therefore deny that request, without prejudice to Friends of the Earth's right to renew the request.

D. Stay Request

Friends of the Earth requests that we grant a "stay of any authorization for restart" of SONGS Units 2 and 3 pending the conclusion of its requested license amendment proceeding.¹⁷ In the Confirmatory Action Letter, the NRC confirmed the various commitments contained within SCE's Action Plan, and confirmed that SCE would not restart Units 2 and 3 prior to the NRC's reviewing the appropriate actions and issuing formal written permission to resume power production.¹⁸ On July 18, 2012, the NRC issued an inspection report identifying ten "unresolved" items which SCE must address "before the resumption of operations in both SONGS Units 2 and 3."¹⁹ On October 3, 2012, SCE submitted a letter indicating that the issues identified in the Confirmatory Action Letter had been completed

¹⁵ Boards have previously considered such issues. *See generally Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-89-28, 30 NRC 271 (1989), *aff'd*, ALAB-940, 32 NRC 225 (1990); *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), LBP-95-17, 42 NRC 137 (1995), *rev'd and vacated*, CLI-96-13, 44 NRC 315 (1996).

¹⁶ *See* Friends of the Earth Petition at 15.

¹⁷ Friends of the Earth Stay Request at 1.

¹⁸ *See* Confirmatory Action Letter at 2.

¹⁹ *See* Elmo E. Collins, Regional Administrator, Region IV, U.S. NRC, Letter to Peter T. Dietrich, Senior Vice President and Chief Nuclear Officer, SCE, San Onofre Nuclear Generating Station — NRC Augmented Inspection Team Report 05000361/2012007 and 05000362/2012007 (July 18, 2012) (ADAMS Accession No. ML12188A748).

for Unit 2, and included a proposed action plan for restart of Unit 2.²⁰ The NRC is currently analyzing the SONGS steam generator tube degradation issue.²¹

Because restart of SONGS is not imminent, we deny the stay request without prejudice to its renewal should there be an indication that a restart of SONGS Units 2 or 3 appears imminent.

III. CONCLUSION

For the reasons given in the decision, we (1) *refer* the asserted 10 C.F.R. § 50.59 violation to the EDO, (2) *refer* the “Confirmatory Action Letter” argument to the Board for consideration under 42 U.S.C. § 2239(a) and 10 C.F.R. § 2.309, and (3) *deny* the discretionary hearing and stay requests without prejudice.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 8th day of November 2012.

²⁰ See Peter T. Dietrich, Senior Vice President & Chief Nuclear Officer, SCE, Letter to Elmo E. Collins, Regional Administrator, Region IV, U.S. NRC, Docket No. 50-361, Confirmatory Action Letter — Actions to Address Steam Generator Tube Degradation San Onofre Nuclear Generating Station, Unit 2 (Oct. 3, 2012) (ADAMS Accession No. ML12285A263). Additionally, Friends of the Earth submitted a letter to the Commission reiterating its earlier requests. See Friends of the Earth Letter to U.S. NRC, NRC Proceeding San Onofre 50-361-CAL and 50-362-CAL. Request That the NRC Decide Petition to Intervene and Application by Friends of the Earth to Stay Any Decision to Restart Units 2 or 3 at the San Onofre Nuclear Generating Station (Oct. 16, 2012) (ADAMS Accession No. ML12290A049). SCE responded to this letter on October 23, 2012, and the NRC Staff responded on October 25, 2012. See Southern California Edison Company’s Response to Request That the NRC Decide Petition to Intervene and Application by Friends of the Earth to Stay Any Decision to Restart Units 2 or 3 at the San Onofre Nuclear Generating Station (ADAMS Accession No. ML12297A487); NRC Staff’s Response to Request That the NRC Decide Petition to Intervene and Application to Stay Restart Decision (ADAMS Accession No. ML12299A513).

²¹ The NRC will continue to keep the public informed of its review process through various methods, such as posting information on the agency’s public website and through public meetings.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Ronald M. Spritzer, Chairman
Dr. Gary S. Arnold
Dr. William W. Sager

In the Matter of

Docket No. 52-016-COL
(ASLBP No. 09-874-02-COL-BD01)
(Combined License Application)

**CALVERT CLIFFS 3 NUCLEAR
PROJECT, LLC, and UNISTAR
NUCLEAR OPERATING
SERVICES, LLC**
**(Calvert Cliffs Nuclear Power
Plant, Unit 3)**

November 1, 2012

ORDER
(Terminating the Adjudicatory Proceeding)

On August 30, 2012, the Board granted Summary Disposition in favor of Intervenor on Contention 1, holding that Applicants are ineligible to obtain a license because they fail to meet the requirements of section 103d of the Atomic Energy Act, 42 U.S.C. § 2133(d), and 10 C.F.R. § 50.38.¹ The Board's August 30 Order further stated that the proceeding would be terminated 60 days after the issuance of the Order unless, within that time, Applicants provided information to show that they have changed their ownership situation so as to satisfy foreign

¹ LBP-12-19, 76 NRC 184 (2012).

ownership, control, and domination requirements.² Because no such information has been submitted to the Board and the 60-day period has expired, this proceeding is hereby terminated.

Pursuant to 10 C.F.R. § 2.341(b), any party aggrieved by this Order may file a petition for review with the Commission within twenty-five (25) days of service.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Ronald M. Spritzer, Chairman
ADMINISTRATIVE JUDGE

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

Dr. William W. Sager
ADMINISTRATIVE JUDGE

Rockville, Maryland
November 1, 2012

² *Id.* at 205.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Ronald M. Spritzer, Chairman
Dr. Anthony J. Baratta
Dr. Randall J. Charbeneau

In the Matter of

Docket No. 52-033-COL
(ASLBP No. 09-880-05-COL-BD01)

DETROIT EDISON COMPANY
(Fermi Nuclear Power Plant,
Unit 3)

November 9, 2012

In this 10 C.F.R. Part 52 proceeding regarding the application of DTE to construct and operate a GE-Hitachi Economic Simplified Boiling Water Reactor, designated Unit 3, on its existing Fermi nuclear facility site in Monroe County, Michigan, the Board grants summary disposition of Contention 6, denies summary disposition of Contentions 8 and 15, and denies the Motion to Admit Contention 25. The Board also declines to admit those parts of previously submitted Contentions 20 and 21 that the Board did not previously reject.

RULES OF PRACTICE: CONTENTIONS (SCOPE)

If Intervenor raise issues that are not within the scope of an admitted contention and have not sought to amend the contention to include those issues, the Board will not consider the issues because they are outside the scope of the admitted contention.

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.309(f)(1)(ii))

The scope of an admitted contention depends in large part on the bases set forth in the “brief explanation of the basis for the contention” required by 10 C.F.R. § 2.309(f)(1)(ii). As long as the facts now relied on by Intervenor in opposition to the summary disposition motion fall within the scope of that explanation, they are properly before the Board. In addition, while a party may not raise new arguments that are outside the scope of its contention, it may “legitimately amplify” arguments presented in support of the contention in order to fairly respond to arguments raised by the opposing party.

NEPA: MITIGATION

If an agency commits to mitigation measures in its Environmental Impact Statement (EIS), then it should take steps to ensure that mitigation commitments are implemented, monitor the effectiveness of such mitigation commitments, and be able to remedy failed mitigation. *See* U.S. Council on Environmental Quality, Final Guidance for Federal Departments and Agencies on the Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact, 76 Fed. Reg. 3843, 3847 (Jan. 21, 2011).

NEPA: MITIGATION

If mitigation is used to support a finding of no significant impact (FONSI), it should either have been included in the original proposal or required by statute or regulation.

NEPA: MITIGATION

Federal agencies may rely on mitigation that will be imposed by other agencies; however, this does not relieve the federal agency conducting the NEPA review of the burden to explain the statutory or regulatory requirements it is relying on and its reasons for concluding that the application of those requirements will actually result in the mitigation and monitoring it assumes will occur.

RULES OF PRACTICE: CONTENTIONS

The Board may construe an admitted contention contesting the Environmental Report (ER) as a challenge to a subsequently issued DEIS or FEIS without the necessity for Intervenor to file a new or amended contention. This concept has been referred to as the “migration tenet.” The tenet applies when the information contained in a subsequently released document is sufficiently similar to the

information contained in the original document upon which the original contention was filed. *See Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-1, 73 NRC 19, 26 (2011).

QUALITY ASSURANCE: DEFICIENCIES (RESOLUTIONS)

An adequate quality assurance (QA) “program must provide for control over activities affecting the quality of ‘structures, systems, and components, to an extent consistent with their importance to safety.’ The program must also include provisions requiring that the applicant regularly review its status and adequacy. The regulations further mandate that the program establish measures to assure that conditions ‘adverse to quality’ are promptly identified and corrected.” *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-802, 21 NRC 490, 492-93 (1985) (internal citation omitted).

QUALITY ASSURANCE: DEFICIENCIES (RESOLUTIONS)

Once Intervenor show that safety-related design information in the Final Safety Analysis Report (FSAR) is infected by a pattern of QA violations, the burden then shifts to the Applicant to reestablish confidence in the safety-related aspects of the design.

RULES OF PRACTICE: NATIONAL HISTORIC PRESERVATION ACT CONSULTATION REQUIREMENTS

If the Staff uses the process and documentation required for the preparation of an EIS/ROD to comply with National Historic Preservation Act (NHPA) § 106, as it is permitted to do, then Intervenor must identify some requirement applicable to that process and documentation with which the Staff arguably failed to comply.

RULES OF PRACTICE: NATIONAL HISTORIC PRESERVATION ACT CONSULTATION REQUIREMENTS

The NHPA and its implementing regulations require only that agencies consider the impacts of an undertaking on historic preservation and measures to mitigate those impacts in their decisionmaking. It does not require that the agency implement any mitigation measures, let alone that those measures meet a certain standard of protection for historic properties.

MEMORANDUM AND ORDER
(Granting Motion for Summary Disposition of Contention 6;
Denying Motions for Summary Disposition of
Contentions 8 and 15; Denying Motion to Admit
Contention 25; and Resolving Remaining Issues Regarding
Contentions 20 and 21)

Detroit Edison Company (“DTE” or “Applicant”) has filed motions for summary disposition of Contentions 6, 8, and 15.¹ In addition, Intervenor has filed a Motion to Admit New Contention 25.² For the reasons explained below, the Board grants summary disposition of Contention 6, denies summary disposition of Contentions 8 and 15, and denies the Motion to Admit Contention 25.

In addition, the Board resolves the issues left open when we otherwise declined to admit Intervenor’s proposed Contentions 20 and 21.³ The Board concludes that, given our rulings on the motions for summary disposition of Contentions 6 and 8, the allegations of Contentions 20 and 21 that we did not previously resolve will not be admitted.

I. MOTION FOR SUMMARY DISPOSITION OF CONTENTION 6

A. Background

This combined license (COL) proceeding concerns the application of DTE pursuant to 10 C.F.R. Part 52, Subpart C, to construct and operate a GE-Hitachi Economic Simplified Boiling Water Reactor (ESBWR), designated Unit 3, on its existing Fermi nuclear facility site near Newport City in Monroe County, Michigan. DTE originally submitted its COL application (COLA) for Fermi Unit 3 to the NRC on September 18, 2008.⁴ The Commission published a notice of hearing and opportunity to petition for leave to intervene in the *Federal Register*

¹ Applicant’s Motion for Summary Disposition of Contention 6 (Apr. 17, 2012) [hereinafter Second C-6 Motion]; Applicant’s Motion for Summary Disposition of Contention 8 (June 11, 2012) [hereinafter Second C-8 Motion]; Applicant’s Motion for Summary Disposition of Contention 15 (Apr. 17, 2012) [hereinafter C-15 Motion].

² Intervenor’s Motion for Admission of Contention No. 25 (Challenging § 106 NHPA Mitigation for Demolition of Fermi Unit 1) (July 2, 2012) [hereinafter Motion to Admit].

³ LBP-12-12, 75 NRC 742, 768, 771 (2012).

⁴ See Detroit Edison Company; Notice of Hearing, and Opportunity to Petition for Leave to Intervene and Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation on a Combined License for Fermi 3, 74 Fed. Reg. 836 (Jan. 8, 2009).

on January 8, 2009.⁵ On March 9, 2009, the Intervenors⁶ filed a timely Request for a Hearing and Petition to Intervene,⁷ and on March 19, 2009, this Board was established to preside over the proceeding.⁸ In its July 31, 2009 Order, the Board found that the Intervenors had standing, admitted four of their contentions, and granted their hearing request.⁹

Contention 6 was admitted in part and rejected in part. The Board found that Contention 6 was “admissible insofar as it challenges the adequacy of the ER’s analysis of the potential contribution of chemical and thermal effluent from the proposed Fermi Unit 3 to algal production and the potential proliferation of the newly identified species of harmful algae.”¹⁰

On September 17, 2010, DTE moved for summary disposition of Contention 6 based on its supplements to the ER, arguing that the issues underlying the Contention had been addressed.¹¹ The Board denied the Motion because various material issues remained in dispute. First, Intervenors maintained that the addition of calcium (in lieu of phosphoric acid) to the cooling water discharge may promote algal growth. Intervenors also argued that Applicant’s methods of observation of algae growth had not been made a matter of record and visual observation may not be appropriate for bottom-growing algae. They also claimed that higher levels of turbidity created during plant construction and operation will cause conditions favorable to algae growth, and they disputed the estimated size of the thermal plume that enhances algae growth and questioned the assertion of a small plume residence time for bottom-growing algae.¹²

On April 17, 2012, DTE again moved for summary disposition of Contention 6.¹³ On May 7, 2012, the NRC Staff (Staff) filed an answer supporting DTE’s motion.¹⁴ On May 17, 2012, the Intervenors filed a response opposing summary

⁵ *Id.*

⁶ Intervenors include Beyond Nuclear, Citizens for Alternatives to Chemical Contamination, Citizens Environmental Alliance of Southwestern Ontario, Don’t Waste Michigan, the Sierra Club (Michigan Chapter), and numerous individuals.

⁷ Petition of Beyond Nuclear, et al. for Leave to Intervene in Combined Operating License Proceedings and Request for Adjudication Hearing (Mar. 9, 2009); REFILED Petition of Beyond Nuclear, et al. for Leave to Intervene in Combined Operating License Proceedings and Request for Adjudication Hearing (Apr. 21, 2009) [hereinafter Petition].

⁸ Establishment of Atomic Safety and Licensing Board, 74 Fed. Reg. 12,913 (Mar. 25, 2009).

⁹ LBP-09-16, 70 NRC 227, 236-37, *aff’d*, CLI-09-22, 70 NRC 932, 933 (2009).

¹⁰ *Id.* at 280.

¹¹ Applicant’s Motion for Summary Disposition of Contention 6 (Sept. 17, 2010) at 1.

¹² LBP-11-14, 73 NRC 591, 598-601 (2010).

¹³ Second C-6 Motion.

¹⁴ Staff Answer to Applicant’s Motion for Summary Disposition of Contention 6 (May 7, 2012) [hereinafter Staff Answer to Second C-6 Motion].

disposition.¹⁵ On May 24, 2012, DTE filed a motion for leave to file a reply to the Intervenor's response.¹⁶

B. Legal Standard for Summary Disposition

The standard for summary disposition motions in a Subpart L proceeding such as this is set forth in 10 C.F.R. § 2.1205. Under that regulation, licensing boards must apply the summary disposition standard for Subpart G proceedings found in 10 C.F.R. § 2.710. Section 2.710(d)(2) provides that a moving party is entitled to summary disposition if the presiding officer finds that “the filings in the proceeding, . . . together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.”¹⁷

In general, when ruling on motions for summary disposition, the Commission applies standards analogous to those used by federal courts when ruling on motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure.¹⁸ Consistent with Rule 56, the moving party bears the initial burden of demonstrating that no genuine issue as to any material fact exists and that it is entitled to judgment as a matter of law.¹⁹ If the moving party fails to make the requisite showing to satisfy that initial burden, then “the Board must deny the motion — even if the opposing party chooses not to respond or its response is inadequate.”²⁰ Thus, “no defense to an insufficient showing is required.”²¹ If the moving party meets its burden, however, the nonmoving party must “counter each adequately supported material fact with its own statement of material facts in dispute and supporting documentation” and cannot rely on “mere allegations or denials,” or the facts in controversy will be deemed admitted.²² In addition, because the initial burden rests on the moving party, a Licensing Board must

¹⁵ Intervenor's Response in Opposition to Applicant's Motion for Summary Disposition of Contention 6 (May 17, 2012) [hereinafter Intervenor's Response to Second C-6 Motion].

¹⁶ See Applicant's Motion for Leave to File a Reply on Contention 6 (May 24, 2012).

¹⁷ 10 C.F.R. § 2.710(d)(2).

¹⁸ See *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

¹⁹ 10 C.F.R. § 2.325; see also *Poller v. Columbia Broadcasting System, Inc.*, 368 U.S. 464, 467 (1962) (summary judgment should be granted only where the truth is clear); *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 102; *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-99-32, 50 NRC 155, 158 (1999).

²⁰ *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 102.

²¹ *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-443, 6 NRC 741, 754 (1977) (internal citation omitted).

²² 10 C.F.R. § 2.710(a); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-30, 54 NRC 231, 235 (2001).

examine the record in the light most favorable to the nonmoving party and all justifiable inferences must be drawn in favor of the nonmoving party.²³

C. The Parties' Positions

Contention 6 alleges that chemical effluent and thermal discharges from proposed Fermi 3 will contribute to algal production in Lake Erie and to proliferation of a newly identified nuisance species of algae, *Lyngbya wollei*, and that those issues were not adequately addressed in the ER. In its Second C-6 Motion, DTE contends that all such issues have been resolved in the Draft Environmental Impact Statement (DEIS)²⁴ and the State of Michigan National Pollutant Discharge Elimination System (NPDES) permit.²⁵ The Staff agrees with DTE that summary disposition of Contention 6 is warranted.²⁶

DTE states that “[b]ecause the total mass of calcium in Lake Erie will not increase, and because there will be no statistical increase in total calcium concentration in Lake Erie as a result of Fermi 3 operations, no adverse water quality impacts are anticipated from Fermi 3 operations.”²⁷ DTE asserts that issuance of the NPDES permit by the State of Michigan confirms this finding with regard to both chemical and thermal impacts.²⁸ It notes that Lake Erie waters already retain relatively high concentrations of calcium. DTE also maintains that in other locations *Lyngbya wollei* responds to increased concentrations of nitrate-nitrogen, and that the Maumee River drains agro-ecosystems to the west containing nutrient-rich waters, which may account for the proliferation of *Lyngbya wollei* in the Maumee Bay area.²⁹

The DEIS describes the distribution of *Lyngbya wollei* along the shoreline of Lake Erie in the vicinity of Fermi 3.³⁰ According to the DEIS, the closest reported observation of *Lyngbya wollei* in Lake Erie was within approximately 5 miles of the Fermi 3 site.³¹ The DEIS also discusses the impacts of construction-related turbidity on potential algal growth, explaining that these impacts are short term

²³ *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 102.

²⁴ Office of New Reactors, Draft Environmental Impact Statement for Combined License (COL) for Enrico Fermi Unit 3, NUREG-2105, Vols. 1 & 2 (Oct. 2011) (ADAMS Accession Nos. ML11287A108 & ML11287A109).

²⁵ Second C-6 Motion at 1.

²⁶ Staff Answer to Second C-6 Motion at 1.

²⁷ Second C-6 Motion at 9.

²⁸ *Id.*

²⁹ *Id.* at 10.

³⁰ DEIS at 2-120.

³¹ *Id.* at 5-52.

and easily mitigated.³² The DEIS anticipates that other construction runoff-related impacts will be minor, partly because of controls required by the NPDES permit.³³

DTE also contends that the thermal plume will be small, explaining that this conclusion is based on detailed mathematical modeling. It asserts that the Intervenor's assessment of the thermal plume is "devoid of any probative or scientific validity," noting that many important processes are ignored.³⁴ DTE again relies on issuance of the NPDES permit as affirming that the thermal plume will not cause or contribute to algal blooms.³⁵

Intervenors maintain that issues of material fact remain, and that summary disposition is therefore not warranted.³⁶ Intervenor's assert that the likely spreading and proliferation of *Lyngbya wollei* immediately offshore of the Fermi 3 site due to the allegedly understated thermal plume and chemical effluent have not been adequately addressed.³⁷ They note that "water containing twice (2x) the calcium naturally-occurring in Lake Erie will be returned to the Lake in Fermi 3's effluent."³⁸ They maintain that calcium boosts the growth of *Lyngbya wollei*, and that construction-phase activities will also cause calcium runoff due to local geologic conditions (limestone). Intervenor's assert "calcium levels remain near saturation in Lake Erie offshore of the Fermi site, hence adding concentrated calcium in the form of thermal effluent assures that maximum calcium saturation will become the norm as a direct result of Fermi construction and operation."³⁹ Intervenor's continue to question the estimated size of the thermal plume, pointing specifically to winter periods when the lake water is cooler. They suggest that DTE's analysis is not adequate because it fails to take account of multiple plumes, increased use of agricultural chemicals, global warming, and mussel wastes.⁴⁰

D. Board Ruling

1. Summary Disposition

We agree with DTE and Staff that Contention 6 is appropriate for summary disposition. The DEIS and written materials submitted by DTE and the Staff

³² *Id.* at 4-46, 5-51.

³³ *Id.* at 4-46, 5-51, 7-26.

³⁴ Second C-6 Motion at 12, 13.

³⁵ *Id.* at 14-15.

³⁶ Intervenor's Response to Second C-6 Motion at 1.

³⁷ *Id.* at 2.

³⁸ *Id.* at 4.

³⁹ *Id.*

⁴⁰ *Id.* at 5.

resolve the issues raised in Contention 6, and no issues of material fact remain that would benefit from the evidentiary hearing process.

The National Environmental Policy Act (NEPA) requires agencies to consider the environmental impacts of “major Federal actions significantly affecting the quality of the human environment,” as well as alternatives to the proposed action, in an environmental impact statement (EIS).⁴¹ Contention 6 alleges that the DEIS fails to adequately evaluate one particular environmental impact, the potential of the Fermi 3 plant effluent to stimulate the growth of a nuisance algae, *Lyngbya wollei*. DTE’s Second C-6 Motion maintains that the DEIS, together with the additional information DTE submitted with its Motion, resolves the issues that the Board found unresolved in its earlier ruling denying summary disposition of Contention 6. Our ruling reflects both the content of the DEIS and the additional material submitted by the parties, which forms part of the adjudicatory record.⁴²

The first of the issues we previously found in dispute is the effect of calcium contained in the thermal effluent stream on the potential proliferation of *Lyngbya wollei*. The DEIS discusses nuisance algae, including *Lyngbya wollei*, concluding that “[t]he principal limiting nutrient responsible for controlling algal blooms in Lake Erie is phosphorus.”⁴³ Phosphorus will not be added to the discharge waters of Fermi 3.⁴⁴ DTE recognizes that calcium is present in the Fermi 3 influent and effluent streams. Intervenors note that calcium will be discharged in the Fermi 3 thermal effluent at approximately twice the influent concentration. This observation is also not disputed — it is drawn directly from DTE’s Statement of Facts.⁴⁵ DTE explains, however, that calcium is already present in Lake Erie offshore of Unit 3 at near saturation levels. Intervenors agree that “[c]alcium levels remain near saturation in Lake Erie offshore of the Fermi site”⁴⁶ Also, the Fermi 3 discharge will not result in any mass addition of calcium to Lake Erie.⁴⁷ Dr. Rex Lowe, one of DTE’s experts, reviews the data relevant to calcium and its role in stimulation of *Lyngbya wollei* biomass and concludes that Fermi 3 discharges are “unlikely to increase the potential for *Lyngbya wollei* proliferation or cause other algal blooms.”⁴⁸ Intervenors offer neither a contrary

⁴¹ NEPA § 102(2)(C), 42 U.S.C. § 4332(2)(C).

⁴² See *Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), CLI-11-6, 74 NRC 203, 209 (2011).

⁴³ DEIS at 5-51.

⁴⁴ Affidavit of Dr. Rex Lowe in Support of Summary Disposition of Contention 6 (April 16, 2012) ¶ 7 [hereinafter Dr. Lowe Affidavit].

⁴⁵ Intervenors’ Statement of Facts Demonstrating Issues of Material Fact (May 17, 2012) at 1 (quoting DTE, Statement of Material Facts on Which No Genuine Dispute Exists (Apr. 17, 2012) ¶ 7).

⁴⁶ Intervenors’ Response to Second C-6 Motion at 4.

⁴⁷ Dr. Lowe Affidavit ¶ 7.

⁴⁸ *Id.*

expert opinion nor any other information that would undermine the basis of Dr. Lowe's conclusion. We accordingly find no material dispute concerning the effect of calcium contained in the thermal effluent stream on the potential proliferation of *Lyngbya wollei*.

Intervenors also allege that stormwater runoff from plant construction will add calcium to Lake Erie offshore of the Fermi 3 site.⁴⁹ But Intervenors provide no reason for the Board to conclude that calcium from plant construction is likely to increase the potential for *Lyngbya wollei* proliferation any more than calcium in the Fermi 3 effluent.

The second issue raised in admitted Contention 6 concerns the lack of discussion in the ER of the distribution and methods of observation of algae, particularly *Lyngbya wollei*. As mentioned above, the DEIS describes the distribution of *Lyngbya wollei* along the shoreline of Lake Erie in the vicinity of Fermi 3. DTE's Second C-6 Motion explains the methods of observation and data collection, including results from specific field sampling investigations.⁵⁰ The omissions have therefore been cured, and Intervenors do not dispute the methods used.

The third issue raised in Contention 6 is the lack of discussion in the ER of higher levels of turbidity that will be created during plant construction and operations, which may cause conditions favorable to the growth of *Lyngbya wollei*. Turbidity and other construction and operation impacts are discussed in the DEIS.⁵¹ This discussion is not disputed by Intervenors. In addition, Dr. Lowe concludes that "the short-term impacts associated with construction of the Fermi 3 discharge structure are unlikely to cause or exacerbate algal blooms in Lake Erie."⁵² Intervenors offer no contrary expert opinion.

The fourth issue is the size of the thermal plume and the residence time for algae in plume waters. The Staff notes that the DEIS contains extensive discussion of thermal plume modeling, and the Staff has independently confirmed the estimated plume size.⁵³ DTE's expert report also explains that, at the discharge location, the diffusers discharge water upward and at high velocity, making it unlikely that elevated temperatures or concentrations of chemicals will occur at the lakebed.⁵⁴ Dr. Lowe concludes, therefore, that the impact of the Fermi 3 diffusers on benthic algal communities should be minimal.⁵⁵ In addition, areas with the greatest concentration of *Lyngbya wollei* are typically more sheltered

⁴⁹ Intervenors' Response to Second C-6 Motion at 4.

⁵⁰ Second C-6 Motion at 16-19.

⁵¹ DEIS at 4-46, 5-51, 7-26.

⁵² Dr. Lowe Affidavit ¶ 9.

⁵³ Staff Answer to Second C-6 Motion at 16.

⁵⁴ Dr. Rex L. Lowe, "Assessment of Fermi 3 Discharge Impacts on *Lyngbya wollei* and Other Algal Species," Second C-6 Motion, Attachment 1, at 12.

⁵⁵ Dr. Lowe Affidavit ¶ 8.

from wave action than the Fermi 3 site. “Instead of *Lyngbya wollei*, the benthic algal communities at the Fermi site were dominated by small diatoms typical of healthy sand lake bottoms that are adapted to resist turbulent flow.”⁵⁶

Intervenors do not dispute any of these facts. Instead, they raise issues that are not within the scope of Contention 6, including impacts from mussel wastes and global warming. We will not consider these issues because they are outside the scope of the admitted contention and Intervenors have not sought to amend the Contention to include these issues.

In admitting Contention 6, we determined that it raised genuine disputes of material fact with regard to the DTE’s assessment of potential chemical and thermal discharges impacting algal production in Lake Erie. We now find that no issues of material fact remain in dispute and that DTE is entitled to judgment as a matter of law. We therefore grant DTE’s Motion for Summary Disposition of Contention 6.⁵⁷

2. Proposed Contention 20

Given our ruling granting summary disposition, we can now resolve the issue we left open when we ruled on Intervenors’ proposed Contention 20. Proposed Contention 20 alleges, among other things, that the DEIS fails to adequately consider whether thermal effluent from Fermi Unit 3 will result in drastic growth of harmful algae.⁵⁸ That issue is equivalent to the issue raised by Contention 6 concerning the ER. Because DTE had already filed its Second Motion for Summary Disposition of Contention 6, we deferred ruling on proposed Contention 20, insofar as it concerned the thermal effluent, until we ruled on DTE’s Second Motion for Summary Disposition of Contention 6.⁵⁹ Because we have now granted that Motion, we also decline to admit Contention 20, insofar as it concerns the thermal effluent, because the Board has now resolved that issue in favor of DTE.

II. MOTION FOR SUMMARY DISPOSITION OF CONTENTION 8

A. Background

Contention 8, as admitted by the Board, states:

⁵⁶ Rex L. Lowe, “Assessment of Fermi 3 Discharge Impacts on *Lyngbya wollei* and Other Algal Species,” Second C-6 Motion, Attachment 1, at 12.

⁵⁷ Our ruling granting DTE’s request for summary disposition renders moot Applicant’s Motion for Leave to File a Reply on Contention 6. We therefore deny that Motion.

⁵⁸ LBP-12-12, 75 NRC at 765-66. The Board declined to admit any other aspect of Contention 20. *Id.* at 768.

⁵⁹ *Id.*

the ER fails to adequately assess [Fermi Unit 3]’s impacts on the eastern fox snake and to consider alternatives that would reduce or eliminate those impacts.⁶⁰

The eastern fox snake is listed as a threatened species by the Michigan Department of Natural Resources (MDNR). The Board admitted Contention 8 because of the material dispute between Intervenor and DTE concerning the project’s likely impacts upon the eastern fox snake and the evaluation of alternatives that would mitigate those impacts.⁶¹ In the first version of its ER, DTE claimed that the species had not been observed on the site and that any impact of the project on the snake would be small, making mitigation measures unnecessary.⁶² Intervenor challenged these claims, citing a letter from Lori Sargent, a Nongame Wildlife Biologist in MDNR’s Wildlife Division.⁶³ She stated that MDNR’s recorded sightings of the eastern fox snake at the Fermi Unit 3 site contradicted the ER’s statement that the species had not been observed at the site. She further maintained that “going forward with the construction would not only kill snakes but destroy the habitat in which they live and possibly exterminate the species from the area. We would like to see a plan for protection of this rare species with regard to this new reactor project.”⁶⁴

Applicant’s First Motion for Summary Disposition of Contention 8 asserted that Contention 8 was moot because it had “resolved the discrepancy in the ER regarding the presence of the Eastern Fox snake at the Fermi site, developed a mitigation plan for the snake, and submitted an addenda to the ER describing those plans.”⁶⁵ The first mitigation measure put forth by DTE to address the potential impacts of construction on the eastern fox snake included a revision to “the site layout to reduce potential wetland impacts.”⁶⁶ DTE noted that “the Eastern Fox snake habitat is primarily associated with wetlands.”⁶⁷ Applicant stated that the new site layout reduces Fermi Unit 3’s wetland impacts by approximately 120 acres, from 169 to 49 acres.⁶⁸ DTE also maintained that 39 of the 49 wetland acres

⁶⁰ LBP-09-16, 70 NRC at 286.

⁶¹ *Id.* at 286-89.

⁶² Fermi 3 Combined License Application Part 3: Environmental Report, Rev. 0 (Sept. 2008) (ADAMS Accession No. ML082730641) at 4-45 [hereinafter ER Rev. 0].

⁶³ Petition at 89-90 (citing E-mail from Lori Sargent, Nongame Wildlife Biologist, Wildlife Division, Michigan Department of Natural Resources, to U.S. NRC (Feb. 9, 2009) (ADAMS Accession No. ML090401014) [hereinafter Sargent E-mail]).

⁶⁴ *Id.* at 90 (quoting Sargent E-mail).

⁶⁵ Applicant’s Motion for Summary Disposition of Contention 8 (Nov. 16, 2010) at 4.

⁶⁶ *Id.* at 7.

⁶⁷ *Id.* (citing Letter from Peter W. Smith, Nuclear Development — Licensing and Engineering, DTE, to U.S. NRC Document Control Desk, Attachment 7 (Feb. 15, 2010) at 3 (ADAMS Accession No. ML100541329)).

⁶⁸ *Id.* at 8.

impacted by construction will suffer only temporary impacts, and that those 39 acres will be restored to an equal or better ecological condition once construction of Fermi Unit 3 is complete.⁶⁹

In addition, “to further reduce the potential impacts to Eastern Fox snakes, [Applicant] also developed a draft *Habitat and Species Conservation Plan: Eastern Fox Snake (Elaphe gloydi)*.”⁷⁰ Specific mitigation measures called for in the draft mitigation plan include: an employee education program describing the eastern fox snake and its habitat, prejob briefings, preconstruction surveys of developed areas, preconstruction surveys of undeveloped areas, construction mitigation, and monitoring and reporting of eastern fox snake sightings on the Fermi Unit 3 site.⁷¹

The Board concluded that, although DTE had made significant modifications to the project and provided relevant new information, disputes of material fact remained concerning the adequacy of the ER’s evaluation of the impact of Fermi Unit 3 on the eastern fox snake and the status of mitigation measures to reduce those impacts.⁷² The Board agreed with DTE that the revised ER cured the discrepancy between the original ER and the MDNR records by revising section 4.3.1.2.1 to acknowledge the sightings of the eastern fox snake on the Fermi Unit 3 site. The Board also acknowledged that DTE had developed a revised site layout and a draft mitigation plan for the eastern fox snake. In substance, the revised site layout and draft mitigation plan constitute alternatives to the project as originally proposed that might, if implemented, reduce impacts to the species. DTE had therefore addressed two of the issues that led the Board to admit Contention 8: it acknowledged the presence of the species at the site and developed alternatives that appear intended to reduce impacts to the species.⁷³

But the Board explained that, although the specific deficiencies that DTE had resolved were among the factors that led the Board to admit Contention 8, they were not the only concerns. The Contention concerned the overall adequacy of the ER’s assessments of the project’s impacts on the eastern fox snake and possible alternatives that might reduce those effects, not just the specific omissions or discrepancies that were the focus of DTE’s motion.⁷⁴

The Board agreed with Intervenor that substantial conflicts relevant to compliance with NEPA and 10 C.F.R. Part 51 remain unresolved. For example, in the

⁶⁹ *Id.*

⁷⁰ *Id.* (citing Letter from Peter W. Smith, Nuclear Development — Licensing and Engineering, DTE, to U.S. NRC Document Control Desk, Attachment 7, Enclosure 2 (Feb. 15, 2010) (ADAMS Accession No. ML100541329)).

⁷¹ *Id.* at 8-9.

⁷² LBP-11-14, 73 NRC at 604.

⁷³ *Id.* at 606.

⁷⁴ *Id.* at 604-05.

revised ER, DTE continued to maintain that “the impact to [the eastern fox snake] from the [Fermi Unit 3] project is considered [small], and no mitigative measures are needed.”⁷⁵ The Board therefore found an unresolved conflict between the opinion of MDNR and that of DTE concerning the impact of Fermi Unit 3 construction activities on the eastern fox snake and the need for mitigation of those impacts. Moreover, the Board continued to find conflicts on the same issues within DTE’s own documents.⁷⁶

The Board agreed with DTE that “NEPA does not require a fully developed plan that will mitigate all environmental harm before an agency can act; NEPA requires only that mitigation be discussed in sufficient detail to ensure that environmental consequences have been fully evaluated.”⁷⁷ But the Board did not agree with DTE that the revised ER necessarily satisfies the latter requirement. The only statement in section 4.3.1.2.1 of the ER regarding mitigation of impacts to the eastern fox snake was that no mitigation is necessary.⁷⁸ Although the draft mitigation plan was referred to as an addendum to the revised ER, neither the plan nor its likely effect was discussed in the ER.⁷⁹ This left the Board uncertain which mitigation measures, if any, DTE will actually take for the protection of the eastern fox snake during the construction of Fermi Unit 3, whether those measures had been reviewed or approved by MDNR, and whether they will actually help prevent harm to the species during construction. The Board stated that the ER should explain, at a minimum, the mitigation measures DTE intends to take to benefit the eastern fox snake, the effect DTE believes those measures will have if implemented, and the basis of that belief.⁸⁰ The Board therefore concluded that a dispute of material fact remained concerning whether ER Revision 1 included the requisite hard look at potential construction impacts to the eastern fox snake and mitigation that might reduce those impacts.⁸¹

In October 2011, after the Board’s ruling denying DTE’s first motion for summary disposition of Contention 8, the Staff issued its Draft Environmental Impact Statement (DEIS). In the discussion of construction impacts, the DEIS reports that

more than 15 documented sightings of the eastern fox snake have been made on the Fermi site since 1990, including two sightings in 2008 during the wetlands

⁷⁵ *Id.* at 606.

⁷⁶ *Id.* at 606-07.

⁷⁷ *Id.* at 607 (quoting *Laguna Greenbelt, Inc. v. U.S. Department of Transportation*, 42 F.3d 517, 528 (9th Cir. 1994) (internal citation omitted)).

⁷⁸ *Id.* at 608.

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Id.*

delineation survey. . . . Eastern fox snakes have been observed in a variety of habitats, even near Fermi 2 buildings. The snake's most likely preferred habitat occurs along the cattail marshes or wetland shorelines around woody debris, but many of the habitats present on the Fermi site are usable as habitat by the snake Of the 1260 [acres] of the Fermi site, 656 [acres] are undeveloped, and much of it is potentially suitable habitat for the eastern fox snake.⁸²

The DEIS states that Fermi 3 building activities would affect approximately 197 acres of the potential snake habitat. Of that total, approximately 51 acres would be converted permanently to developed uses. "The remaining 146 [acres] of disturbed habitat would be restored to the pre-project vegetative cover type."⁸³ In addition, the DEIS acknowledges that "[t]raffic into the site and vicinity would increase greatly during construction," and that the "[i]ncreased traffic associated with operation of Fermi 3 has the potential to increase wildlife mortality, including mortality of eastern fox snakes."⁸⁴

The DEIS noted that DTE had prepared a Habitat and Species Conservation Plan (Conservation Plan or the Plan) to mitigate direct impacts on the snake.⁸⁵ The MDNR's Endangered Species Coordinator, however, had not reviewed the Plan when the DEIS was issued, and therefore he had not "commented on whether the [P]lan's mitigation measures would be adequate to protect the eastern fox snake."⁸⁶ The coordinator did inform the Staff that "monitoring of the eastern fox snake population during and after building of Fermi 3 could help determine whether the direct impacts from site activities and increased traffic warranted additional measures."⁸⁷ The Staff acknowledged that, "[g]iven the extent of potential eastern fox snake habitat that would be disturbed, albeit temporarily, and the increased traffic during construction and preconstruction, . . . the Fermi 3 project could result in mortality of some individuals and reduce the local population unless appropriate avoidance and mitigation measures are taken."⁸⁸ The Staff also concluded that, in addition to the measures identified in DTE's Conservation Plan, "monitoring of the snake would be necessary during and after building Fermi 3 to support development and implementation of effective mitigation measures."⁸⁹ The Staff

⁸² DEIS at 4-34.

⁸³ *Id.* at 4-35.

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.* at 4-35 to 4-36.

⁸⁷ *Id.* at 4-36.

⁸⁸ *Id.*

⁸⁹ *Id.*

“expects that this monitoring would be required by and done under the direction of the MDNR.”⁹⁰

In summarizing the project’s impacts on important species at the Fermi 3 site, the Staff acknowledged that impacts on the eastern fox snake could be “noticeable” unless adequate mitigation measures are developed and implemented.⁹¹ The Staff predicted, however, that “State permitting would probably result in requirements to protect the eastern fox snake to the extent practicable and to mitigate impacts that cannot be avoided.”⁹² The Staff, again referring to the requirements it believes MDNR will impose and enforce, concluded that

the impacts from construction and preconstruction activities for Fermi 3 on terrestrial resources on the Fermi site and transmission line corridor would be [small] because mitigation would be required prior to conducting site preparation, preconstruction, and construction activities. This conclusion is based in part on . . . mitigation for eastern fox snake and American lotus impacts that would be required by MDNR. Based on the above analysis, and because NRC-authorized construction activities represent only a portion of the analyzed activities, the NRC staff concludes that the impacts of NRC-authorized activities on terrestrial resources would be [small].⁹³

On April 6, 2012, MDNR issued a two-page checklist to DTE, indicating that MDNR had reviewed “information received regarding the proposed Fermi 3 nuclear plant construction” and that the information “was found . . . to adequately address the concerns for potential threatened and endangered species at the site in question.”⁹⁴ The MDNR checklist further states, based on the information DTE provided, that “[t]he proposed project should have minimal direct impacts on known special natural features at the location(s) specified if it proceeds *according to the plans provided*.”⁹⁵ The checklist also indicates that the eastern fox snake “may occur on the site(s) and should be avoided and protected from harm from all activities associated with the project and in perpetuity from any future activities on the property.”⁹⁶ Finally, the MDNR checklist states that “[a]n endangered species permit is required *if* activities will harm the species that are present, including

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.* at 4-44.

⁹⁴ Letter from Lori G. Sargent, Endangered Species Specialist, Wildlife Division, MDNR, to Mr. Randall Westmoreland, DTE Energy (April 6, 2012), Second C-8 Motion, Attachment 2, at 1 [hereinafter MDNR checklist].

⁹⁵ *Id.* (emphasis in original).

⁹⁶ *Id.*

transplanting them to another location.”⁹⁷ The checklist does not indicate whether DTE has applied for such a permit.

B. Parties’ Positions

According to DTE, the DEIS “acknowledges the potential adverse impacts to fox snakes from Fermi 3 construction activities and describes the role of MDNR with respect to mitigation of potential impacts to fox snakes.”⁹⁸ DTE further maintains that MDNR has reviewed its Mitigation Plan and “concluded that the plan is acceptable and provides adequate protection for the fox snakes at the Fermi site.”⁹⁹ Applicant has also submitted the declaration of “Detroit Edison’s expert herpetologist,” who “concluded that the Mitigation Plan is comprehensive and will effectively minimize impacts to fox snakes during construction.”¹⁰⁰ DTE argues that these facts are sufficient to remove any dispute of material fact and to establish its right to summary disposition of Contention 8.¹⁰¹

Intervenors challenge the claim that the entire dispute concerning the impact of Fermi 3 upon the eastern fox snake has been resolved. They note that the Board admitted Contention 8 based on “the conflict between the ER’s claim that the project would have only a small impact on the snake and that no mitigation measures were necessary, and the opinion of [MDNR] that ‘going forward with the construction would not only kill the snakes but destroy the habitat in which they live and possibly exterminate the species from the area,’ and that mitigation should be considered.”¹⁰² Intervenors acknowledge that DTE has now proposed mitigation measures, but, they maintain, those measures “have not been adequately vetted by the state regulatory authority and there are not satisfactory enforcement mechanisms in place.”¹⁰³ Intervenors then allege various deficiencies in DTE’s Conservation Plan. For example, they criticize the Plan for failing to characterize the 107.31-acre farm field intended to serve as mitigation habitat, as well as the “absence of a binding commitment to having the mitigation habitat available contemporaneously to the removal of the [eastern fox snake] from the construction site.”¹⁰⁴ Intervenors also state, referring to the MDNR checklist, that

⁹⁷ *Id.* at 2 (emphasis in original).

⁹⁸ Second C-8 Motion at 9.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 9-10.

¹⁰² Intervenors’ Response in Opposition to Applicant’s Motion for Summary Disposition of Contention 8 (Eastern Fox Snake) (July 2, 2012) at 2-3 (quoting LBP-11-14, 73 NRC at 605) [hereinafter Intervenors’ Response to Second C-8 Motion].

¹⁰³ *Id.* at 3.

¹⁰⁴ *Id.* at 4-6.

the “approval does not explain with any particularity what, exactly, was reviewed by MDNR, nor what the basis of the approval is.”¹⁰⁵ Intervenor complain that the checklist does not reflect sufficiently thorough analysis to “merit deference.”¹⁰⁶

Intervenor further argue that “[a]bsent a viable enforcement mechanism, there is no guarantee whatsoever that mitigation will take place.”¹⁰⁷ In support of this argument, Intervenor rely on guidance issued by the Council on Environmental Quality (CEQ) that addresses the appropriate use of mitigation and monitoring to support a conclusion in an EIS or a finding of no significant impact.¹⁰⁸ The CEQ acknowledges that NEPA itself does not create a general substantive duty on federal agencies to mitigate adverse environmental effects,¹⁰⁹ but recommends that, if an agency relies upon mitigation measures in its Final Environmental Impact Statement (FEIS), then it should take steps to ensure that mitigation commitments are implemented, monitor the effectiveness of such mitigation commitments, and be able to remedy failed mitigation.¹¹⁰ Intervenor imply that the Staff has failed to address these issues.¹¹¹ Intervenor also emphasize that, for agency decisions such as a COL that are based on an EIS, the CEQ Regulations require that “a monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation.”¹¹² The CEQ Guidance makes clear that this applies to permitting actions: “[w]hen an agency . . . permits or otherwise approves actions, it should also exercise its available authorities to ensure implementation of any mitigation commitments by including appropriate conditions on the relevant grants, permits or approvals.”¹¹³

Intervenor conclude that “[a]n evidentiary hearing is warranted here, because DTE has provided neither sufficient proofs of genuine regulatory scrutiny of its plan, nor procedures to assure its implementation if it were approved.”¹¹⁴ Because genuine issues of material fact are in dispute, they argue, DTE’s motion should be denied.¹¹⁵

¹⁰⁵ *Id.* at 6.

¹⁰⁶ *Id.* at 11.

¹⁰⁷ *Id.* at 8.

¹⁰⁸ *Id.* at 11 (citing and quoting U.S. Council on Environmental Quality, Final Guidance for Federal Departments and Agencies on the Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact, 76 Fed. Reg. 3843 (Jan. 21, 2011) [hereinafter CEQ Guidance]).

¹⁰⁹ CEQ Guidance, 76 Fed. Reg. at 3846.

¹¹⁰ *Id.* at 3847.

¹¹¹ Intervenor’s Response to Second C-8 Motion at 11-13.

¹¹² *Id.* at 12 (quoting 40 C.F.R. § 1505.2(c)).

¹¹³ CEQ Guidance, 76 Fed. Reg. at 3847.

¹¹⁴ Intervenor’s Response to Second C-8 Motion at 14-15.

¹¹⁵ *Id.* at 15.

The Staff filed a response to DTE's Second Motion for Summary Disposition of Contention 8, arguing that the Motion should be granted. Echoing DTE's position, the Staff argues that the DEIS adequately addresses the impacts of construction of Fermi Unit 3 on the eastern fox snake and the need for mitigation.¹¹⁶

Although replies in support of summary disposition motions are not authorized by the NRC's hearing regulations, DTE filed a Motion for Leave to File a Reply on Contention 8, together with the proposed Reply. The Motion for Leave is unopposed, and we will therefore permit the filing of the Reply. The Reply alleges that Intervenor, in their Opposition to the Summary Disposition Motion, "impermissibly attempt to expand the scope of Contention 8 by providing new bases — without addressing the criteria for late-filed or amended contentions and without demonstrating that the new issues are within the scope of the proceeding as currently defined by the admitted Contention 8."¹¹⁷ We resolve DTE's objections in our ruling below on the scope of Contention 8.

C. Board Ruling

1. Scope of Contention 8

In its Reply, DTE maintains that several of Intervenor's arguments in response to the summary disposition motion are outside the scope of Contention 8 as admitted by the Board. "Where an issue arises over the scope of an admitted contention, NRC opinions have long referred back to the bases set forth in support of the contention."¹¹⁸ Thus, the scope of an admitted contention depends in large part on the bases set forth in the "brief explanation of the basis for the contention" required by 10 C.F.R. § 2.309(f)(1)(ii). As long as the facts now relied on by Intervenor in opposition to the summary disposition motion fall within the scope of that explanation, they are properly before the Board. In addition, while a party may not raise new arguments that are outside the scope of its contention, it may "legitimately amplify" arguments presented in support of the contention in order to fairly respond to arguments raised by the opposing party.¹¹⁹

We explained the basis of Contention 8 in our ruling on DTE's Motion to Strike, which alleged that various arguments of Intervenor in response to DTE's First Motion for Summary Disposition of Contention 8 were outside the scope of

¹¹⁶ NRC Staff Answer to Applicant's Motion for Summary Disposition of Contention 8 (July 2, 2012) [hereinafter Staff Answer to Second C-8 Motion].

¹¹⁷ Reply to Response in Opposition to Summary Disposition of Contention 8 (July 9, 2012) at 1 [hereinafter DTE C-8 Reply].

¹¹⁸ *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002).

¹¹⁹ See, e.g., *Nuclear Management Co., LLC* (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 329 (2006).

the Contention. As we stated, the Contention concerns the adequacy under NEPA of the assessment of the project's impacts on the eastern fox snake and possible alternatives that might reduce those effects. Contention 8 is based on the risk that the construction of Fermi Unit 3 will kill snakes, destroy their habitat, and exterminate the species from the area.¹²⁰ To the extent Intervenor's arguments went beyond the impacts of construction of Unit 3 upon the snake, we ruled that they were outside the scope of Contention 8. On the other hand, arguments concerning the adequacy of the NEPA analysis of the impact of construction of Unit 3 upon the snake and of measures to mitigate those impacts fall within the scope of the Contention.¹²¹

DTE argues that Intervenor's criticism of MDNR's review of the Conservation Plan, describing it as a "shallow, checklist review," is outside the scope of Contention 8. According to DTE, the Board "should not entertain what is, in effect, a collateral attack on the MDNR process — a matter over which the NRC is devoid of jurisdiction."¹²² We agree, and for that reason the Board has not considered that argument in our ruling below. DTE also argues that Intervenor's criticisms of the Plan are outside the scope of Contention 8. These include Intervenor's arguments that various toxic contaminants may be present in the soil of the wetland mitigation site, and that "[r]epurposing agricultural land as reptile habitat is rather experimental."¹²³ We found it unnecessary to consider these arguments in our ruling, so this aspect of DTE's Reply is moot.

DTE also challenges as outside the scope of the Contention 8 Intervenor's argument that there is no viable enforcement mechanism to ensure implementation of the Conservation Plan.¹²⁴ Although we agree with DTE that an NRC adjudication is not the appropriate forum for a challenge to a decision by a state regulatory agency, we do not construe the argument regarding the lack of an enforcement mechanism as such a challenge. Instead, Intervenor questions the adequacy of the DEIS's analysis of the impact of construction on the snake, given the lack of any means to enforce the Conservation Plan. As previously explained,¹²⁵ the Staff expressly relied on future MDNR actions, including enforcement of the Plan, to justify its finding that the impact of construction and preconstruction activities on the eastern fox snake will be small. Applicable NEPA law requires an agency to justify its reliance on anticipated future mitigation of adverse impacts.¹²⁶ Inter-

¹²⁰ LBP-11-14, 73 NRC at 609.

¹²¹ *Id.* at 608-09.

¹²² DTE C-8 Reply at 2 (citing *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), LBP-82-117A, 16 NRC 1964, 1991 (1982)).

¹²³ *Id.* at 2-3.

¹²⁴ *Id.* at 2.

¹²⁵ *See supra* pp. 459-60.

¹²⁶ *See infra* p. 467.

venors may therefore question whether the DEIS includes a sufficient justification for its reliance upon future actions of MDNR.

A board faced a related issue in litigation challenging amendments to the operating license for Unit 1 at the River Bend Station.¹²⁷ The contention at issue alleged that the licensee's financial exposure in ongoing litigation and regulatory proceedings might adversely affect safety at the facility.¹²⁸ In arguing for summary disposition, the licensee and the Staff contended that, if the licensee was forced to declare bankruptcy, the bankruptcy court would ensure that the River Bend Station would receive sufficient funding to ensure safe operation.¹²⁹ The Intervenor responded that the licensee had not supplied enough information to establish that a bankruptcy court would supply sufficient funding to River Bend. The Board concluded that "the question of whether bankruptcy courts will adequately fund nuclear facilities to ensure safety is a disputed factual question for which summary disposition is inappropriate."¹³⁰ Similarly, the question here is whether the Staff, in the DEIS, has reasonably relied on assumptions about the future actions of MDNR. By raising that issue, Intervenor is not making a collateral attack on the MDNR process any more than the Intervenor in *River Bend* was making a collateral attack upon the bankruptcy court process. Rather, Intervenor is disputing the sufficiency of the DEIS under NEPA. Intervenor's argument, as so construed, does not impermissibly expand the scope of Contention 8 into an attack upon the state agency's process.

2. Summary Disposition

The Board denied DTE's First Motion for Summary Disposition of Contention 8 because genuine issues of material fact remained unresolved. Although DTE's present motion identifies additional developments since our earlier ruling that resolve some of the problems that led us to deny DTE's earlier motion, the new information is not sufficient to resolve all disputed questions of material fact or law relevant to resolution of Contention 8. The Board accordingly denies DTE's Second C-8 Motion.

We agree with DTE that the DEIS, like the revised ER, resolves the question whether the eastern fox snake is present at the Fermi 3 site. The DEIS acknowledges the presence of the snake, as well as the availability of snake habitat at the site. Intervenor has not alleged that the DEIS understates the presence of the snake at the site or the available habitat, so those issues are no longer in

¹²⁷ *Gulf States Utilities Co.* (River Bend Station, Unit 1), LBP-95-10, 41 NRC 460 (1995).

¹²⁸ *Id.* at 466.

¹²⁹ *Id.* at 471.

¹³⁰ *Id.*

dispute. Similarly, the DEIS does not repeat the statement in the ER that the snake would be expected to avoid construction activities and that therefore mitigation is unnecessary. Instead, the DEIS acknowledges the potential adverse impacts to eastern fox snakes from Fermi 3 construction activities and notes that DTE has modified the site layout and developed the Conservation Plan.¹³¹ On these issues as well, Intervenor fails to identify any factual dispute.

But Intervenor does dispute whether the Staff's reliance on the Conservation Plan is consistent with the CEQ Guidance. The Staff expressly premised its conclusion that the impact of construction and preconstruction activities on the snake will be small on its assumption that MDNR will require mitigation that will be sufficient to protect the snake from the impacts of such activities.¹³² As the CEQ Guidance explains, although NEPA does not require mitigation of environmental impacts, it does require that, if a federal agency relies on mitigation to support a finding in an environmental impact statement (EIS) or a finding of no significant impact (FONSI), the agency should ensure that mitigation commitments are implemented, monitor the effectiveness of such commitments, be able to remedy failed mitigation, and involve the public in mitigation planning.¹³³ The DEIS, however, fails to address those issues. Instead, the DEIS's conclusion that the impact on the eastern fox snake will be small appears to be based on the assumption that MDNR will require implementation of DTE's Conservation Plan, and that MDNR will also require the monitoring that the Staff concluded would also be necessary. In other words, the DEIS assumes that MDNR will take the actions that the CEQ Guidance states are the responsibility of the federal agency that relies on mitigation to support a finding in its EIS. In substance, Intervenor questions whether this reliance is consistent with the CEQ Guidance.

Intervenor has raised a substantial question whether the DEIS adequately addresses the issues raised in the CEQ Guidance. Because DTE, the moving party in this instance, bears the burden of demonstrating that it is entitled to judgment as a matter of law,¹³⁴ a substantial question whether the DEIS complies with applicable NEPA requirements is sufficient to defeat summary disposition. But the CEQ Guidance consists primarily of recommendations to federal agencies, not legally binding obligations. The Guidance "is not a rule or regulation, and the recommendations it contains may not apply to a particular situation based upon the individual facts and circumstances."¹³⁵ It also "does not change or substitute

¹³¹ DEIS at 4-34 to 4-35.

¹³² See DEIS at 4-44.

¹³³ CEQ Guidance, 76 Fed. Reg. at 3847.

¹³⁴ 10 C.F.R. § 2.710(d)(2). See also *Poller v. Columbia Broad. Sys., Inc.*, 368 U.S. at 467 (summary judgment should be granted only where the truth is clear); *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 102; *Private Fuel Storage*, LBP-99-32, 50 NRC at 158.

¹³⁵ CEQ Guidance, 76 Fed. Reg. at 3846 n.5.

for any law, regulation, or other legally binding requirement and is not legally enforceable.”¹³⁶ Some courts have declined to defer to similar interpretative guidance issued by CEQ.¹³⁷

Fortunately, we need not resolve the question of the level of deference we should afford the CEQ Guidance, because the federal courts have developed similar rules for deciding when federal agencies may rely on mitigation to support a FONSI. To be sure, in the present case the NRC did not issue a FONSI, but it did rely on mitigation to support its finding that the impact of construction and pre-construction activities on the eastern fox snake will be small. Such a finding is sufficiently similar to a FONSI that the cases addressing that issue are also relevant to assessing the determination the Staff made in the DEIS concerning impacts to the snake. The CEQ Guidance recognizes the overlap between those two issues.¹³⁸ We will therefore look to the federal case law for the governing legal requirements.

Federal courts have agreed that, “[w]hen conducting a NEPA-required environmental review, an agency may consider the ameliorative effects of mitigation in determining the environmental impacts of an activity.”¹³⁹ But “[a]n agency’s reliance on mitigation in making a FONSI . . . must be justified.”¹⁴⁰ Such reliance is justified if the proposed mitigation satisfies two criteria. “First, the proposed mitigation underlying the FONSI ‘must be more than a possibility’ in that it is ‘imposed by statute or regulation or have been so integrated into the initial proposal that it is impossible to define the proposal without mitigation.’”¹⁴¹ “Second, there must be some assurance that the mitigation measures ‘constitute an adequate buffer against the negative impacts that result from the authorized activity to render such impacts so minor as to not warrant an EIS.’”¹⁴² Proposed

¹³⁶ *Id.*

¹³⁷ See *Associations Working for Aurora’s Residential Environment v. Colorado Department of Transportation*, 153 F.3d 1122, 1127 n.4 (10th Cir. 1998); *Cabinet Mountains Wilderness/Scotchman’s Peak Grizzly Bears v. Peterson*, 685 F.2d 678, 682-83 (D.C. Cir. 1982).

¹³⁸ See CEQ Guidance, 76 Fed. Reg. at 3846-49.

¹³⁹ *Ohio Valley Environmental Coalition v. Hurst*, 604 F. Supp. 2d 860, 888 (S.D. W. Va. 2009) (citing *O’Reilly v. U.S. Army Corps of Engineers*, 477 F.3d 225, 231 (5th Cir. 2007); *Sierra Club v. U.S. Army Corps of Engineers*, 464 F. Supp. 2d 1171, 1224 (M.D. Fla. 2006), *aff’d*, 508 F.3d 1332 (11th Cir. 2007)).

¹⁴⁰ *Id.* (citing *Sierra Club*, 464 F. Supp. 2d at 1224).

¹⁴¹ *Id.* (quoting *Sierra Club*, 464 F. Supp. 2d at 1225 (quoting *Wyoming Outdoor Council v. U.S. Army Corps of Engineers*, 351 F. Supp. 2d 1232, 1250 (D. Wyo. 2005))). *Accord Davis v. Mineta*, 302 F.3d 1104, 1125 (10th Cir. 2002).

¹⁴² *Id.* (quoting *Wetlands Action Network v. U.S. Army Corps of Engineers*, 222 F.3d 1105, 1121 (9th Cir. 2000) (citing *Greenpeace Action v. Franklin*, 14 F.3d 1324, 1332 (9th Cir. 1992))).

mitigation measures are sufficient “if they are supported by sufficient evidence, such as studies conducted by the agency, or are ‘adequately policed.’”¹⁴³

Concerning the first requirement, the record before us fails to show that DTE’s conservation plan is “‘imposed by statute or regulation or [has] been so integrated into the initial proposal that it is impossible to define the proposal without [the] mitigation.’”¹⁴⁴ The DEIS informs us only that “State permitting” would “probably” result in requirements to protect the snake to the extent practicable and to mitigate any unavoidable impacts.¹⁴⁵ The DEIS also states that, “[i]n addition to the measures identified in [DTE’s Conservation Plan], the review team believes that monitoring of the snake would be necessary during and after building Fermi 3 to support development of effective mitigation measures.”¹⁴⁶ The Staff stated that it “expects” that the additional monitoring it found to be necessary would be “required and done under the direction of the MDNR.”¹⁴⁷ Thus, the DEIS fails to identify any statutory or regulatory requirements that will mandate implementation of the Conservation Plan and the additional monitoring the DEIS states will be necessary. Instead, the DEIS appears to simply assume that MDNR will take whatever actions are necessary to ensure that impacts to the snake are small and that necessary additional monitoring will occur.

This is similar to the argument the D.C. Circuit recently rejected in *New York v. NRC*.¹⁴⁸ The NRC argued that its environmental assessment did not need to deal with the potential impacts of leaks from spent fuel pools because its monitoring and regulatory compliance program would prevent such leaks. The court stated:

That argument . . . amounts to a conclusion that leaks will not occur because the NRC is “on duty.” With full credit to the Commission’s considerable enforcement and inspection efforts, merely pointing to the compliance program is in no way sufficient to support a scientific finding that spent-fuel pools will not cause a significant environmental impact during the extended storage period.¹⁴⁹

Similarly, in the DEIS the Staff appears to assume that because the MDNR is “on duty” the snake will not be significantly impacted by the construction of Fermi Unit 3. That assumption, like the similar assumption rejected in *New York v. NRC*,

¹⁴³ *Id.* (quoting *Wetlands Action Network*, 222 F.3d at 1121 (quoting *Wyo. Outdoor Council*, 351 F. Supp. 2d at 1250)).

¹⁴⁴ 604 F. Supp. 2d at 888 (quoting *Sierra Club*, 464 F. Supp. 2d at 1225 (quoting *Wyo. Outdoor Council*, 351 F. Supp. 2d at 1250)).

¹⁴⁵ DEIS at 4-36.

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ 681 F.3d 471, 481 (D.C. Cir. 2012).

¹⁴⁹ *Id.*

is insufficient to demonstrate compliance with NEPA's requirement that agencies take a hard look at the environmental consequences of their proposed actions.¹⁵⁰

The CEQ Guidance states that, as an alternative to reliance upon the agency's own authority to impose mitigation, "the authority for the mitigation may derive from legal requirements that are enforced by other Federal, state, or local government entities (e.g., air or water permits administered by local or state agencies)."¹⁵¹ This suggests that federal agencies may rely on mitigation that will be imposed by other agencies. But this does not relieve the federal agency conducting the NEPA review of the burden to explain the statutory or regulatory requirements it is relying on and its reasons for concluding that the application of those requirements will actually result in the mitigation and monitoring it assumes will occur. The DEIS fails to provide that information, which raises a significant question whether the DEIS complies with NEPA.¹⁵²

Nor was DTE's Plan part of the initial proposal (the license application). Instead, it was developed after the Board admitted Contention 8. And the Plan has not been so integrated into DTE's proposed action that it would be "impossible" to define the action without the Plan.¹⁵³ In *Ohio Valley Environmental Coalition*, the court found that the Army Corps of Engineers satisfied that requirement because "the case-by-case evaluation that the Corps relies upon to mitigate the cumulative impacts to insignificance, as well as the factors to be considered in that process, are mandatory conditions that are integrated into the proposed permit"¹⁵⁴ Here, by contrast, the DEIS does not suggest that the Conservation Plan will be required by or otherwise integrated into the proposed COL. And MDNR has not yet issued a permit providing for protection of the eastern fox snake.

The MDNR checklist, relied on by DTE in its Motion, also fails to identify any present obligation to implement the Conservation Plan. On the contrary,

¹⁵⁰ See also *Center for Biological Diversity v. U.S. Bureau of Land Management*, 698 F.3d 1101 (9th Cir. 2012) (Biological Opinion and its accompanying Incidental Take Statement issued by the United States Fish and Wildlife Service were arbitrary and capricious because they were based in part on a conservation plan that was not enforceable under the Endangered Species Act).

¹⁵¹ CEQ Guidance, 76 Fed. Reg. at 3847.

¹⁵² See *Davis v. Mineta*, 302 F.3d at 1125 (Court of Appeals disagreed with the district court's conclusion that the increase in noise levels would not be a significant impact because the agency's environmental assessment made "no firm commitment to any noise mitigation measures."); *National Audubon Society v. Hoffman*, 132 F.3d 7, 17 (2d Cir. 1997) ("In this case, we have no assurance of Measure K's efficacy. The Forest Service conducted no study of its likely effects, proposed no monitoring to determine how effective the proposed mitigation would be, and did not consider alternatives in the event Measure K fails."). Cf. *Wyo. Outdoor Council v. U.S. Army Corps of Eng'rs*, 351 F. Supp. 2d at 1250 (district court found that "the mitigation measures are a mandatory condition to the use of GP 98-08," and that they therefore "qualify as the type of mitigation measures that can be relied upon for a finding of no significant impact.")

¹⁵³ *Ohio Valley Envtl. Coalition*, 604 F. Supp. 2d at 888.

¹⁵⁴ *Id.* at 890.

the checklist informs us only that “[t]he proposed project should have minimal direct impacts on known special natural features at the location(s) specified if it proceeds *according to the plans provided*.”¹⁵⁵ Thus, while the checklist supports DTE’s position that construction will not have a significant impact upon the eastern fox snake if the Conservation Plan is implemented, it provides no support for the supposition that the proposed action will in fact proceed according to the Plan. On the contrary, the checklist simply reinforces the uncertainty about what measures, if any, will be imposed to ensure implementation of the Plan and the additional monitoring that the DEIS states will be necessary.

In short, neither DTE nor the Staff has identified any existing requirement that DTE implement its Conservation Plan or the additional monitoring. DTE has provided the affidavit of a company official stating that DTE will implement the Plan,¹⁵⁶ but this does nothing to make the Plan enforceable. As things stand, DTE may halt or modify implementation of the Conservation Plan as it chooses. Thus, an issue material to determining whether the DEIS complies with NEPA has not been resolved. This is sufficient to require denial of summary disposition, so the Board need not address the second part of the federal court test.

3. *Proposed Contention 21*

Given our ruling on summary disposition, we can now resolve the issue we left open when we ruled on Intervenor’s proposed Contention 21. We construed proposed Contention 21 to allege, among other things, that the DEIS fails to adequately discuss mitigation alternatives for the eastern fox snake.¹⁵⁷ That issue is equivalent to the issue raised by Contention 8 concerning the ER. Because DTE had already filed its Second Motion for Summary Disposition of Contention 8, we deferred ruling on proposed Contention 21, insofar as it concerned the eastern fox snake, until we ruled on DTE’s Second Motion for Summary Disposition of Contention 8.¹⁵⁸ Because we have now denied the summary disposition motion, Contention 8 remains pending.

Contention 8 was filed based on the ER, but the issuance of an EIS by the Staff does not necessarily render moot a contention that was filed based on the ER. The Board may construe an admitted contention contesting the ER as a challenge to a subsequently issued DEIS or FEIS without the necessity for Intervenor’s to

¹⁵⁵ MDNR checklist at 1 (emphasis in original).

¹⁵⁶ Affidavit of Peter W. Smith in Support of Summary Disposition of Contention 8 (June 11, 2012) at 4.

¹⁵⁷ LBP-12-12, 75 NRC at 769. The Board declined to admit any other aspect of Contention 21. *Id.* at 771.

¹⁵⁸ *Id.* at 771.

file a new or amended contention.¹⁵⁹ This concept has been referred to as the “migration tenet.”¹⁶⁰ It helps to expedite hearings by obviating the need to file and litigate the same contention up to three times — once against the ER, once against the DEIS, and one final time against the FEIS.¹⁶¹ The tenet applies when the information contained in a subsequently released document is sufficiently similar to the information contained in the original document upon which the original contention was filed.¹⁶²

The relevant parts of the ER and the DEIS both concern the impact of construction activities upon the eastern fox snake and conclude that the impact will be small. There is one difference relevant to Contention 8: the ER assumed that no mitigation would be necessary, while the DEIS acknowledges the need for mitigation and assumes that adequate mitigation will be required by MDNR. However, the issue raised by Intervenor remains the same — whether the discussion of mitigation is sufficient to satisfy the requirements of NEPA. We therefore deem the ER and the DEIS to be sufficiently similar that the migration tenet should apply. Contention 8 accordingly applies to the DEIS and is not moot.

We therefore deny the Motion to Admit Contention 21, as it relates to the snake, because the amendment is unnecessary.

III. MOTION FOR SUMMARY DISPOSITION OF CONTENTION 15

A. Background

On November 6, 2009, the Intervenor filed a Supplemental Petition for Admission of a Newly Discovered Contention (Supplemental Petition), which

¹⁵⁹ See *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 84 (1998) (“In this proceeding, CANT filed most of its environmental contentions on the basis of LES’s ER. But by the time the various NEPA issues came before the Board on the merits, the NRC Staff had issued its FEIS. In LBP-96-25 and LBP-97-8, therefore, the Board appropriately deemed all of CANT’s environmental contentions to be challenges to the FEIS.”); *McGuire/Catawba*, CLI-02-28, 56 NRC at 383 n.44 (“[A] contention ‘initially framed as a challenge to the substance of an applicant’s ER analysis of particular matters would not necessarily require a late-filed revision or substitution to constitute a litigable issue statement relative to the substance of the Staff’s DEIS (or final environmental impact statement) analysis of the same matter.’”); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-23, 54 NRC 163, 172 n.3 (2001).

¹⁶⁰ *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-1, 73 NRC 19, 26 (2011).

¹⁶¹ *Id.*

¹⁶² See *id.*

included a quality assurance (QA) contention numbered as Contention 15.¹⁶³ In June 2010, the Board admitted a reformulated version of the Contention: Contention 15 (including subparts A and B)

Detroit Edison (DTE) failed to comply with Appendix B to 10 C.F.R. Part 50 to establish and implement its own quality assurance (QA) program when it entered into a contract with Black and Veatch (B&V) for the conduct of safety-related combined license (COL) application activities and to retain overall control of safety-related activities performed by B&V. This violation began in March 2007 and continued through at least February 2008. Further, DTE failed to complete internal audits of QA programmatic areas implemented for the Fermi 3 COL Application, and DTE also has failed to document trending of corrective actions to identify recurring conditions adverse to quality since the beginning of the Fermi Unit 3 project in March 2007.

Contention 15A:

These deficiencies adversely impact the quality of the safety related design information in the FSAR that is based on B&V's tests, investigations, or other safety-related activities. Because the NRC may base its licensing decision on safety-related design information in the FSAR only if it has reasonable assurance of the quality of that information, it may not lawfully issue the COL until the deficiencies have been adequately corrected by the Applicant, or until the Applicant demonstrates that the deficiencies do not affect the quality of safety-related design information in the FSAR.

Contention 15B:

Although DTE claims that in February 2008 it adopted a QA program that conforms to Appendix B, DTE has failed to implement that program in the manner required to properly oversee the safety-related design activities of B&V. This demonstrates an ongoing lack of commitment on the part of DTE's management to compliance with NRC QA regulations. The NRC cannot support a finding of reasonable assurance that the plant, as built, can and will be operated without endangering the public health and safety until DTE provides satisfactory proof of a fully-implemented QA program that will govern the design, construction, and operation of Fermi Unit 3 in conformity with all relevant NRC regulations.¹⁶⁴

The Contention was based upon a Staff inspection in August 2009 that resulted in a Notice of Violation (NOV) issued in October 2009 (the October 2009 NOV). The October 2009 NOV found that DTE had failed, in certain respects, to comply

¹⁶³ Supplemental Petition for Admission of a Newly Discovered Contention (Nov. 6, 2009) at 2-3.

¹⁶⁴ LBP-10-9, 71 NRC 493, 510-11 (2010).

with the QA requirements of Appendix B.¹⁶⁵ The violations included: (A) failing to establish and implement a Fermi Unit 3 QA program between March 2007 (when DTE initially contracted with B&V for the conduct of COLA activities for Fermi Unit 3) and February 2008 and failing to retain overall control of contracted COLA activities as required under Criterion II, “Quality Assurance Program” of Appendix B, resulting in inadequate control of procurement documents and ineffective control of contract services performed by B&V for COLA activities; (B) failing to perform internal audits of QA programmatic areas implemented for Fermi Unit 3 COLA activities; and (C) failing to document trending of DTE’s corrective action reports.¹⁶⁶

In its reply to the October 2009 NOV, DTE denied that any violation occurred before September 18, 2008, because it was not then a COL applicant and thus was not subject to Appendix B requirements.¹⁶⁷ The Staff responded to DTE on April 27, 2010.¹⁶⁸ The Staff agreed with DTE that it could not issue a NOV for actions or omissions before the date on which DTE submitted the Fermi 3 COLA to the NRC. Therefore, the Staff withdrew the original Violation A and substituted a revised Violation A in its revised NOV (the April 2010 NOV). But the Staff also stated that DTE “must demonstrate compliance with Appendix B in order to receive a COL” from the NRC.¹⁶⁹ Thus, the Staff made clear that DTE’s compliance with Appendix B requirements between March 2007 and February 2008, as well as later, remained relevant to the question whether the NRC may issue the COL.

DTE’s reply also disputed Violations B and C in the October 2009 NOV. The Staff determined, however, that those violations remained valid.¹⁷⁰ In its April 2010 NOV, the Staff reformulated those two violations into one new violation (revised Violation B). The Staff’s reply also stated that DTE’s response to Violations B and C was responsive to the October 2009 NOV, and DTE was not required to respond further concerning those violations or revised Violation B.¹⁷¹

In May 2010, DTE responded to the revised Violation A, admitting the

¹⁶⁵ *Id.* at 500.

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

¹⁶⁸ *Id.* at 500-01 (citing Letter from Richard Rasmussen, Chief Quality and Vendor Branch B, Division of Construction Inspection & Operational Programs, Office of New Reactors, to Jack Davis, Chief Nuclear Officer, Detroit Edison Company and Revised Notice of Violation to Detroit Edison Company (Apr. 27, 2010) (ADAMS Accession No. ML100330687) [hereinafter NRC Response to DTE NOV Reply]).

¹⁶⁹ NRC Response to DTE NOV Reply at 1.

¹⁷⁰ *Id.* at 2.

¹⁷¹ *Id.*

violation and outlining the corrective steps that DTE had taken to address it.¹⁷² The Staff now considers resolved all the violations identified in the October 2009 and April 2010 NOV^s.¹⁷³

In March 2010, the Staff issued a Request for Additional Information No. 26 (RAI 26) concerning DTE's QA activities prior to submittal of the application in September 2008. It stated in part, "[s]ufficient detail has not been provided in the Fermi 3 FSAR to enable the Staff to reach a final conclusion on whether all Fermi 3 project safety-related activities completed prior to the COL application date were consistent with the requirements of Appendix B to 10 CFR Part 50."¹⁷⁴ DTE responded in May 2010 to RAI 26, describing how, in its view, all Fermi 3 safety-related activities completed or in process prior to September 18, 2008, were consistent with the requirements of Appendix B, and identifying all safety-related activities performed prior to that date that were related to the Application.¹⁷⁵

On April 17, 2012, DTE moved for summary disposition of Contention 15 and subparts 15A and 15B.¹⁷⁶ On May 7, 2012, the Staff filed an answer supporting DTE's motion.¹⁷⁷ On May 17, the Intervenor^s filed a response opposing summary disposition.¹⁷⁸ On May 24, DTE filed a motion for leave to file a reply to the Intervenor^s response.¹⁷⁹

¹⁷² NRC Staff Answer to Applicant's Motion for Summary Disposition of Contention 15 (May 7, 2012) at 8 [hereinafter Staff Answer to C-15 Motion].

¹⁷³ *Id.* at 8-9.

¹⁷⁴ Letter from Jerry Hale, U.S. NRC, to Jack M. Davis, Chief Nuclear Officer, DTE (Mar. 18, 2010) (ADAMS Accession No. ML100770169).

¹⁷⁵ C-15 Motion at 11.

¹⁷⁶ See C-15 Motion.

¹⁷⁷ See Staff Answer to C-15 Motion.

¹⁷⁸ See Intervenor^s Response in Opposition to Applicant's Motion for Summary Disposition of Contention 15 (May 17, 2012) [hereinafter Intervenor^s Answer to C-15 Motion]. Concurrently, the Intervenor^s filed a motion to allow them to supplement their response in opposition to DTE's summary disposition motion by July 31, 2012. See Intervenor^s Motion to Supplement Response in Opposition to Applicant's Motion for Summary Disposition of Contention 15 (May 17, 2012). Both DTE and the Staff opposed the Intervenor^s motion to supplement. See Applicant's Response to Motion to Supplement Response in Opposition to Summary Disposition on Contention 15 (May 29, 2012); Staff Answer to Intervenor^s Motion to Supplement Response in Opposition to Applicant's Motion for Summary Disposition of Contention 15 (May 24, 2012). On June 21, 2012, we denied the motion. See Licensing Board Order (Denying Intervenor^s Motion to Supplement) (June 21, 2012) (unpublished).

¹⁷⁹ See Applicant's Motion for Leave to File a Reply on Contention 15 (May 24, 2012). The Motion for Leave is unopposed, and we therefore allow the filing of the Reply. The Reply argues that an issue raised by Intervenor^s in their Answer to the C-15 Motion is outside the scope of the admitted contention. We find, however, that Intervenor^s argument is within the scope of Contention 15. See *infra* note 198.

B. The Parties' Positions

DTE characterizes Contention 15 as raising two issues: “(1) The first issue concerns the reliability of safety-related information in the FSAR”; and (2) “the second issue relates to the Intervenor’s assertion that there is a history of QA violations associated with the Fermi 3 project, and therefore a lack of commitment to compliance with Appendix B requirements.”¹⁸⁰ The first issue is the subject of Contention 15A, the second the subject of Contention 15B.

DTE maintains that, both before and after the COLA was submitted to the NRC, “work related to the Fermi 3 application has been subject to 10 C.F.R. Part 50, Appendix B, QA programs.”¹⁸¹ DTE states that it “delegated to its COL Application contractor [B&V] the responsibility for establishment and execution of a QA program related to the project.”¹⁸² DTE explains that such delegation is allowed by 10 C.F.R. Part 50, Appendix B, Criterion I, which provides that

[t]he applicant shall be responsible for the establishment and execution of the quality assurance program. The applicant may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, or any part thereof, but shall retain responsibility for the quality assurance program.

DTE argues that it complied with its obligation to retain responsibility for the QA program. DTE further argues that the information developed during this time period is of “high quality,” that it may be and has been relied on by the NRC during its review of the FSAR, and that therefore DTE is entitled to summary disposition of Contention 15A.¹⁸³

DTE also argues that it is entitled to summary disposition of Contention 15B. DTE states that it had in place as of February 2008 its own QA program.¹⁸⁴ It further argues that it has demonstrated its commitment to QA since the start of the project in various ways, and that “there is ample basis for the Licensing Board to make its predictive finding that there is reasonable assurance that the Fermi 3 QA program has been, can be, and will be implemented.”¹⁸⁵

The Staff argues that, because it now considers resolved all the violations identified in the October 2009 and April 2010 NOV’s, all issues related to

¹⁸⁰ C-15 Motion at 12-13.

¹⁸¹ *Id.* at 14.

¹⁸² *Id.* at 15.

¹⁸³ *Id.* at 42.

¹⁸⁴ *Id.* at 26.

¹⁸⁵ *Id.* at 46.

Contentions 15A and 15B have been resolved and DTE is entitled to summary disposition.¹⁸⁶

Intervenors disagree. They acknowledge that a license applicant “may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, or any part thereof,” but they stress that DTE must “retain responsibility for the quality assurance program.” 10 C.F.R. Part 50, App. B.¹⁸⁷ According to Intervenors, the evidence shows that DTE failed to comply with this requirement by effectively relying on B&V, the QA contractor, to oversee its own work.¹⁸⁸ Intervenors contend that the lack of independent oversight of B&V, as well as the defects in the QA program identified by their expert, Arnold Gunderson, are material factual issues that remain in dispute, and the existence of these disputed issues renders summary disposition unwarranted.¹⁸⁹

1. Board Ruling

We agree with Intervenors that Contention 15 is not appropriate for summary disposition because issues of material fact remain in dispute. In our view, the adequacy of the QA program both before and after submission by DTE of the COLA is a disputed issue of material fact that must be resolved through the evidentiary hearing process.

An adequate QA program is basic to ensuring that a nuclear power plant is designed and built to the exacting standards needed to provide adequate assurance of safety. The QA program used to develop design and site characteristics must therefore be robust enough to ensure all data and design information is reliable and accurate. The Commission has explained that an adequate QA “program must provide for control over activities affecting the quality of ‘structures, systems, and components, to an extent consistent with their importance to safety.’ The program must also include provisions requiring that the applicant regularly review its status and adequacy. The regulations further mandate that the program establish measures to assure that conditions ‘adverse to quality’ are promptly identified and corrected.”¹⁹⁰ Contention 15 maintains, in substance, that the QA program was insufficient to enable the Applicant to perform those functions.

Intervenors point out that there appear to be conflicting interests between B&V acting as the QA contractor, design contractor, preapplication activity contractor,

¹⁸⁶ See Staff Answer to C-15 Motion.

¹⁸⁷ Intervenors’ Answer to C-15 Motion at 3.

¹⁸⁸ *Id.* at 5-8.

¹⁸⁹ *Id.* at 14-16.

¹⁹⁰ *Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1 and 2)*, ALAB-802, 21 NRC 490, 492-93 (1985) (internal citation omitted).

and Owner's Engineer.¹⁹¹ DTE states that, in addition to contracting with B&V to develop the Fermi 3 application, it "secured the services of an Owner's Engineer . . . to support owner-related activities such as . . . COL Application contractor oversight."¹⁹² According to DTE, the evidence "demonstrates that, during site investigation and COL Application development activities, there was a substantial degree of oversight — under the B&V QA program and by the Detroit Edison [Owner's Engineer]."¹⁹³ Intervenor note that, in at least four other places in its C-15 Motion, DTE refers to its Owner's Engineer providing oversight of B&V QA activities.¹⁹⁴ But Intervenor, relying on various passages in the Final Safety Analysis Report, note that the Owner's Engineer providing oversight of B&V QA activities was in fact B&V itself.¹⁹⁵ Intervenor argue that their "evidence suggests that some of the 2007-2010 quality assurance activities involving the proposed Fermi 3 were compromised by conflicts of interest wherein Black & Veatch personnel, acting as the 'Owner's Engineer,' were overseeing fellow Black & Veatch personnel who were serving as general contractor and quality assurance guarantors for DTE."¹⁹⁶ Intervenor contend that such an arrangement fails to satisfy the requirement that DTE "retain responsibility for the quality assurance program."¹⁹⁷ As admitted by the Board, the contention includes a dispute over proper oversight of the contractor by DTE,¹⁹⁸ something that Intervenor still dispute in their response to the C-15 Motion. Based on the record before us, that dispute has not yet been resolved. Therefore, Intervenor have identified a material issue relevant to Contention 15 that remains in dispute.

Also, Intervenor's expert, Mr. Gunderson, disputes the adequacy of DTE's QA program. In June of 2010, Mr. Gunderson reviewed information submitted by DTE in response to RAI 26 and identified various issues that, in his view, constitute significant problems with the QA program.¹⁹⁹ Although originally submitted at an earlier stage of this adjudication, Mr. Gunderson's Second Declaration was discussed at length in DTE's C-15 Motion,²⁰⁰ as well as by

¹⁹¹ Intervenor's Answer to C-15 Motion at 8.

¹⁹² C-15 Motion at 17.

¹⁹³ *Id.* at 25.

¹⁹⁴ Intervenor's Answer to C-15 Motion at 6 n.3.

¹⁹⁵ *Id.* at 6-7.

¹⁹⁶ *Id.* at 15-16.

¹⁹⁷ *Id.* at 8.

¹⁹⁸ LBP-10-9, 71 NRC at 514-18. We therefore reject DTE's argument, in its Reply on Contention 15, that the alleged conflict of interest resulting from B&V's role as Owner's Engineer is outside the scope of the admitted contention.

¹⁹⁹ Second Declaration of Arnold Gunderson Supporting Supplemental Petition of Intervenor Contention 15: DTE COLA Lacks Statutorily Required Cohesive QA Program (June 8, 2010) [hereinafter Second Gunderson Declaration].

²⁰⁰ C-15 Motion at 47-53.

Intervenors in their Response.²⁰¹ It is therefore properly before the Board. Mr. Gunderson contends that “[i]t is critical in nuclear QA that there be complete separation and independence between QA and other line functions,” and that for a 13-month period this was lacking in DTE’s QA program because the QA department reported directly to the Director of Nuclear Development.²⁰² For these and other reasons, Mr. Gunderson concludes that “[t]he RAI response, when compared to DTE Fermi Unit 3’s COLA, shows that the QA function on the Fermi 3 project was and continues to be wholly inadequate.”²⁰³

DTE spends 6 pages of its 54-page C-15 Motion disputing Mr. Gunderson’s analysis.²⁰⁴ Intervenors respond to DTE’s attacks, maintaining that Mr. Gunderson’s criticisms of DTE’s QA program remain valid.²⁰⁵ This is not the appropriate place for the Board to resolve these disagreements. “[W]hen presented with conflicting expert opinions, licensing boards should be mindful that summary disposition is rarely proper.”²⁰⁶ “[A] licensing board (or presiding officer) should not . . . conduct a ‘trial on affidavits.’”²⁰⁷ “Regardless of the level of the dispute, at the summary disposition stage, it is not proper for a Board” to choose which expert has the better of the argument.²⁰⁸ “If ‘reasonable minds could differ as to the import of the evidence,’ summary disposition is not appropriate.”²⁰⁹ Here we have a conflict of expert opinion on a material issue, the adequacy of DTE’s QA program, which is sufficient to defeat summary disposition.

Our conclusion that summary judgment must be denied is not altered by the Staff’s view that the issues identified in the October 2009 and April 2010 NOVs have been resolved. The Staff has concluded that QA deficiencies cited in the NOVs do not affect the quality of safety-related design information in the FSAR and the confidence the NRC can reasonably have in DTE’s commitment to implementing QA requirements.²¹⁰ But the Staff’s views do not preclude Intervenors from attempting to persuade the Board that it should reach different

²⁰¹ Intervenors’ Answer to C-15 Motion at 8-13.

²⁰² *Id.* at 8.

²⁰³ *Id.* at 12.

²⁰⁴ C-15 Motion at 47-53.

²⁰⁵ Intervenors’ Answer to C-15 Motion at 8-13.

²⁰⁶ *Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), LBP-11-7, 73 NRC 254, 263 (2011) (citing *Phillips v. Cohen*, 400 F.3d 388, 399 (6th Cir. 2005)). *See also Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-5, 63 NRC 116, 122 (2006).

²⁰⁷ *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297 (2010) (citing *Anderson v. Liberty Lobby*, 477 U.S. 242, 255 (1986)).

²⁰⁸ *Vermont Yankee*, LBP-06-5, 63 NRC at 122 (citing *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 510 (2001)).

²⁰⁹ *Pilgrim*, CLI-10-11, 71 NRC at 297-98 (citing *Anderson*, 477 U.S. at 250-51).

²¹⁰ Staff Answer to C-15 Motion at 9, 14.

conclusions concerning those issues. We addressed a similar question in our ruling admitting Contention 15, explaining that the Staff's April 2010 decision to grant DTE's appeal of the original Violation A did not alter our decision that the Contention should be admitted.²¹¹ We noted that the Staff's decision appeared to be based on its interpretation of its legal authority, but that in any event the Board is not bound by NRC Staff's position or by changes in that position.²¹² In the present context as well, we are not required to accept the Staff's views of disputed issues. For example, although the Staff reviewed DTE's response to RAI 26 and concluded that the deficiencies cited in the October 2009 NOV do not affect the quality of safety-related information in the FSAR,²¹³ Mr. Gunderson reached quite different conclusions upon his review of the same RAI response. "[T]he Staff is but one of the parties to this licensing proceeding, and . . . the positions which it may take are in no way binding upon us."²¹⁴

DTE complains that Intervenor has not identified any specific information in the COLA that is allegedly flawed due to deficient QA.²¹⁵ Again, we responded to a similar argument in our ruling admitting Contention 15. We acknowledged that Intervenor, in petitioning for admission of Contention 15, alleged only that the FSAR's accuracy is "brought into question" by the alleged QA violations, not that it actually provides false information.²¹⁶ But we explained that to argue that Intervenor must show specific information in the FSAR to be false misapprehends the effect of QA violations. "The effect of a pattern of QA violations is not necessarily to show that particular safety-related information is false, but, as the Appeal Board stated in the *Diablo Canyon* licensing proceeding, to erode the confidence the NRC can reasonably have in, and create substantial uncertainty about the quality of, the work that is tainted by the alleged QA violations."²¹⁷ Once the petitioners in the *Diablo Canyon* proceeding established that the plant's design was infected by a pattern of QA violations, the burden shifted to the applicant to reestablish confidence in the adequacy of the design.²¹⁸ Similarly, in this case, Intervenor need show only that safety-related design information in the FSAR is infected by a pattern of QA violations. The burden then shifts to DTE to reestablish confidence in the safety-related aspects of the design.

²¹¹ LBP-10-9, 71 NRC at 522 n.133.

²¹² *Id.*

²¹³ Staff Answer to C-15 Motion at 9.

²¹⁴ *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-268, 1 NRC 383, 399 (1975).

²¹⁵ C-15 Motion at 41.

²¹⁶ LBP-10-9, 71 NRC at 519.

²¹⁷ *Id.* (citing *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-763, 19 NRC 571, 576 (1984)).

²¹⁸ *Id.* at 521.

Our task at this point is not to conduct a comprehensive review of the evidence to decide which side is likely to prevail on that or any other issue. Rather, at this point we need only determine whether a genuine factual dispute remains concerning a material issue. As the Commission has explained, when considering a motion for summary disposition, the function of the Board is not “to weigh the evidence and determine the truth of the matter but to determine whether there is a genuine issue for [hearing].”²¹⁹ Summary disposition “is not a tool for trying to convince a Licensing Board to decide, on written submissions, genuine issues of material fact that warrant resolution at a hearing.”²²⁰ Intervenor has identified specific material issues that remain in dispute. We therefore deny DTE’s Motion for Summary Disposition of Contention 15.

IV. MOTION TO ADMIT CONTENTION 25

A. Background

On July 2, 2012, Intervenor filed the motion now before the Board to admit proposed Contention 25. It states:

The proposed measures taken to mitigate the demolition of the Fermi 1 containment building are inadequate and violative of § 106 of the National Historic Preservation Act. The mitigation measures and concluding Memorandum of Agreement were agreed upon without public consultation or participation, and the resulting official recordation of the history of Fermi 1, is likely to be biased in favor of commercial nuclear power and to omit significant historical details.²²¹

1. Historic Preservation and NEPA

Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires that federal agencies, before licensing any federally assisted undertaking, “take into account the effect of the undertaking” on any site that is included or eligible for inclusion in the National Register of Historic Places.²²² The agency must also allow the federal Advisory Council on Historic Preservation (ACHP) “a reasonable opportunity to comment with regard to such undertaking.”²²³

²¹⁹ *Pilgrim*, CLI-10-11, 71 NRC at 297 (internal citation omitted).

²²⁰ *Private Fuel Storage*, LBP-01-39, 54 NRC at 509 (emphasis omitted).

²²¹ Motion to Admit at 1-2.

²²² NHPA § 106, 16 U.S.C. § 470f (2006). There is no dispute that a combined license for a nuclear reactor is an “undertaking” under the NHPA.

²²³ *Id.*

The ACHP has promulgated regulations delineating the procedures for an agency to follow in complying with section 106, which generally involve (1) identifying the impacts of the project, or lack thereof, on historic properties; (2) communicating these to the “consulting parties,” including the ACHP and the relevant state historic preservation officer (SHPO); and (3) considering measures to mitigate any impacts.²²⁴ The regulations also encourage that the NHPA § 106 process be coordinated with the agency’s process for complying with NEPA.²²⁵ The agency “shall plan for involving the public in the section 106 process,”²²⁶ but “may use the agency’s procedures for public involvement under [NEPA] . . . if they provide adequate opportunities for public involvement.”²²⁷

2. *Fermi Unit 1*

Fermi Unit 1, completed in 1963, was the first (and to date the only) commercial fast breeder reactor constructed and operated in the United States. It is also notable for an accident in 1966 that shut down the reactor for 3 years.²²⁸ Unit 1 was taken offline permanently in 1972. The Staff and the Michigan SHPO have deemed Unit I eligible for inclusion in the National Registry of Historic Places.²²⁹

Unit 1 sits on the proposed site of Unit 3. As a result, if Applicant’s COL is approved and construction goes forward, Unit 1 must be demolished. In light of this fact, the Staff reached the obvious conclusion in the DEIS that demolition would “adversely affect” Unit 1 as an historic or cultural resource.²³⁰ In the DEIS, the Staff stated that it was “consulting with the Michigan SHPO and [Applicant] in developing a MOA [Memorandum of Agreement] to resolve the adverse effects” on Unit 1.²³¹ Among the steps in that consultation were: a notice in the *Federal Register* that the Staff would coordinate its NHPA compliance with its NEPA

²²⁴ See 36 C.F.R. §§ 800.3-800.6.

²²⁵ See *id.* § 800.8.

²²⁶ *Id.* § 800.3(e).

²²⁷ *Id.* § 800.2(d)(3).

²²⁸ See *Fermi, Unit 1*, U.S. NRC, <http://www.nrc.gov/info-finder/decommissioning/power-reactor/enrico-fermi-atomic-power-plant-unit-1.html> (last visited October 17, 2012).

²²⁹ See DEIS at 2-204, 7-32; Letter from Brian D. Conway, Michigan SHPO, to Bruce Olson, U.S. NRC (May 9, 2011) (ADAMS Accession No. ML11159071).

²³⁰ DEIS at 4-97.

²³¹ *Id.*

review;²³² a draft MOA;²³³ conference calls with participants; the final MOA sent for signatures to the SHPO,²³⁴ and acceptance by the SHPO.

The MOA specifies that the Applicant will prepare documentation as a permanent record of the existence of Fermi I, in accordance with documentation guidelines of the Michigan SHPO.²³⁵ Two copies of this “recording” package will be sent to the Michigan SHPO and the Monroe County Library and Reference Center.²³⁶ In addition, the Applicant is to “develop and establish a permanent public exhibit regarding the history of the Fermi 1 plant,” with the location and design to be determined.²³⁷

B. Parties’ Positions

Intervenors assert that the recording materials settled on by the Staff are insufficient to memorialize the true significance of Unit 1, including its alleged legacy as a potential source of fuel for nuclear weapons.²³⁸ Intervenors also suggest that the recording materials minimize the importance of the 1966 accident. In the Motion to Admit, Intervenors point to additional materials, including books, reports, and congressional testimony, that they believe should be included in the recording package.²³⁹

Intervenors also argue that the NRC failed to comply with the procedural requirements of the NHPA regulations that the agency seek input from the public.²⁴⁰ Intervenors claim that no formal notice for public participation was

²³² See Detroit Edison Company Fermi Nuclear Power Plant, Unit 3 Combined License Application Notice of Intent to Prepare an Environmental Impact Statement and Conduct Scoping Process, 73 Fed. Reg. 75,142, 75,143 (Dec. 10, 2008).

²³³ Draft Memorandum of Agreement Between the U.S. [NRC] and the Michigan [SHPO] Regarding the Demolition of the Enrico Fermi Atomic Power Plant, Unit 1 Facility Located in Monroe County, Michigan (Aug. 22, 2011) (ADAMS Accession No. ML112070039) [hereinafter Draft MOA].

²³⁴ Memorandum of Agreement Between the U.S. [NRC] and the Michigan [SHPO] Regarding the Demolition of the Enrico Fermi Atomic Power Plant, Unit 1 Facility Located in Monroe County, Michigan (Mar. 8, 2012) (ADAMS Accession No. ML12089A007) [hereinafter MOA].

²³⁵ See MOA at 1 & Appendix A.

²³⁶ *Id.* Although the final MOA does not specify the contents of the recording package, the draft MOA referenced two documents that Applicant had provided the SHPO: a 2009 evaluation of Unit 1’s suitability for listing in the National Register and the book *Fermi-1: New Age for Nuclear Power*. See Draft MOA at 1.

²³⁷ *Id.* at 2.

²³⁸ See Motion to Admit at 3-4, 6.

²³⁹ See *id.* at 3-8, 11. In particular, Intervenors reference the books *We Almost Lost Detroit* and *The Careless Atom*. *Id.*

²⁴⁰ See 36 C.F.R. § 800.2(d)(2) (“The agency official must, except where appropriate to protect confidentiality concerns of affected parties, provide the public with information about an undertaking
(Continued)

issued during the completion of the MOA, nor was there any recitation of the NRC's attempts "to communicate the existence of, or the signing of, the MOA to the general public before the signing actually took place."²⁴¹ Intervenor contend that "[s]ince the Fermi 3 DEIS issuance in October 2011, all ensuing progress toward a Memorandum of Agreement has been accomplished effectively in secret, without the public participation which is anticipated by the NHPA § 106 regulations."²⁴²

On July 27, the Staff and Applicant filed answers opposing admission of the contention.²⁴³ They argue that the contention is untimely and that it fails to satisfy the admissibility criteria. Intervenor filed their reply on August 3.²⁴⁴

C. Board Ruling

On September 4, 2012, amendments to the NRC's rules of practice for adjudications took effect.²⁴⁵ Because Intervenor's submitted the contention before the new regulations took effect, we analyze the admissibility of the contention under the rules that were in place at the time of filing.²⁴⁶

1. Timeliness

Under the former 10 C.F.R. § 2.309(f)(2), new contentions may be filed after the deadline for requests for hearing and petitions to intervene if they satisfy the following requirements:

- (i) The information upon which the amended or new contention is based was not previously available;

and its effects on historic properties and seek public comment and input."); 36 C.F.R. § 800.3(e) ("[i]n consultation with the SHPO/THPO, the agency official shall plan for involving the public in the section 106 process. The agency official shall identify the appropriate points for seeking public input and for notifying the public of proposed actions, consistent with § 800.2(d)").

²⁴¹ Motion to Admit at 12.

²⁴² *Id.* at 9.

²⁴³ Staff Answer to the Intervenor's Motion for Admission of Contention 25 (July 27, 2012) [hereinafter Staff C-25 Answer]; Applicant's Answer to Proposed Contention 25 (July 27, 2012) [hereinafter Applicant C-25 Answer].

²⁴⁴ See Intervenor's Reply in Support of Motion for Admission of Contention No. 25 (Challenging § 106 NHPA Mitigation for Demolition of Fermi Unit 1) (Aug. 3, 2012) [hereinafter C-25 Reply].

²⁴⁵ See Amendments to Adjudicatory Process Rules and Related Requirements, 77 Fed. Reg. 46,562, 46,562 (Aug. 3, 2012).

²⁴⁶ See *id.* ("[I]n ongoing adjudicatory proceedings, if there is a dispute over an adjudicatory obligation or situation arising prior to the effective date of the new rule, the former rule provisions would be used.")

- (ii) The information upon which the amended or new contention is based is materially different than information previously available; and
- (iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.

The regulations do not define “timely fashion.” In our scheduling order, we established that “a proposed new or amended contention shall be deemed timely under 10 C.F.R. § 2.309(f)(2)(iii) if it is filed within thirty (30) days of the date when the new and material information on which it is based first becomes available.”²⁴⁷ If a new contention is deemed untimely under section 2.309(f)(2)(iii), it will be evaluated under the former 10 C.F.R. § 2.309(c)(1), which provides that a Board presented with a nontimely contention shall balance eight factors to determine whether to admit the contention.

Intervenors assert that Contention 25 is based on new information that did not become available through the NRC’s public document system (ADAMS) until June 1, 2012, or later. This information consists of (1) the March 2012 MOA describing the mitigation plan and recordation package, and (2) a letter dated May 7, 2012, from the Michigan SHPO to the NRC confirming acceptance of the recordation materials.²⁴⁸ Intervenors contend that the May 7 letter constituted an “administrative determination” that concluded the NHPA consultation.²⁴⁹

In response, the Applicant and the Staff argue that the May 7 letter is not different from information previously available.²⁵⁰ Although this letter from the SHPO confirmed acceptance of the final MOA, information about the recordation materials was publicly available earlier. The Applicant characterizes the letter as “a ministerial act that reflects full implementation (i.e., completion) of mitigation measures agreed to previously.”²⁵¹ Additionally, the March MOA was available in draft form months earlier, in August 2011. The Applicant and the Staff point out that the Intervenors had prior opportunities to participate in the consultation or bring their contention. For this reason, they argue, Intervenors also lack good cause for filing their contention late.²⁵²

The Commission considered the timing of an historical preservation contention

²⁴⁷ Licensing Board Order (Establishing Schedule and Procedures to Govern Further Proceedings) (Sept. 11, 2009) at 2 (unpublished).

²⁴⁸ Letter from Martha MacFarlane Faes, Cultural Resource Protection Manager, Michigan SHPO, to Bruce Olson, U.S. NRC (May 7, 2012) (ADAMS Accession No. ML12144A321).

²⁴⁹ Motion to Admit at 14.

²⁵⁰ See Applicant C-25 Answer at 5-7; Staff C-25 Answer at 21.

²⁵¹ Applicant C-25 Answer at 5.

²⁵² *Id.* at 8; Staff C-25 Answer at 23 n.17.

in the *Crow Butte* license renewal proceeding.²⁵³ There, the petitioning Indian tribe raised a contention against the Applicant's environmental report, alleging that the Staff had not fulfilled its NHPA consultation duty regarding cultural resources and tribal artifacts that may be found at the site. In response, the Staff argued not that the contention was untimely, but that it was not yet ripe, and "will not ripen until the Staff completes its NEPA review."²⁵⁴ The Commission agreed. The Commission stated that "the Tribe must defer its contention until the NEPA review is complete."²⁵⁵

Thus, the question in this case is not simply when sufficient information was available to enable Intervenor to formulate Contention 25. The Board must consider not only that issue, but also when the Staff's NEPA review of the Fermi Unit 1 preservation issue was (or will be) complete.²⁵⁶ Until then, Contention 25 is premature, and therefore it could not plausibly be deemed late.

In *Crow Butte*, the Commission suggested that the publication of the DEIS could be the trigger for a timely NHPA contention.²⁵⁷ But, in this case, the Staff's NEPA review of the Fermi Unit 1 historic preservation issue was not complete when the DEIS was issued, because the Staff was then still consulting with the Michigan SHPO and DTE to develop a MOA to resolve the adverse effects on Unit 1.²⁵⁸ Thus, a plan for mitigating the adverse effect on Unit 1 was still being developed. The MOA was signed several months later, in March of 2012, but for two reasons it is not clear that such action constituted the completion of the Staff's NEPA review. First, the MOA requires further action, including DTE's submission of the recordation package to the SHPO; and development of a Fermi Unit 1 exhibit in consultation with the Michigan SHPO, Monroe County Community College, and other interested persons. In addition, the Staff has not yet issued the FEIS, which would logically be understood as the completion of the NEPA review process that was still ongoing when the DEIS was issued. In the FEIS, the Staff must explain the impact of the proposed action on Fermi Unit 1 and the steps the agency has taken to mitigate the impact, which will presumably include an explanation of the MOA and the steps that have been and will be taken

²⁵³ See *Crow Butte Resources, Inc.* (In-Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 348-51 (2009).

²⁵⁴ *Id.* at 349.

²⁵⁵ *Id.* at 351.

²⁵⁶ Although the Staff and Applicant argue that the information necessary to support Contention 25 was available more than 30 days before it was filed, neither addresses the question of when the Staff's review terminated or will terminate. Intervenor also fail to address the question.

²⁵⁷ See CLI-09-9, 69 NRC at 351 n.105.

²⁵⁸ DEIS at 4-97.

pursuant to that agreement.²⁵⁹ Under this analysis, Contention 25 is premature, not late, because the Staff's review of the historic preservation issue will not be complete until the FEIS is issued.

Nevertheless, given that in *Crow Butte* the Commission did not attempt to precisely define the point at which the Staff's review terminates, we are reluctant to base our ruling on a finding that Contention 25 is premature. We are equally reluctant to find the contention late, given the uncertainty about the prematurity issue. We will therefore base our decision on the admissibility criteria, an issue that we find easier to resolve.

2. *Admissibility*

A contention must meet the six admissibility requirements of 10 C.F.R. § 2.309(f)(1). Intervenors challenge both the Staff's procedural compliance with section 106 of the NHPA, and the substance of the mitigation plan developed by the NRC, the Michigan SHPO, and the Applicant.

To the extent that the Intervenors' proposed contention is based on asserted deficiencies in the Staff's process for soliciting public participation pursuant to the NHPA, we conclude that the Intervenors' proposed contention fails to demonstrate a genuine dispute on a material issue of fact or law.²⁶⁰ Applicant argues that Intervenors are disregarding the ACHP regulations that authorize agencies to comply with the NHPA through the NEPA process.²⁶¹ Similarly, the Staff maintains that it fulfilled its NHPA responsibilities by following the process outlined in 36 C.F.R. § 800.8(c).²⁶² The Staff asserts that "through the combined

²⁵⁹ Under NEPA, an EIS must discuss "any adverse environmental effects which cannot be avoided should the proposal be implemented." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351-52 (1989), and must provide "a reasonably complete discussion of possible mitigation measures." *Id.* at 352.

²⁶⁰ 10 C.F.R. § 2.309(f)(1)(vi). Intervenors also appear to challenge Detroit Edison's compliance with the NHPA. They contend, for instance, that "[b]ecause of the federal nature of a COL, DTE was required to follow the NHPA." Motion at 2-3. This argument also fails to demonstrate a genuine dispute of material fact because the burden of fulfilling NHPA's consultation requirements rests exclusively with the NRC, not with the Applicant. See *Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 566 (2009) ("Regardless of the applicant's efforts, the burden rests on the NRC to fulfill the consultation requirements.").

²⁶¹ Applicant C-25 Answer at 9.

²⁶² 36 C.F.R. § 800.8, "Coordination with the National Environmental Policy Act," contains a subsection entitled, "Use of the NEPA process for section 106 process." This subsection provides that:

An agency official may use the process and documentation required for the preparation of an EA/FONSI or an EIS/ROD to comply with section 106 in lieu of the procedures set forth in §§ 800.3 through 800.6 if the agency official has notified in advance the SHPO/THPO and the Council that it intends to do so and the following standards are met.

36 C.F.R. § 800.8(c).

issuance of *Federal Register* notices, public meeting, comment solicitations, and the DEIS, [the Staff] has continued to comply with Section 106 of NHPA.”²⁶³

The Staff stated in a December 10, 2008 *Federal Register* notice that it would address its NHPA responsibilities through its NEPA process.²⁶⁴ The DEIS, published in October 2011, described the Staff’s section 106 consultation process and analyzed impacts from construction and operation of the proposed site for Fermi Unit 3, including the historic and cultural resources of the site.²⁶⁵ In addition, as part of the Staff’s historical and cultural analysis in the DEIS, the Staff identified Fermi Unit 1 as a historic property.²⁶⁶ The DEIS also acknowledged the potential impacts to historic and cultural resources associated with the demolition of Fermi Unit 1 prior to the construction of Unit 3.²⁶⁷ The Staff noted that “[t]he NRC staff is consulting with the Michigan SHPO and Detroit Edison in developing an MOA to resolve the adverse effects on Fermi 1 pursuant to 36 C.F.R. § 800.6(c).”²⁶⁸

The Staff conducted environmental scoping meetings related to the Detroit Edison Application on January 14, 2009, at the Monroe County Community College.²⁶⁹ The participants in the afternoon and evening meetings included several of the Intervenor — members of the Sierra Club, Don’t Waste Michigan, Beyond Nuclear, and the Intervenor’s counsel, Terry Lodge.²⁷⁰ In addition, Kevin Kamps, of Beyond Nuclear and Don’t Waste Michigan, and Ed McArdle, of the Sierra Club, discussed Fermi 1 in the afternoon scoping meeting.²⁷¹ In the evening scoping meeting, Mr. Keegan, of Don’t Waste Michigan, discussed Fermi 1.²⁷²

Moreover, as pointed out by the Applicant in its Answer, Mr. Keegan was present for one of the public hearings concerning the cultural and historical aspects

²⁶³ Staff C-25 Answer at 11-12.

²⁶⁴ 73 Fed. Reg. 75,142, 75,143 (Dec. 10, 2008) (“Pursuant to 36 CFR 800.8(c), the NRC staff intends to use the process and documentation for the preparation of the EIS on the proposed action to comply with Section 106 of the NHPA in lieu of the procedures set forth on 36 CFR 800.3 through 800.6.”).

²⁶⁵ See DEIS at 2-193 to 2-205 (describing historic and cultural resources at the site); 2-207 to 2-208 (describing section 106 consultation); 4-96 to 4-100 (describing impacts of construction on historic and cultural resources); 5-88 to 5-90 (describing impacts of operations on historic and cultural resources); and 7-31 to 7-32 (describing cumulative impacts on historic and cultural resources).

²⁶⁶ DEIS at 2-203 to 2-204; 4-97.

²⁶⁷ *Id.* at 4-97.

²⁶⁸ *Id.*

²⁶⁹ Memorandum to Ryan Whited from Stephen Lemont, Summary of Public Scoping Meetings Conducted Related to the Combined License Application Review of the Fermi Nuclear Power Plant, Unit 3 (Mar. 3, 2009) at 1 (ADAMS Accession No. ML090291080).

²⁷⁰ *Id.* at 22-25.

²⁷¹ See Corrected Transcript of Fermi 3 Afternoon Scoping Meeting (Jan. 14, 2009) at 33, 79-85, 109-112 (ADAMS Accession No. ML090440586).

²⁷² See Corrected Transcript of Fermi 3 Evening Scoping Meeting (Jan. 14, 2009) at 30, 94-100 (ADAMS Accession No. ML090440588).

of Fermi 1.²⁷³ During a public teleconference held on August 29, 2011, the NRC discussed the draft MOA and a letter sent to the SHPO by the NRC about the section 106 review.²⁷⁴ Mr. Keegan was present during the call.²⁷⁵ In addition, on December 15, 2011, Mr. Keegan provided comments regarding the historical accuracy of the proposed archives for Fermi 1 at a public meeting on the DEIS.²⁷⁶ Mr. Keegan specifically referred to *We Almost Lost Detroit* during his comments in the evening session of the public meeting on the DEIS.²⁷⁷ Mr. Keegan was also present during other teleconference calls discussing the historical preservation of Fermi 1; these conference calls were held on May 23, 2011,²⁷⁸ June 6, 2011,²⁷⁹ June 27, 2011,²⁸⁰ and September 28, 2011.²⁸¹

Because the Staff used the process and documentation required for the preparation of an EIS/ROD to comply with NHPA § 106, as it is permitted to do, Intervenor must identify some requirement applicable to that process and documentation with which the Staff arguably failed to comply. They have failed to do so. A mere desire for even more public participation than required by the applicable requirements is not sufficient to demonstrate a genuine dispute of material fact. Intervenor has accordingly failed to demonstrate a genuine dispute regarding the adequacy of the process used by the Staff to comply with the NHPA.

Intervenor also asserts that the substance of the DEIS is inadequate, arguing that the “total discussion of historic preservation impacts expected from Fermi 1 in the [DEIS] for Fermi 3 consists of [one passage].”²⁸² Applicant responds

²⁷³ See Applicant C-25 Answer at 6.

²⁷⁴ See Memorandum from Ryan Whited, Chief, Environmental Projects Branch 2, to Bruce A. Olson, Project Manager, Environmental Projects Branch 2 (Sept. 7, 2011) at 1 (ADAMS Accession No. ML112440055).

²⁷⁵ See *id.* at 4.

²⁷⁶ See Transcript of Afternoon Session of Public Meeting on DEIS for Fermi 3 Project (Jan. 13, 2012), at 50-55 (ADAMS Accession No. ML12009A120); see also Transcript of Evening Session of Public Meeting on DEIS for Fermi 3 Project, (Jan. 13, 2012), at 42-43, 88-93 (ADAMS Accession No. ML12009A121) [hereinafter Jan. 13, 2012 Evening Session Tr.].

²⁷⁷ Jan. 13, 2012 Evening Session Tr. at 90.

²⁷⁸ See Meeting Minutes of Conference Call for the Fermi 3 COL Environmental Review (May 23, 2011) at 1 (ADAMS Accession No. ML11179A177).

²⁷⁹ See Meeting Minutes of Conference Call (June 6, 2011) at 1 (ADAMS Accession No. ML-11179A179).

²⁸⁰ See Meeting Minutes of Conference Call (June 27, 2011) at 1 (ADAMS Accession No. ML-112231667).

²⁸¹ See Meeting Minutes of Conference Call, List of Attendees (Sept. 26, 2011) (ADAMS Accession No. ML112720110).

²⁸² See Motion to Admit at 9 (quoting DEIS at 7-31).

that Fermi 1 is discussed in several sections of the DEIS.²⁸³ Applicant points to sections 7.5 and 4.6.1 of the DEIS to support this argument.²⁸⁴ We accordingly find no genuine dispute on this issue.

In addition, Intervenor argue that the recordation documents are inadequate because the recordation package “is likely to be biased in favor of commercial nuclear power and to omit significant historical details.”²⁸⁵ Applicant responds that recordation is not required by the NHPA and that Intervenor provide no authority for the premise that the recordation must reflect the entire public record of Fermi 1.²⁸⁶ The Staff argues that Intervenor’s Motion to Admit “asserts that the Staff’s NHPA consultation is inadequate unless the Intervenor are allowed to determine the content and scope of the Fermi MOA as well as subsequent implementation.”²⁸⁷ The Staff also contends that the NHPA merely requires consultation and to afford consulting parties a reasonable opportunity to comment; the NHPA does not dictate a substantive outcome nor does it require direct public participation in the approval of or finalization of the Fermi MOA.²⁸⁸

Intervenor’s argument concerning the substance of the recordation package fails to present a genuine dispute. The NHPA and its implementing regulations require only that agencies consider the impacts of an undertaking on historic preservation and measures to mitigate those impacts in their decisionmaking. It does not require that the agency implement any mitigation measures, let alone that those measures meet a certain standard of protection for historic properties.²⁸⁹ Intervenor are thus demanding that the Staff do something it has no legal obligation to do.

Because Intervenor have failed to proffer an admissible contention, the Motion to Admit is DENIED.

V. CONCLUSION

For the foregoing reasons, the Board grants summary disposition of Contention 6, denies summary disposition of Contentions 8 and 15, and denies the Motion

²⁸³ See Applicant C-25 Answer at 10-11.

²⁸⁴ See *id.* (citing DEIS at 4-97).

²⁸⁵ Motion to Admit at 2.

²⁸⁶ See Applicant C-25 Answer at 12.

²⁸⁷ Staff C-25 Answer at 20.

²⁸⁸ *Id.*

²⁸⁹ See, e.g., *Valley Community Preservation Commission v. Mineta*, 373 F.3d 1078, 1085 (10th Cir. 2004) (“Section 106 is essentially a procedural statute and does not impose a substantive mandate”); *Waterford Citizens’ Association v. Reilly*, 970 F.2d 1287, 1290-91 (4th Cir. 1992); *Slockish v. U.S. Federal Highway Administration*, 682 F. Supp. 2d 1178, 1193 (D. Or. 2010) (“the NHPA and NEPA impose only procedural requirements on federal projects”).

to Admit proposed Contention 25. The Board also declines to admit those parts of previously submitted Contentions 20 and 21 that the Board did not previously reject.

IT IS SO ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Ronald M. Spritzer, Chairman
ADMINISTRATIVE JUDGE

Dr. Anthony J. Baratta
ADMINISTRATIVE JUDGE

Dr. Randall Charbeneau
ADMINISTRATIVE JUDGE

Rockville, Maryland
November 9, 2012

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Allison M. Macfarlane, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of

Docket No. 50-293-LR

**ENTERGY NUCLEAR
GENERATION COMPANY and
ENTERGY NUCLEAR
OPERATIONS, INC.
(Pilgrim Nuclear Power Station)**

December 6, 2012

REVIEW, DISCRETIONARY

We will grant a petition for review at our discretion, giving due weight to the existence of a substantial question with respect to one or more of the following considerations: (i) a finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding; (ii) a necessary legal conclusion is without governing precedent or is a departure from or contrary to established law; (iii) a substantial and important question of law, policy, or discretion has been raised; (iv) the conduct of the proceeding involved a prejudicial procedural error; or (v) any other consideration that we may deem to be in the public interest.

MOTIONS TO REOPEN

A motion to reopen a closed record must be timely. When determining whether a new contention is timely for the purposes of reopening a record, we look to whether the contention could have been raised earlier — that is, whether the information on which it is based was previously available or whether it is

materially different from what was previously available, and whether it has been submitted in a timely fashion based on the information's availability.

CONTENTIONS, TIMELINESS

Although "timely" is not expressly defined by months or days in our regulations, we, as well as our licensing boards, typically consider 30 to 60 days from the initiating event a reasonable deadline for proposing new or amended contentions.

CONTENTIONS, TIMELINESS

Our contention pleading rules are designed with the expectation that petitioners will alert us to issues early on — when they arise — so that we may address them as part of the license application review. By participating in our proceedings, intervenors accept the obligation of uncovering relevant, publicly available information.

MOTIONS TO REOPEN

Our reopening rule provides an exception to the timeliness requirement, permitting consideration of an exceptionally grave issue even if it is untimely presented.

MOTIONS TO REOPEN

An untimely raised environmental issue could be exceptionally grave depending on the circumstances of the case and the facts presented. This narrow exception will be granted rarely and only in truly extraordinary circumstances.

MEMORANDUM AND ORDER

Jones River Watershed Association (JRWA) and Pilgrim Watch (collectively, Petitioners) seek review of LBP-12-11,¹ in which the Licensing Board denied their request for hearing and motion to reopen the record to consider a contention regarding the roseate tern, a federally listed endangered species.² For the reasons set forth below, we deny the petition for review.

¹ LBP-12-11, 75 NRC 731 (2012).

² Jones River Watershed Association and Pilgrim Watch Petition for Review of Memorandum
(Continued)

I. BACKGROUND

This proceeding concerns Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.'s (collectively, Entergy) application to renew the operating license for the Pilgrim Nuclear Power Station for an additional 20 years.³ The NRC Staff accepted the application for review and published a notice of opportunity for hearing in the *Federal Register* in March 2006.⁴ In response to the notice, Pilgrim Watch and the Commonwealth of Massachusetts filed petitions to intervene and requests for hearing. JRWA did not request a hearing at that time. The Board granted Pilgrim Watch's hearing request, and admitted two contentions: Contention 1, which challenged Entergy's aging management program for buried piping; and Contention 3, which challenged certain aspects of the severe accident mitigation alternatives analysis in Entergy's Environmental Report.⁵ The Board denied Massachusetts' hearing request.⁶ Contentions 1 and 3 were later resolved in favor of Entergy.⁷ Pilgrim Watch, individually, as well as jointly with JRWA, filed a number of proposed new contentions, including the contention at issue here regarding the roseate tern, after the Board had closed the evidentiary record.⁸ This is the last remaining contention pending either before us or the Board.⁹

and Order (Denying Petition for Intervention and Request to Reopen Proceeding and Admit New Contention) LBP-12-11, June 18, 2012 (July 3, 2012) (Petition). Petitioners state that their petition may become moot if the U.S. Fish and Wildlife Service grants their request to reinstate consultation for the roseate tern. *Id.* at 2. The record does not reflect a response from Fish and Wildlife.

³ The history of this lengthy proceeding has been well documented; we reiterate only the procedural history relevant to the instant petition for review. The Director of the Office of Nuclear Reactor Regulation issued the renewed license on May 29, 2012.

⁴ Entergy Nuclear Operations, Inc., Pilgrim Nuclear Power Station; Notice of Acceptance for Docketing of the Application and Notice of Opportunity for Hearing Regarding Renewal of Facility Operating License No. DPR-35 for an Additional 20-Year Period, 71 Fed. Reg. 15,222 (Mar. 27, 2006).

⁵ LBP-06-23, 64 NRC 257, 348-49 (2006).

⁶ *Id.* at 349. See CLI-12-6, 75 NRC 352, 355-58 (2012) (providing a history of Massachusetts' participation in this matter).

⁷ See LBP-08-22, 68 NRC 590, 610 (2008), *petition for review denied*, CLI-10-14, 71 NRC 449, 477 (2010); LBP-11-18, 74 NRC 29 (2011), *petition for review denied*, CLI-12-1, 75 NRC 39 (2012).

⁸ See CLI-12-15, 75 NRC 704 (2012); CLI-12-10, 75 NRC 479 (2012); CLI-12-3, 75 NRC 132 (2012); LBP-12-16, 76 NRC 44 (2012); LBP-12-10, 75 NRC 633 (2012). Neither Pilgrim Watch nor JRWA appealed LBP-12-10 or LBP-12-16.

⁹ Pilgrim Watch requested a hearing on two orders that were issued in response to the March 2011 Fukushima Dai-ichi accident; a separate licensing board denied the hearing request. See LBP-12-14, 76 NRC 1 (2012). Pilgrim Watch's petition for review of that board's order is pending before us. See generally Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Petitions for Hearing), LBP-12-14, July 10, 2012 (July 20, 2012).

Pilgrim Watch and JRWA claim that the Staff violated the Endangered Species Act and the National Environmental Policy Act (NEPA) by failing to consider potentially adverse impacts to the roseate tern from operation of the Pilgrim station for an additional 20 years.¹⁰ They argue that the Board should have admitted JRWA as a party to the proceeding, and reopened the record to consider adverse impacts.¹¹ Entergy and the Staff oppose the petition for review.¹²

II. DISCUSSION

We will grant a petition for review at our discretion, giving due weight to the existence of a substantial question with respect to one or more of the following considerations:

- (i) [a] finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding;
- (ii) [a] necessary legal conclusion is without governing precedent or is a departure from or contrary to established law;
- (iii) [a] substantial and important question of law, policy, or discretion has been raised;
- (iv) [t]he conduct of the proceeding involved a prejudicial procedural error; or
- (v) [a]ny other consideration [that we] may deem to be in the public interest.¹³

Petitioners enumerate what they claim to be the Board's erroneous conclusions of law and findings of material fact.¹⁴ But we find that Petitioners have not raised a substantial question warranting review.

A. Petitioners' Roseate Tern Contention

Petitioners' contention raised both procedural and substantive challenges to the Staff's environmental review. According to Petitioners, the Staff failed to

¹⁰ Petition at 2-3. *See generally* Jones River Watershed Association and Pilgrim Watch Motion to Reopen, Request for Hearing and Permission to File New Contention in the Above-Captioned License Renewal Proceeding on Violations of the Endangered Species Act with Regard to the Roseate Tern (May 2, 2012) (Roseate Tern Contention).

¹¹ *See* Petition at 1-2.

¹² Entergy's Answer Opposing Jones Rive[r] Watershed Association and Pilgrim Watch's Petition for Review of LBP-12-11 (July 13, 2012) at 1; NRC Staff's Answer to Jones River Watershed Association and Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Petition for Intervention and Request to Reopen Proceeding and Admit New Contention) (July 13, 2012) at 2 (Staff Answer).

¹³ 10 C.F.R. § 2.341(b)(4)(i)-(v).

¹⁴ *See* Petition for Review at 3-5.

prepare a biological assessment of impacts to the roseate tern, in derogation of the Endangered Species Act.¹⁵ By way of background, in April 2006, the Staff sent the U.S. Fish and Wildlife Service a request for a list of protected species that may be in the vicinity of Pilgrim, as required by section 7 of the Endangered Species Act.¹⁶ In response, Fish and Wildlife enclosed a copy of correspondence with Entergy in March 2005 (prior to the submittal of its license renewal application), which concluded that renewal of the Pilgrim operating license was “not likely to adversely affect” the roseate tern, among other listed species.¹⁷ The Staff included this correspondence, as well as a discussion of impacts on the roseate tern, in the final supplemental environmental impact statement (final SEIS).¹⁸ Similar to Fish and Wildlife, the Staff concluded that certain listed species, including the roseate tern, “are unlikely to be adversely affected during the renewal period.”¹⁹ Petitioners argued that the Staff should not have relied on the correspondence between Fish and Wildlife and Entergy, and instead should have prepared a biological assessment to ensure that Pilgrim’s continued operation will not harm the roseate tern or its habitat.²⁰

In addition, Petitioners asserted that the Staff, Entergy, and Fish and Wildlife failed to consider new information that calls into question the Staff’s and Fish and Wildlife’s conclusion that an additional 20 years of operating the Pilgrim station is “not likely to adversely affect” the tern.²¹ Petitioners disagreed with the “not likely to adversely affect” finding, arguing that the potential for adverse effects will increase with an increase in the number of roseate terns nesting near the site.²² As causes, Petitioners cited potential adverse impacts on the terns’ food supply — American sand lance, hake, and Atlantic herring — due to impingement and entrainment; chemical pollution from heavy metals, corrosion inhibitors,

¹⁵ Roseate Tern Contention at 5, 24-25.

¹⁶ See Franovich, Rani, Branch Chief, Environmental Branch B, Office of Nuclear Reactor Regulation, U.S. NRC, Letter to Michael Bartlett, Field Supervisor, U.S. Fish and Wildlife Service (Apr. 25, 2006) (ADAMS Accession No. ML061160303) (Species List Request). See generally 16 U.S.C. § 1536.

¹⁷ See NUREG-1437, “Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Regarding Pilgrim Nuclear Power Station,” Supplement 29 (July 2007), Vols. 1 and 2, at E-8 to E-9, E-12 (ADAMS Accession Nos. ML071990020 and ML071990027) (Final SEIS).

¹⁸ See *id.* at 2-96, 4-64 to 4-65, E-8 to E-9, E-12.

¹⁹ *Id.* at 4-64 to 4-65.

²⁰ See Roseate Tern Contention at 24-25.

²¹ *Id.* at 5-6. The NRC does not have authority to rule on challenges to Fish and Wildlife’s compliance with the Endangered Species Act, as the Board correctly notes. See LBP-12-11, 75 NRC at 735 n.17. See, e.g., 5 U.S.C. § 706; 16 U.S.C. § 1536(n).

²² Roseate Tern Contention at 27 (quoting Affidavit of Ian Christopher Thomas Nisbet, Ph.D. (Apr. 30, 2012) ¶ 21 (Nisbet Affidavit) (appended to Roseate Tern Contention)).

and chlorine; and thermal pollution.²³ Petitioners argued that the final SEIS is incomplete because it does not consider this purportedly new information, and they argued that the final SEIS must be supplemented in order to satisfy, in substance, the Endangered Species Act and NEPA.²⁴

B. The Board's Ruling

The Board rejected Petitioners' Roseate Tern Contention primarily on timeliness grounds.²⁵ The Board observed that both the reopening and contention admissibility criteria require that new contentions be timely presented, generally within 30 days of the availability of the information on which the contention is based.²⁶ Noting that the new contention, in addition to challenging the final SEIS, challenges the adequacy of Entergy's Environmental Report, the Board found that Petitioners' claims against the Environmental Report should have been raised before the Staff issued the draft SEIS in December 2006.²⁷ With regard to the Petitioners' challenges to the final SEIS, the Board found that they "should have been filed, if not within [30 days of the Staff's publication of the July 2007 final SEIS], then certainly at a time significantly earlier than nearly 5 years later."²⁸

As for Petitioners' remaining claims, the Board found that they were based on information that was "either not new or not materially different from information that was previously available."²⁹ The Board specifically pointed out that Petitioners' most recent information, a sighting of roseate terns in August 2011, occurred 7 months before the contention was filed.³⁰ The Board also noted that Petitioners' information regarding purported excess chlorine emissions stemmed from as early as 2010.³¹ Additionally, the Board rejected Petitioners' argument that a March 2000 fish population report should be treated as new information given that they recently received it, when Petitioners could have requested the 12-year-old report earlier, or located it themselves in the Agencywide Documents Access and Management System (ADAMS), the NRC's official recordkeeping

²³ See Roseate Tern Contention at 20-24.

²⁴ *Id.* at 26.

²⁵ LBP-12-11, 75 NRC at 737.

²⁶ *Id.* (citing *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 218 & n.8 (2011)).

²⁷ *Id.* ("To the extent Petitioners criticize the accuracy of statements in Entergy's [Environmental Report], the time for challenging the [Environmental Report] passed when the NRC Staff released its [draft SEIS].").

²⁸ *Id.*

²⁹ *Id.* at 738.

³⁰ *Id.*

³¹ *Id.*

system.³² And finally, the Board rejected Petitioners' argument that they were justified in filing their contention now, rather than years earlier. The Board did not agree "that a years-long delay" is reasonable.³³

In addition, the Board found that Petitioners' supporting affidavit from Dr. Nisbet did not "substantively address the reopening criteria."³⁴ The Board observed that although "[t]he affidavit provides a great deal of information about the roseate tern," it "does not, with any specificity, explain how th[at] information would alter the . . . conclusions . . . regarding the effects of the additional operation of Pilgrim on the tern."³⁵ The Board further observed that Dr. Nisbet did not suggest "that the information he presents demonstrates an 'exceptionally grave issue,'"³⁶ which would permit even an untimely motion to reopen the record. And the Board reasoned that the possibility of adverse effects on the roseate tern did not involve a threat to public safety; thus, by definition, it did not constitute an exceptionally grave issue.³⁷ Based on the Board's findings that Petitioners had not shown good cause for (or otherwise had justified) their delay, and that Dr. Nisbet's affidavit did not demonstrate either an exceptionally grave issue or a materially different result in the Staff's analysis, the Board concluded that the contention failed to meet the reopening requirements in 10 C.F.R. § 2.326 and the timeliness requirements in 10 C.F.R. §§ 2.309(c) and 2.309(f)(2).³⁸ Accordingly, the Board dismissed the Roseate Tern Contention and denied Petitioners' request for hearing and motion to reopen the record.³⁹

C. Analysis

Petitioners argue on appeal that the Board misapplied the reopening rule and

³² *Id.* Based on the "document properties" information in ADAMS, it appears that the report was not publicly released until April 16, 2012. *See* Alexander, J.F., Director, Nuclear Assessment, Entergy, Letter to David M. Webster, Manager, Massachusetts State Program Office, U.S. EPA (Apr. 11, 2000) (ADAMS Accession No. ML061390357) (enclosing redacted version of Pilgrim's section 316 Demonstration). However, as discussed below, we find no basis to review the Board's finding that Petitioners did not show good cause for why they did not request the document earlier, considering that the report is referenced in both Entergy's Environmental Report and the draft SEIS.

³³ LBP-12-11, 75 NRC at 738-39.

³⁴ *Id.* at 739.

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.* at 740. In dicta, however, the Board questioned whether the Staff followed appropriate procedure, suggesting that if, as the Staff asserted, the final SEIS should be considered to be the "functional equivalent" of a biological assessment, then the Staff should have submitted it to Fish and Wildlife. *Id.* We need not address this issue in light of our ruling today.

the timeliness standards for new contentions.⁴⁰ In particular, they take issue with the Board's application of a "30-day rule" for determining timeliness that does not exist in the regulations, as well as the Board's safety-based definition of an "exceptionally grave issue."⁴¹ Petitioners also argue that the Board ignored their showing that the balancing test in section 2.309(c) tips in favor of allowing their contention to go forward despite its lateness.⁴²

Further, Petitioners assert that the Board erred in finding that Dr. Nisbet's testimony is not materially different from previously available information. Petitioners specifically list three areas of purported materially different information in Dr. Nisbet's affidavit — Dr. Nisbet's statements that: (1) roseate terns are not "transient," and more terns nested near Pilgrim station in 2011 than in previous years; (2) operation of the plant has a "significant potential for adverse effects" on the roseate tern; and (3) pollutants discharged from the facility have the potential to harm roseate terns or their food supply.⁴³ Petitioners also challenge the Board's finding that Petitioners failed to explain why they did not request the March 2000 fish population study earlier, as well as the Board's "acceptance" of the Staff's argument that the SEIS operated as the functional equivalent of an Endangered Species Act biological assessment.⁴⁴

We find that Petitioners have not raised a substantial question regarding the Board's application of the reopening rule or the timeliness criteria for new contentions. As Petitioners recognize, because the Board closed the record in June 2008,⁴⁵ they must meet the reopening standards in section 2.326 to have their contention admitted.⁴⁶ A motion to reopen a closed record must be timely.⁴⁷ When determining whether a new contention is timely for the purposes of reopening a record, we look to whether the contention could have been raised earlier — that is, whether the information on which it is based was previously available or whether it is materially different from what was previously available, and whether it has been submitted in a timely fashion based on the information's availability.⁴⁸

As the Board observed, the most recent supporting information in Petitioners'

⁴⁰ Petition at 3-4.

⁴¹ *Id.* at 3-4, 12-14.

⁴² *Id.* at 4.

⁴³ *Id.* at 5-7.

⁴⁴ *Id.* at 5. Petitioners also argue that the Board violated NEPA by not requiring the Staff to provide the final SEIS to Fish and Wildlife. *Id.* at 4. *See supra* note 39.

⁴⁵ *See* Memorandum and Order (Ruling on Pilgrim Watch Motions Regarding Testimony and Proposed Additional Evidence Relating to Pilgrim Watch Contention 1) (June 4, 2008), at 3-4 (unpublished).

⁴⁶ *See* CLI-12-3, 75 NRC at 140.

⁴⁷ 10 C.F.R. § 2.326(a)(1).

⁴⁸ *See, e.g.*, CLI-12-10, 75 NRC at 492-93. *See also* 10 C.F.R. § 2.309(f)(2).

new contention dates from August 2011, 7 months before Petitioners filed their motion to reopen and request for hearing.⁴⁹ The rest of Petitioners' supporting information is several years old. Although "timely" is not expressly defined by months or days in our regulations, we, as well as our licensing boards, typically consider 30 to 60 days from the initiating event a reasonable deadline for proposing new or amended contentions.⁵⁰ We find no substantial question in the Board's determination that Petitioners' (at least) 7-month delay is unreasonable under either the reopening rule in section 2.326(a)(1) or the timeliness requirements in section 2.309(f)(2).

Moreover, the Staff published the draft SEIS in December 2006.⁵¹ After reviewing and responding to public comments on the draft, the Staff published the final SEIS in July 2007.⁵² Our contention pleading rules are designed with the expectation that petitioners will alert us to issues early on — when they arise — so that we may address them as part of the license application review.⁵³ "By participating in our proceedings, intervenors accept the obligation of uncovering relevant, publicly available information."⁵⁴ Here, Petitioners waited several years before submitting their Roseate Tern Contention, when they could have filed it in response to the Staff's publication of the final SEIS, if not earlier. Given our longstanding regulatory scheme and case law supporting the early raising of issues, we decline to accept Petitioners' argument that they were justified in delaying their contention.⁵⁵ Nor do we accept Petitioners' argument that the Board should not have expected Petitioners to request the March 2000

⁴⁹ See LBP-12-11, 75 NRC at 738.

⁵⁰ See, e.g., *Vogtle*, CLI-11-8, 74 NRC at 218 n.8 ("A 30-day window [for filing new contentions] is in line with our general practice."); *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 342 n.43 (2011) ("We and our Licensing Boards generally consider approximately 30-60 days as the limit for timely filings based on new information.").

⁵¹ See generally NUREG-1437, "Generic Environmental Impact Statement for Nuclear Plants, Regarding Pilgrim Nuclear Power Station" (Draft Report for Comment), Supplement 29 (Dec. 2006) (ADAMS Accession No. ML063260173) (Draft SEIS).

⁵² See generally Final SEIS.

⁵³ See CLI-12-10, 75 NRC at 483 ("Our rules provide a balance, allowing for late-filed contentions based on genuinely new information, yet at the same time helping to assure an efficient, focused hearing process. We long have stressed that our proceedings would be incapable of attaining finality if contentions — that could have been raised at the outset — could be added later at will, regardless of the stage of the proceeding."); *Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 19, 22 (1998).

⁵⁴ *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-12-13, 75 NRC 681, 686 n.30 (2012) (citing *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1048 (1983)).

⁵⁵ See Petition at 10-11 (citing Affidavit of E. Pine duBois (Mar. 6, 2012) ¶ 22 (appended to Roseate Tern Contention)).

fish population report at an earlier date.⁵⁶ Although, as Petitioners explain,⁵⁷ the report was not publicly available on the NRC website until a few weeks before Petitioners filed their contention, the report was referenced extensively in Entergy's Environmental Report and the December 2006 draft SEIS.⁵⁸ Thus, Petitioners could have requested a copy of the report from either Entergy or the Staff several years ago.⁵⁹ Like the Board, we do not agree with Petitioners that a years-long delay is reasonable.⁶⁰

We also find that Petitioners have not shown that their delay should be excused on the theory that they have raised an "exceptionally grave issue." Our reopening rule provides an exception to the timeliness requirement, permitting consideration of an exceptionally grave issue even if it is untimely presented.⁶¹ The Board analyzed our case law and regulatory history and narrowly interpreted "exceptionally grave" as limited to issues affecting public safety, and thus did not apply the exception to Petitioners' environmental claim.⁶² But we do not interpret our case law and regulatory history so narrowly.⁶³ We have not expressly defined "exceptionally grave," and we do not do so here, except to clarify that an untimely raised environmental issue could be "exceptionally grave," depending

⁵⁶ See *id.* at 8-10 (asserting that the report was not made publicly available in ADAMS until April 16, 2012; therefore the Board "has in essence ruled that it is acceptable for the NRC and Entergy to withhold the . . . report until the last minute").

⁵⁷ See *id.* at 8.

⁵⁸ See, e.g., Pilgrim Nuclear Power Station, Applicant's Environmental Report, Operating License Renewal Stage (Jan. 25, 2006) at 2-2 to 2-6, 2-36 (ADAMS Accession No. ML060830611); Draft SEIS at 2-34 to 2-48, 2-137.

⁵⁹ In addition, Petitioners assert that they have been "denied access to the 2001 EPA-financed Tetra Tech report critiquing the . . . conclusions [in the March 2000 fish population report]." Petition at 9. This report is an EPA document, and it appears that Petitioners have filed a Freedom of Information Act appeal after EPA denied their request for the document. See Hennes, Seth, and Crystal, Howard M., Letter to National Freedom of Information Officer, U.S. EPA (Apr. 27, 2012), at 1-4 and Attachments 1 and 2 (appended to Roseate Tern Contention). We have no authority to rule on a request for access to a document controlled by the EPA. Moreover, the Staff states that it did not rely on this report in the SEIS "or in any other document related to the Pilgrim license renewal." Staff Answer at 12.

⁶⁰ For the same reasons, we find no basis to review the Board's finding that Petitioners had not shown good cause for their lateness under 10 C.F.R. § 2.309(c), or otherwise demonstrated that the balance of the remaining factors weighs in their favor.

⁶¹ 10 C.F.R. § 2.326(a)(1).

⁶² See LBP-12-11, 75 NRC at 739 (citing Criteria for Reopening Records in Formal Licensing Proceedings, 51 Fed. Reg. 19,535, 19,536 (May 30, 1986); *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-00-12, 52 NRC 1, 5 (2000)).

⁶³ *Hydro Resources* involved a public health and safety issue, and it was decided on the particular facts presented. See *Hydro Resources*, CLI-00-12, 52 NRC at 5. Further, in codifying the reopening requirements, the more neutral "exceptionally grave issue" language was chosen over the case law based "sufficiently grave threat to public safety" phrasing. See 51 Fed. Reg. at 19,536.

on the circumstances of the case and the facts presented. We are not convinced that the exception should apply here, however. The information that Petitioners offered in support of their contention is not materially different from what the Staff already considered in the draft and final SEIS, and Petitioners do not show how the roseate tern will be adversely affected by continued operation of the Pilgrim station.

Just as Dr. Nisbet notes that there are increasing numbers of terns nesting within a few miles of the site, the final SEIS recognizes that the roseate tern population in Massachusetts has been slowly increasing.⁶⁴ The final SEIS likewise acknowledges the presence of roseate terns on beaches within a few miles of the Pilgrim station and discusses their migratory patterns.⁶⁵ And the final SEIS considers impacts on aquatic species, including fish that provide a source of food to the tern, from Pilgrim's cooling water intake and discharge (for example, impacts from impingement and entrainment and effluent and thermal discharges).⁶⁶ Dr. Nisbet does not specify how an increase in potential adverse effects will follow an increase in the number of terns at the site, nor does he show how the Staff's "not likely to adversely affect" conclusion is incorrect, considering that the Staff reviewed similar information. At bottom, although potential harm to an endangered species might rise to the level of an "exceptionally grave issue," Petitioners have not shown that such harm is likely to occur here.⁶⁷ Indeed, Petitioners' support would have been insufficient to satisfy the general admissibility requirements of 10 C.F.R. § 2.309(f)(1), let alone this more stringent reopening standard.⁶⁸ We therefore decline to review the Board's application of the "exceptionally grave issue" provision.⁶⁹

⁶⁴ See Nisbet Affidavit ¶¶ 8-9, 21; Final SEIS at 4-64.

⁶⁵ See Nisbet Affidavit ¶¶ 13-14; Final SEIS at 2-96, 4-64.

⁶⁶ See Nisbet Affidavit ¶ 19; Final SEIS ch. 2, 4.

⁶⁷ We reiterate that this "narrow exception" "will be granted rarely and only in truly extraordinary circumstances." 51 Fed. Reg. at 19,536.

⁶⁸ See CLI-12-6, 75 NRC at 367, 371; *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 287 (2009) (noting the "heavy" burden for those seeking to reopen a closed record). Because the Staff considers similar information in the SEIS, we do not see how Petitioners have raised a "genuine dispute." See 10 C.F.R. § 2.309(f)(1)(vi).

⁶⁹ Although the Board found that Dr. Nisbet's affidavit did not demonstrate a materially different result in the Staff's conclusions regarding the tern, the Board nevertheless suggested that the Staff should consider the information presented in the affidavit. See LBP-12-11, 75 NRC at 740. We find this to be unnecessary, however, given that the Staff already considered substantively similar information when reaching its conclusions in the SEIS.

III. CONCLUSION

In sum, Petitioners have not demonstrated a substantial question regarding the Board's finding their Roseate Tern Contention impermissibly late. We therefore deny their petition for review.

IT IS SO ORDERED.⁷⁰

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 6th day of December 2012.

⁷⁰ Commissioner Apostolakis did not participate in this matter.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Michael M. Gibson, Chairman
Dr. Gary S. Arnold
Nicholas G. Trikouros

In the Matter of

Docket No. 72-10-ISFSI-2
(ASLBP No. 12-922-01-ISFSI-MLR-BD01)

**NORTHERN STATES POWER
COMPANY
(Prairie Island Nuclear Generating
Plant Independent Spent Fuel
Storage Installation)**

December 20, 2012

This proceeding concerns the application of Northern States Power Company for renewal of the operating license for its 10 C.F.R. Part 72 license to operate an Independent Spent Fuel Storage Installation at the Prairie Island Nuclear Generating Plant in Red Wing, Minnesota. The Prairie Island Indian Community (PIIC) petitioned to intervene and raised seven contentions. The Board granted PIIC's petition, admitted three of the contentions, and held one additional contention in abeyance.

RULES OF PRACTICE: STANDING TO INTERVENE

Although no party contests the petitioner's standing, the Board has an independent obligation to determine whether this threshold criterion has been met. 10 C.F.R. § 2.309(d)(3).

RULES OF PRACTICE: STANDING TO INTERVENE

NRC regulations require a petitioner to establish standing by demonstrating (1) the nature of its right under the Atomic Energy Act to be made a party to the proceeding, (2) the nature and extent of its interest in the proceeding, and (3) the possible effect of any decision in the proceeding on the petitioner's interest. 10 C.F.R. § 2.309(d)(1). Additionally, the Commission has instructed that, in assessing a petitioner's standing, the Board should look to contemporary judicial concepts of standing and determine whether (1) a petitioner is threatened with a concrete injury, (2) the injury is fairly traceable to the licensing action, and (3) the injury is capable of being redressed by a favorable decision. *See, e.g., EnergySolutions, LLC* (Radioactive Waste Import/Export Licenses), CLI-11-3, 73 NRC 613, 621 (2011).

RULES OF PRACTICE: STANDING TO INTERVENE (PROXIMITY PRESUMPTION)

In materials licensing actions such as this one, a petitioner is entitled to a presumption of standing if the petitioner resides in the “zone of reasonably foreseeable harm from the source of radioactivity,” and if “the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences.” *U.S. Department of Energy* (Plutonium Export License), CLI-04-17, 59 NRC 357, 364-65 (2004). There is no predefined distance marking the area of potential offsite consequences on which to establish standing — instead this must be “judged on a case-by-case basis.” *Id.* at 365.

CONTENTIONS (WASTE CONFIDENCE RULE)

In light of the vacatur of the Waste Confidence Decision and Temporary Storage Rule in *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012), NRC's rules require that the environmental report consider the reasonably foreseeable impacts of permanent storage of spent fuel. Contentions concerning the failure of the ER to do so must be held in abeyance pursuant to the Commission's direction in *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63 (2012).

ENVIRONMENTAL REPORT: CUMULATIVE IMPACTS ANALYSIS

A license applicant is required to address cumulative impacts in its environmental report. Section 51.45 directs an applicant to discuss in its ER “[t]he impact of the proposed action on the environment.” A regulation of the Council on Environmental Quality, 40 C.F.R. § 1508.25, which is incorporated into NRC

regulations, *see* 10 C.F.R. § 51.14(b), makes clear that the scope of the term “impact” includes cumulative impacts. NUREG-1748, the NRC Staff’s nonbinding environmental review guidance document for materials license applicants, instructs applicants to “[d]iscuss any past, present, or reasonably foreseeable future actions which could result in cumulative impacts when combined with the proposed action.”

INCORPORATION BY REFERENCE

Incorporation by reference in an application of a large volume of material is insufficient to defeat a contention of omission absent a clear notice of the specific information incorporated. As the Commission has made clear in scrutinizing the information brought before a licensing board in support of a contention, incorporation by reference of information should not force one “to sift through it in search of asserted factual support” that is not otherwise specified. *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 332 (2012).

INDIAN TRIBES: FEDERAL TRUST RESPONSIBILITY

The federal trust responsibility rests solely with the federal government and cannot be discharged by an applicant. Furthermore, nothing in 10 C.F.R. § 51.45, which governs the contents of environmental reports, requires an applicant to discuss the federal government’s trust responsibility.

CONTENTIONS: AGING MANAGEMENT

NRC regulations require that applications for renewal of an ISFSI license contain “[a] description of the AMP [aging management plan] for management of issues associated with aging that could adversely affect structures, systems, and components important to safety.” 10 C.F.R. § 72.42(a)(2). Where the current licensing basis defines a given system as not important to safety, the time to challenge that classification was when it was originated, during initial licensing of the ISFSI, and not at the license renewal stage.

CONTENTIONS: CURRENT LICENSING BASIS

Challenges to the current licensing basis of a facility are outside the scope of license renewal proceedings, and contentions that pose a challenge to Commission regulations are inadmissible in licensing proceedings, absent a waiver.

MEMORANDUM AND ORDER
(Ruling on Request for Hearing and Petition to Intervene)

The Prairie Island Indian Community (PIIC) has filed a Request for Hearing and Petition to Intervene challenging the application of Northern States Power Company (Northern States) for renewal of its 10 C.F.R. Part 72 license to operate an Independent Spent Fuel Storage Installation (ISFSI) at the Prairie Island Nuclear Generating Plant (PINGP) in Red Wing, Minnesota.¹ In this Memorandum and Order, we determine that PIIC has standing to intervene, and we admit (in whole or in part) three of PIIC's seven proffered contentions. Additionally, in accord with the Commission's directive in its August 2012 decision in CLI-12-16,² we hold in abeyance Contention 1 and parts of Contentions 2 and 4 insofar as they are based on the United States Court of Appeals for the District of Columbia Circuit's June 2012 vacatur of the Nuclear Regulatory Commission's (NRC's) Waste Confidence Decision and Temporary Storage Rule.³

I. BACKGROUND

This proceeding arises from Northern States' license renewal application submitted on October 20, 2011.⁴ Northern States seeks a 40-year extension of its license to operate the Prairie Island ISFSI. On August 24, 2012, in response to a notice in the *Federal Register*,⁵ PIIC petitioned to intervene in the licensing proceeding and proffered seven contentions on which it seeks an evidentiary

¹ [PIIC]'s Request for Hearing and Petition to Intervene in License Renewal Proceeding for the Prairie Island [ISFSI] (Aug. 24, 1012) [Petition].

² *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63 (2012).

³ *See id.* at 68-69; *see also New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012).

⁴ Prairie Island Independent Spent Fuel Storage Installation (ISFSI) License Renewal Application (Oct. 11, 2011) (ADAMS Accession No. ML11304A068). Northern States supplemented its application on February 29, 2012. *See Responses to Requests for Supplemental Information — Prairie Island Independent Spent Fuel Storage Installation (ISFSI) License Renewal Application* (TAC No. L24592) (Feb. 29, 2012) (ADAMS Accession No. ML12065A073).

⁵ *See License Renewal Application for Prairie Island Nuclear Generating Plant Independent Spent Fuel Storage Installation*, 77 Fed. Reg. 37,937 (June 25, 2012).

hearing.⁶ The Secretary of the Commission referred this petition to the Atomic Safety and Licensing Board Panel,⁷ and this Licensing Board was established.⁸

We granted the parties' request for an extension of time to file their respective answers and reply.⁹ Northern States and the NRC Staff each submitted their answers on September 25,¹⁰ and PIIC filed its reply on October 9.¹¹ We heard oral argument on November 8 in Saint Paul, Minnesota, regarding the admissibility of the PIIC contentions.¹²

II. STANDING

Although neither Northern States nor the Staff contests PIIC's standing, we have an independent obligation to determine whether PIIC meets this threshold criterion for intervention in this proceeding.¹³ NRC regulations require a petitioner to establish standing by demonstrating (1) the nature of its right under the Atomic Energy Act to be made a party to the proceeding, (2) the nature and extent of its interest in the proceeding, and (3) the possible effect of any decision in the proceeding on the petitioner's interest.¹⁴ Additionally, the Commission has instructed that, in assessing a petitioner's standing, we should look to contemporary judicial concepts of standing and determine whether (1) a petitioner is threatened with a concrete injury, (2) the injury is fairly traceable to the licensing action,

⁶ PIIC also petitions for a waiver of the application of the waste confidence rule, 10 C.F.R. § 51.23(a), in this ISFSI license renewal proceeding. Because of our resolution of the contentions, we defer ruling on the petition and hold it in abeyance with the waste confidence contentions.

⁷ Memorandum from Annette L. Vietti-Cook, Secretary of the Commission to E. Roy Hawkens, Chief Administrative Judge, Atomic Safety and Licensing Board Panel (Sept. 13, 2012).

⁸ Northern States Power Company, Establishment of Atomic Safety and Licensing Board, 77 Fed. Reg. 58,591 (Sept. 21, 2012).

⁹ See Licensing Board Order (Granting Motions for Extension of Time and Setting Dates for Oral Argument) (Sept. 18, 2012) at 2 (unpublished).

¹⁰ NRC Staff Response to the Request for Hearing and Petition to Intervene by the Prairie Island Indian Community (Sept. 25, 2012) [NRC Staff Answer]; Northern States Power Company's Answer to the Prairie Island Indian Community's Petition to Intervene (Sept. 25, 2012) [Northern States Answer].

¹¹ [PIIC]'s Reply on Request for Hearing and Petition to Intervene in License Renewal Proceeding for the Prairie Island [ISFSI] (Oct. 9, 2012) [Reply].

¹² Tr. at 1.

¹³ 10 C.F.R. § 2.309(d)(3); see also *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), LBP-11-2, 73 NRC 28, 41 n.54 (2011); *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), LBP-10-1, 71 NRC 165, 177 n.3 (2010).

¹⁴ 10 C.F.R. § 2.309(d)(1). Looser standing criteria exist for federally recognized Indian Tribes, see *id.* § 2.309(d)(2), but only where the facility at issue is within the Tribe's boundaries, which the Prairie Island ISFSI concededly is not.

and (3) the injury is capable of being redressed by a favorable decision.¹⁵ And where an organization such as PIIC seeks standing as a party, it must show either a discrete injury to its own institutional interests (organizational standing),¹⁶ or authorization to represent an individual who would have standing in his or her own right (representational standing).¹⁷

In materials licensing actions such as this one, a petitioner is entitled to a presumption of standing if the petitioner resides in the “zone of reasonably foreseeable harm from the source of radioactivity,” and if “the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences.”¹⁸ In materials licensing matters, there is no predefined distance marking the area of potential offsite consequences on which to establish standing — instead this must be “judged on a case-by-case basis.”¹⁹

PIIC has met the requirements for organizational standing based on its proximity to the Prairie Island ISFSI. The potential for offsite consequences to PIIC from the ISFSI is clear. According to PIIC, tribal members reside a mere 600 yards from the spent fuel casks.²⁰ Accordingly, the threat of radiological exposure from an accidental release of radioactive material from an open cask is obvious and real. PIIC also alleges potential harm to cultural resources from the likely expansion of the ISFSI. These alleged injuries would threaten the interests of PIIC as a whole, and are sufficient to meet the test for organizational standing. Therefore, PIIC has the requisite standing to assert its contentions in this proceeding.

III. STANDARDS GOVERNING CONTENTION ADMISSIBILITY

Contentions must meet the admissibility criteria set forth in 10 C.F.R. § 2.309(f)(1). That rule requires each contention to: (1) provide a specific statement of the issue of law or fact to be raised; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised in the contention

¹⁵ See, e.g., *EnergySolutions, LLC* (Radioactive Waste Import/Export Licenses), CLI-11-3, 73 NRC 613, 621 (2011).

¹⁶ See *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252 (2001).

¹⁷ See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-98-13, 48 NRC 26, 30-31 (1998).

¹⁸ *U.S. Department of Energy* (Plutonium Export License), CLI-04-17, 59 NRC 357, 364-65 (2004).

¹⁹ *Id.* at 365. In contrast, in reactor proceedings, the Commission applies a “proximity presumption,” whereby the very fact that an individual or organization is located within 50 miles of a reactor is sufficient to demonstrate the requisite threat of injury. See, e.g., *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915-16 (2009).

²⁰ See Petition at 8-9.

is within the scope of the proceeding; (4) demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the licensing action; (5) provide a concise statement of the alleged facts or expert opinions in support of the petitioner's position on the issue and on which the petitioner intends to rely at hearing; and (6) provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact, with reference to specific disputed portions of the application.²¹ A failure to meet any of these criteria renders the contention inadmissible.

IV. RULING ON CONTENTIONS

A. Contention 1

PIIC's Contention 1 is as follows:

[Northern States'] Environmental Report Improperly Minimizes Waste Storage Impacts.

This contention, as well as portions of Contentions 2, 3, and 4, arise from the June 8, 2012 decision of the United States Court of Appeals for the District of Columbia Circuit in *New York v. NRC*, which vacated and remanded to the NRC its Waste Confidence Decision (WCD) and Temporary Storage Rule (TSR).²² The WCD and TSR expressed the agency's determination that spent nuclear fuel could be stored safely at licensed nuclear facilities until such time as a long-term geologic storage facility was constructed.²³ As a result, before the decision in *New York v. NRC*, the WCD and TSR permitted license applicants to omit any "discussion of any environmental impact of spent fuel storage in [ISFSIs] for the period following the term of the . . . initial ISFSI license . . . in any environmental report, environmental impact statement, environmental assessment, or other analysis."²⁴ The effect of the WCD and TSR was to render contentions concerning long-term storage of spent fuel beyond the permissible scope of NRC licensing proceedings.

PIIC asserts that, now that the WCD and TSR have been vacated, Northern

²¹ 10 C.F.R. § 2.309(f)(1)(i)-(vi).

²² *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012). The court held, among other things, that in light of the dim prospects for moving forward with a geologic repository in the contemporary political environment, the NRC must consider the environmental effects of storing waste in spent fuel pools or casks for extended periods. *Id.* at 478.

²³ *See* 10 C.F.R. § 51.23(a).

²⁴ *Id.* § 51.23(b).

States' Environmental Report (ER) must consider the impacts of long-term storage at the Prairie Island ISFSI.²⁵

The Staff urges that Contention 1 be held in abeyance in light of the Commission's August 7, 2012 decision in CLI-12-16.²⁶ There, the Commission recognized that, as a result of *New York v. NRC*, substantially identical waste confidence contentions were pending in every open reactor licensing proceeding.²⁷ The Commission held that "[i]n view of the special circumstances of this case, as an exercise of our inherent supervisory authority over adjudications, we direct that these [waste confidence] contentions — and any related contentions that may be filed in the near term — be held in abeyance pending our further order."²⁸

In its Reply, PIIC agrees with the Staff that Contention 1 should be held in abeyance.²⁹

In contrast, Northern States argues that Contention 1 is wholly inadmissible and so should not be held in abeyance. In support of its claim, Northern States maintains that, after the Commission issued CLI-12-16, the NRC took a series of definitive steps that will lead to the promulgation of successor rules to the WCD and TSR — and that these steps supersede the Commission's directive in CLI-12-16. Chief among these is the Commission's issuance of a Staff Requirements Memorandum (SRM) directing the Staff to prepare a generic environmental impact statement (EIS) to support an updated WCD and TSR.³⁰ As a result of this SRM, Northern States argues, waste confidence has "become the subject of rulemaking," placing Contention 1 outside the permissible scope of adjudication because licensing boards "should not accept in individual license proceedings contentions which are (or are about to become) the subject of rulemaking by the Commission."³¹ In effect, Northern States maintains that Contention 1 must not be admitted because the underlying issue will be addressed generically.

We are not persuaded. PIIC's contention that the environmental impacts of long-term waste storage are insufficiently examined in the application presents a genuine, material issue. In light of the vacatur of the WCD and TSR in *New York v. NRC*, NRC's rules require the ER to consider the reasonably foreseeable

²⁵ See Petition at 23-24.

²⁶ See Staff Answer at 10.

²⁷ *Calvert Cliffs*, CLI-12-16, 76 NRC 63.

²⁸ *Id.* at 68-69.

²⁹ Reply at 3.

³⁰ See Staff Requirements — COMSECY-12-0016 — Approach for Addressing Policy Issues Resulting from Court Decision to Vacate Waste Confidence Decision and Rule (Sept. 6, 2012) (ADAMS Accession No. ML12250A023).

³¹ *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 345 (1999) (quoting *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 89 (1974)).

impacts of permanent storage, which Northern States' ER clearly fails to do. We agree with the Staff, however, that Contention 1 must be held in abeyance pursuant to the Commission's direction in CLI-12-16.

While Northern States is correct in its claim that the Commission's issuance of the SRM will begin the lengthy process of replacing the WCD and TSR, it is not dispositive of the contention. CLI-12-16 provided specific instructions to licensing boards, and a memorandum to the NRC Staff is not the type of "further order" to which the Commission referred. The SRM itself contains no mention of ongoing adjudications or of the many waste confidence contentions now held in abeyance; and its directives are clearly aimed at the Staff, rather than to this (or any other) licensing board. Nevertheless, in light of the Commission's directive in CLI-12-16, we do not admit Contention 1 at this time, but instead hold it in abeyance pending the Commission's further order.

B. Contention 2³²

PIIC's Contention 2 is as follows:

[Northern States'] Environmental Report Fails to Address Cumulative Impacts of Related Projects on the PIIC, Its Members and Its Lands

PIIC argues that Northern States has not provided an analysis of the cumulative impacts associated with relicensing the Prairie Island ISFSI. The phrase "cumulative impact" is defined as "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions."³³ PIIC asserts that an analysis of cumulative impacts is required under the National Environmental Policy Act (NEPA) to avoid the segmentation into multiple environmental reviews of connected projects, the impacts of which should be considered together.³⁴

PIIC proffers several examples of cumulative impacts that it claims should be included in Northern States' ER. First, PIIC maintains that the scope of the ER should extend beyond "the basis of a 40-year license term and 48 dry casks."³⁵ It asserts the ER should include the consequences of long-term storage onsite in the event a geologic repository is not available at the end of the term of relicensing, particularly in light of the "state of flux" surrounding the vacated WCD and TSR.³⁶ Next, PIIC claims that the ER fails to consider the impacts of the ISFSI

³² Judge Arnold dissents from the Board's ruling on Contention 2. *See infra*, Dissenting Statement of Judge Arnold.

³³ 40 C.F.R. § 1508.7 (adopted by reference in 10 C.F.R. § 51.14(b)).

³⁴ *See* Petition at 27-28.

³⁵ *Id.* at 30.

³⁶ *Id.* at 30-31.

in conjunction with the recent license renewal of the PINGP and the additional spent fuel that will be generated by the plant's continued operation.³⁷ Third, PIIC alleges that the likely expansion of the ISFSI to include additional casks on new concrete pads would produce cumulative impacts that were not addressed in the ER.³⁸ PIIC points to Northern States' application to the Minnesota Public Utilities Commission (MPUC) for a Certificate of Need to expand the ISFSI to accommodate up to sixty-four casks, more than the forty-eight considered in the ER. PIIC asserts that the construction of additional pads would result in impacts including traffic from construction activities, health impacts from additional casks, and disturbance of archeological and cultural resources. Finally, PIIC argues that the ER does not address the long-term viability of cask storage beyond the 40-year relicensing term and the risks of future transportation.³⁹

The NRC Staff would have us admit Contention 2 in part. Although the Staff maintains that license applicants are not required to analyze cumulative impacts in the ER and that the Staff is not required to analyze cumulative impacts in an Environmental Assessment (EA),⁴⁰ it observes that applicable guidance in NUREG-1748 encourages a cumulative impacts analysis in both documents.⁴¹ Moreover, the Staff informs us that it intends to analyze cumulative impacts in its EA, and that it may request additional information from Northern States for that planned analysis of cumulative impacts. In effect, the Staff does not object to admission of the contention as a place-holder to preserve future claims by PIIC against the Staff's cumulative impacts analysis.⁴²

On the other hand, Northern States disputes that Contention 2 is admissible. It acknowledges that it applied for and received a Certificate of Need from the MPUC to expand the ISFSI. However, it contends that the impacts of an expansion are outside the scope of this proceeding because Northern States has not yet applied to the NRC for an amendment to its license.⁴³ In addition, Northern States argues that NRC regulations do not require it to include a cumulative impacts analysis in the ER.⁴⁴ As to the specific concern that the expansion of the ISFSI will adversely impact archaeological resources, Northern States claims that it has addressed PIIC's concerns through a 2009 settlement agreement and

³⁷ *Id.* at 32.

³⁸ *Id.* at 32-34.

³⁹ *Id.* at 35.

⁴⁰ In its Answer and at oral argument, the Staff indicated its intention initially to prepare an EA, rather than a full EIS. *See* Staff Answer at 6, 11-12; Tr. at 23. In light of the impacts on historical and cultural resources alleged by PIIC, we anticipate that an EIS will be required.

⁴¹ NRC Staff Answer at 11.

⁴² *Id.* at 12.

⁴³ Northern States Answer at 15-17.

⁴⁴ *Id.* at 17-18.

a subsequent archaeological field survey.⁴⁵ Northern States also urges us, for the same reasons as it opposes Contention 1, to reject those aspects of Contention 2 that concern impacts of waste storage beyond the renewal term.⁴⁶

At the outset, we reject Northern States' and the Staff's argument that an applicant is not required to address cumulative impacts in its ER. Section 51.45 directs an applicant to discuss in its ER "[t]he impact of the proposed action on the environment."⁴⁷ A regulation of the Council on Environmental Quality, 40 C.F.R. § 1508.25, which is incorporated into NRC regulations,⁴⁸ makes clear that the scope of the term "impact" includes cumulative impacts.⁴⁹ Even NUREG-1748, the NRC Staff's nonbinding environmental review guidance document for materials license applicants, instructs applicants to "[d]iscuss any past, present, or reasonably foreseeable future actions which could result in cumulative impacts when combined with the proposed action."⁵⁰

Two of PIIC's asserted bases for this contention concern the impacts of long-term storage of spent nuclear fuel. These impacts implicate waste confidence, and they are encompassed within the breadth of Contention 1 as held in abeyance. Accordingly we do not admit these claims as a separate contention, but hold them in abeyance in conjunction with Contention 1.

In addition to the waste confidence issues that Contention 2 raises, PIIC asserts a separate claim:

The need for additional casks and the related expansion of the ISFSI are reasonably foreseeable actions that should have been discussed in the ER because the Applicant has already secured State of Minnesota approval. We believe that the additional casks and expansion of the ISFSI will result in cumulative impacts, when combined with the proposed action (ISFSI license renewal). . . . [W]e are particularly concerned about the ER providing a cumulative impact analysis of how the ground-disturbing activities related to the ISFSI expansion have the potential to impact archaeological resources.⁵¹

PIIC has raised an admissible contention that the ER fails to discuss the cumulative impacts of the ISFSI renewal in conjunction with the likely expansion of the ISFSI.

⁴⁵ *Id.* at 19-21.

⁴⁶ *Id.* at 15.

⁴⁷ 10 C.F.R. § 51.45(b)(1).

⁴⁸ *See id.* § 51.14(b).

⁴⁹ 40 C.F.R. § 1508.25(c); *see also Strata Energy, Inc.* (Ross In Situ Uranium Recovery Project), LBP-12-3, 75 NRC 164, 201-02 & n.33 (2012), *aff'd as to standing ruling*, CLI-12-12, 75 NRC 603 (2012).

⁵⁰ NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs," at 6-4 (Aug. 2003) (ADAMS Accession No. ML032450279) [NUREG-1748].

⁵¹ Petition at 33-34.

The fact that Northern States has applied for a state Certificate of Need to build more pads to house sixteen additional casks strongly suggests that such a future expansion is at least “reasonably foreseeable.” Added to this is the fact, as was acknowledged by counsel for Northern States at oral argument, that if PINGP is to operate to the end of its current operating license, additional spent fuel storage would be required such that “[p]robably in the 2017 timeframe, we would submit an application for expansion of our ISFSI.”⁵² Thus, being reasonably foreseeable, this expansion must be the subject of a cumulative impacts analysis.⁵³

Contrary to the view of the Dissent, insofar as Contention 2 seeks to challenge the failure of Northern States to address the cumulative impacts on archaeological and historical resources, it should be admitted. The sole ground on which the Dissent seeks to exclude this portion of Contention 2 is that, because the contention was pleaded as a contention of omission, the following three sentences found in the ER are fatal to its admission:

The environmental impacts of the PI ISFSI were first presented in the ER for the PI ISFSI license, and more recently in the 2008 cask design license amendment request. The GEIS, the PINGP ER, and the NRC’s SEIS address the PI ISFSI operations during a plant’s period of extended operation. Because these documents have previously defined the impacts of the PI ISFSI, NSPM [Northern States] *adopts appropriate material from these documents by reference.*⁵⁴

We disagree with the Dissent for several reasons.

First, these three sentences appear in the generic “Scoping and Methodology” section of the ER,⁵⁵ not in the more specific “Historical and Cultural Resources” section.⁵⁶ It is the latter section, however, that is the subject of PIIC’s claim that it will sustain cumulative impacts. Absent a clear incorporation by reference to specific provisions of prior studies involving historical and archaeological

⁵² Tr. at 88-89.

⁵³ See *Strata Energy*, LBP-12-3, 75 NRC at 203 (cumulative impacts analysis required for future facility expansion described in ER).

⁵⁴ Prairie Island Independent Spent Fuel Storage Installation Application for Renewed ISFSI Site-Specific License, Appendix E, Environmental Report Supplement § E1.4, at E-4 (emphasis added) (ADAMS Accession No. ML113040123) [ER].

⁵⁵ *Id.*

⁵⁶ ER § E3.9, at E-30 to -32. The Staff’s guidance in NUREG-1748 indicates that consideration of cumulative impacts on historic and cultural resources in the ER should be included as part of the section detailing environmental impacts, including cumulative impacts on historic and cultural resources. NUREG-1748, at 6-18, 6-23.

resources, there was nothing in the ER that could be deemed to provide a reasonably prudent person with notice of such incorporation by reference.⁵⁷

Second, although the ER is only 196 pages long, the extrinsic documents that Northern States referenced encompass over 2500 pages.⁵⁸ Moreover, Northern States did not attempt to incorporate every jot and tittle in these extrinsic documents — only the “material portions.”⁵⁹ It would be patently unreasonable to expect PIIC to read Northern States’ mind and ascertain the particular sentences of these 2500 pages that Northern States deems material.⁶⁰ As the Commission has made clear relative to the information brought before it or a Board in support of a contention, it is not sufficient to incorporate by reference large portions of material where doing so would force one “to sift through it in search of asserted factual support” that is not otherwise specified.⁶¹

Third, the “Historical and Cultural Resources” section⁶² of the ER actually refers to specific provisions of these extrinsic documents. Yet, significantly, that section makes no reference at all to “cumulative impacts.” This absence negates any intention to incorporate any discussion of cumulative impacts from these prior documents into its ER, consistent with “the maxim of *expressio unius est*

⁵⁷ Cf. *One Beacon Insurance Co. v. Crowley Marine Services, Inc.*, 648 F.3d 258, 268 (5th Cir. 2011) (“Notice of incorporated terms is reasonable where, under the particular facts of the case, a reasonably prudent person should have seen them.”); *Caldwell-Baker Co. v. Southern Illinois Railcar Co.*, 225 F. Supp. 2d 1243, 1251-52 (D. Kan. 2002) (“where extraneous writing is incorporated for a specific purpose, the writing will be incorporated only to the extent of the reference and for the specific purpose intended; to constitute part of the contract the reference must be clear and unequivocal.”).

⁵⁸ The GEIS for the License Renewal of Nuclear Plants encompasses 1188 pages; the Applicant’s ER in support of its application for renewal of the PINGP operating license spanned 649 pages; and the Supplemental EIS for the renewal of the PINGP operating license consisted of 751 pages.

⁵⁹ ER § E1.4, at E-4.

⁶⁰ Cf. *Guerini Stone Co. v. P. J. Carlin Construction Co.*, 240 U.S. 264, 277 (1916) (“[I]n opinion the true rule, based upon sound reason and supported by the greater weight of authority, is that . . . a reference by the contracting parties to an extraneous writing for a particular purpose makes it a part of their agreement only for the purpose specified.”); see also *Northrop Grumman Information Technology, Inc. v. United States*, 535 F.3d 1339, 1345 (Fed. Cir. 2008) (“The language used in a contract to incorporate extrinsic material by reference must explicitly, or at least precisely, identify the written material being incorporated.”); *PaineWebber, Inc. v. Bybyk*, 81 F.3d 1193, 1201 (2d Cir.1996) (“the paper to be incorporated into a written instrument by reference must be so referred to and described in the instrument that the paper may be identified beyond all reasonable doubt”); *Carahsoft Technology Corp. v. United States*, 86 Fed. Cl. 325, 350 (2009) (“For a contract to incorporate the terms of extrinsic material by reference, it must explicitly, or at least precisely, identify the written material being incorporated and must clearly communicate that the purpose of the reference is to incorporate the referenced material into the contract.”).

⁶¹ *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 332 (2012).

⁶² ER § E3.9, at E-30 to -32.

exclusio alterius . . . , meaning that the expression of one thing is to the exclusion of another.”⁶³

Nevertheless, even were one to assume *arguendo* that this language from the ER was sufficient to incorporate by reference a “cumulative impacts” analysis from these extrinsic documents, the argument of the Dissent still must fail. There is only one sentence in the 2011 Supplemental EIS for the renewal of the PINGP operating license (PINGP SEIS) that could support the conclusion the Dissent seeks to reach:

Based on this information and the analysis of human health and environmental impacts presented in this SEIS, the . . . ISFSI expansion at PINGP would not have any long-term cumulative disproportionately high and adverse human health and environmental operational effects on minority and low-income populations residing in the vicinity of PINGP 1 and 2.⁶⁴

Yet, nowhere in the PINGP SEIS is there any factual or expert information that could support this naked claim. In fact, the Staff conceded in the PINGP SEIS that it lacked specific information about a possible expansion of the ISFSI, even promising that such analysis would be undertaken once Northern States submitted an application for renewal of the ISFSI:

The impacts of the proposed action [i.e., renewing the license for the continued operation of the reactors], as described in Sections 4.1-4.9, are combined with other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Actions which Northern States has expressed an interest in pursuing are the license renewal of the independent spent fuel storage installation (ISFSI), expanding the number of spent fuel casks stored at the ISFSI, and a power uprate increase. Each of these actions requires that an application and environmental report be submitted to the NRC for review and approval of the proposed action. While there have been a number of pre-meetings to discuss these proposed actions, no applications have yet been submitted to the NRC for any of these projects. Without the specific technical information available for the proposed actions, staff is not able to perform a comprehensive environmental assessment for aquatic and water resources at this time. *Qualitative evaluations in the areas of human health, socioeconomics and cultural resources are included in the section of the SEIS [sic]. Once the applications, with its environmental report, are submitted to the NRC, staff will*

⁶³ *Dubinsky v. Mermart, LLC*, 595 F.3d 812, 818 (8th Cir. 2010); see also *Tennessee Valley Authority* (Yellow Creek Nuclear Plant, Units 1 and 2), ALAB-515, 8 NRC 702, 707 (1978).

⁶⁴ NUREG-1437, “Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 39, Regarding Prairie Island Nuclear Generating Plant, Units 1 and 2,” at 4-63 (May 2011) (ADAMS Accession No. ML11133A029) [PINGP SEIS].

*conduct a thorough assessment of both safety and the impact to the environmental impact will be conducted and documented [sic].*⁶⁵

And in this same vein, in noting that the Staff does not oppose the admission of this contention, the Staff's Answer states: "[t]he Staff intends to follow the guidance in NUREG-1748 and consider cumulative effects associated with the relicensing of the PI ISFSI."⁶⁶

Finally, the PINGP SEIS catalogues each license and permit to be issued by another federal and state agency that might impact that EIS.⁶⁷ Conspicuously absent from this list is the Certificate of Need from the MPUC that forms the basis for this portion of Contention 2.

The MPUC approved the CON [Certificate of Need] on December 18, 2009. According to the CON application, it is expected that two additional pads (for the additional casks), adjoining the ISFSI, will be constructed in 2020. The pads will be 216 feet long, 18 feet wide and 3 feet thick. The project will involve excavating the pad area and digging trenches for concrete ductbanks and associated electrical conduits and replacing the structural fill. Site preparation activities will involve earthmoving equipment such as bulldozers, scrapers, backhoes and graders to excavate and level the pad and ductbank areas. Following the leveling of the area, reinforced steel, conduit and forms will be put in place and concrete will be poured forming the storage pads and ductbanks. Concrete trucks will deliver concrete to the site and pumping trucks will place it in the pad area. The area around the pad and trench over the ductbank will be back-filled and returned to the 2% grade when complete. . . . Although, as noted, there would be many types of cumulative impacts from the additional casks, we are particularly concerned about the ER providing a cumulative impact analysis of how the ground-disturbing activities related to the ISFSI expansion have the potential to impact archaeological resources.⁶⁸

Stated otherwise, the key document that forms the basis for this portion of Contention 2 was never even considered in the PINGP SEIS. Rather, it was omitted from the PINGP SEIS and therefore could not have been incorporated by reference.⁶⁹

⁶⁵ *Id.* at 4-55 (emphasis added).

⁶⁶ Staff Answer at 11.

⁶⁷ PINGP SEIS at 1-11 to 1-12, Table 1-1.

⁶⁸ Petition at 33-34.

⁶⁹ The Commission's regulations contain many references to when incorporation by reference is appropriate. They include the following:

10 C.F.R. § 30.32(a): Application for specific license for byproduct material may incorporate "Information contained in previous applications, statements or reports filed with the Commission," "provided that the reference is clear and specific."

(Continued)

For each of the foregoing reasons, PIIC, has raised an admissible claim that Northern States failed to address cumulative impacts in its ER. As a consequence, the Board majority agrees with the NRC Staff that this portion of Contention 2 is admissible.

C. Contention 3

PIIC's Contention 3 is as follows:

Id. § 40.31(a): Application for specific license for source material may incorporate "Information contained in previous applications, statements or reports filed with the Commission," "provided that the reference is clear and specific."

Id. § 50.30(d): Application for operating license may incorporate any pertinent info submitted with application for construction permit.

Id. § 51.49(e): In an application for limited work authorization for a site where a construction permit was issued but construction of the plant was never completed, the ER may incorporate the earlier environmental impact statement.

Id. § 51.50(c)(2), (3): An ER for a COL application may incorporate NRC's EA for a standard design certification or an underlying manufacturing license.

Id. § 51.53(a): "Any environmental report prepared under the provisions of this section may incorporate by reference any information contained in a prior environmental report or supplement thereto that relates to the production or utilization facility or site, or any information contained in a final environmental document previously prepared by the NRC staff that relates to the production or utilization facility or site."

Id. § 51.53(d): "The 'Supplement to Applicant's Environmental Report — Post Operating License Stage' may incorporate by reference any information contained in 'Applicants Environmental Report — Construction Permit Stage.'"

Id. § 51.60(a): For materials licenses, "If the application is for an amendment to or a renewal of a license or other form of permission for which the applicant has previously submitted an environmental report, the supplement to applicant's environmental report may be limited to incorporating by reference, updating or supplementing the information previously submitted to reflect any significant environmental change, including any significant environmental change resulting from operational experience or a change in operations or proposed decommissioning activities."

Id. § 51.62(a): In application for land disposal of radioactive waste, ER "may incorporate by reference information contained in the application or in any previous application, statement or report filed with the Commission provided that such references are clear and specific."

Id. § 60.23: DOE may incorporate in its application for geologic repository info in previous reports filed with the Commission "Provided, That such references are clear and specific."

Id. § 70.21(c): For special nuclear material licenses: "Information contained in previous applications, statements, or reports filed with the Commission may be incorporated by reference if the references are clear and specific."

Although there is a general lack of consistency in these provisions, a common thread is that many of them require statements of incorporation to be "clear and specific." We note also that the provision cited by the Dissent, 10 C.F.R. § 51.60, allows an applicant to incorporate material that *the applicant itself* has previously submitted, not, as the Dissent argues, material prepared by the Staff.

[Northern States'] Environmental Report Fails to Account for the Federal Trust Responsibility that Informs Its Review of Potential Impacts on the Community, Its People and Its Land.

Contention 3 invokes the long-recognized “trust responsibility” that the federal government owes to Indian tribes.⁷⁰ As PIIC explains, the trust responsibility imposes both substantive and procedural duties on the federal government, and the government “has a general mandate to ensure the preservation of a usable land base for future generations of tribal members.”⁷¹ In essence, PIIC is arguing that, in furtherance of the government’s performance of its trust obligation, Northern States’ ER should address issues related to the federal government’s trust responsibility — particularly the prospect that the ISFSI will continue to store waste near PIIC long after the deadline for permanent storage established by the Nuclear Waste Policy Act (NWPA).⁷²

Northern States and the Staff both oppose admission of Contention 3. Northern States argues that PIIC fails to raise a material issue with the application or to explain with any specificity how the application is deficient.⁷³ Northern States asserts that the NRC fulfills its trust responsibility through compliance with its general regulations and statutes.⁷⁴ For its part, the Staff argues that the trust responsibility does not apply to Northern States, and that there is no requirement for it to address the trust responsibility in the ER.⁷⁵ The Staff also asserts that PIIC’s arguments about NRC compliance with the NWPA are beyond the scope of the current proceeding.

In its Reply, PIIC argues that the ER is “insufficient” because it fails to “address matters that are necessary for the NRC to meet its trust obligation.”⁷⁶ PIIC claims that an applicant “must discuss the NRC’s compliance with all applicable federal laws,” including the common-law trust obligation, in order to present a sufficient basis for the NRC to review the application.⁷⁷ PIIC also reiterates its claim that the NRC has violated the trust responsibility by failing to move forward with a geologic repository.⁷⁸

Contention 3 is inadmissible for failure to present a genuine dispute with the application. Although the contention alleges that Northern States’ ER fails

⁷⁰ See, e.g., *Seminole Nation v. United States*, 316 U.S. 286, 296-97 (1942).

⁷¹ Petition at 37.

⁷² See *id.* at 38-42.

⁷³ Northern States Answer at 21-22.

⁷⁴ *Id.* at 22-23.

⁷⁵ Staff Answer at 13.

⁷⁶ Reply at 23.

⁷⁷ *Id.*

⁷⁸ *Id.* at 24.

to discuss the federal trust responsibility, in fact that responsibility rests solely with the federal government, and cannot be discharged by Northern States.⁷⁹ Furthermore, nothing in 10 C.F.R. § 51.45, which governs the contents of ERs, requires an applicant to discuss the federal government's trust responsibility. PIIC claims that a discussion of the trust responsibility is necessary to support the NRC's review of the application, but PIIC does not explain how the information included in the application is insufficient for the Staff to undertake its own consideration of the trust responsibility.

Although we deny Contention 3, PIIC is free to raise a contention challenging the Staff's compliance with its trust responsibility once the Staff issues its EA or draft EIS. We express no opinion as to whether such a contention would be admissible.

D. Contention 4⁸⁰

PIIC's Contention 4 is as follows:

[Northern States'] Environmental Report Does Not Adequately Assess the Impacts of the PI ISFSI on the Adjacent Minority Population.

Contention 4 implicates environmental justice, a policy established by Executive Order 12898 that federal agencies shall identify and consider whether their actions will cause disproportionate environmental impacts on minority, low-income, or other sensitive populations.⁸¹ The policy of the NRC is to address the required environmental justice analysis in its general environmental review process under NEPA.⁸²

PIIC disputes the conclusion in Northern States' ER that the environmental justice impacts of the Prairie Island ISFSI license renewal will be "small."⁸³ It also attacks the ER for failing to consider environmental justice impacts beyond the 40-year period of the renewal term. Additionally, PIIC raises a number of discrete claims of disparate impact on its community from the ISFSI and from the Prairie Island Nuclear Generating Plant more generally. These

⁷⁹ See *Parravano v. Babbitt*, 70 F.3d 539, 546 (9th Cir. 1995) ("the federal government is the trustee of the Indian tribes' rights This trust responsibility extends not just to the Interior Department, but attaches to *the federal government* as a whole.") (emphasis added).

⁸⁰ Judge Arnold dissents from the Board's ruling on Contention 4. See *infra*, Dissenting Statement of Judge Arnold.

⁸¹ Exec. Order No. 12,898, 3 C.F.R. 859 (1995), *reprinted as amended* in 42 U.S.C. § 4321.

⁸² See Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions, 69 Fed. Reg. 52,040 (Aug. 24, 2004).

⁸³ ER at E-59.

include: destruction of tribal cultural resources at the plant site; unfulfilled promises of jobs and infrastructure improvements for the community; radiological and thermal pollution from plant operations; elevated risks from radiological release or leaks from the spent fuel pools; the potential exposure from the “skyshine” radiation associated with ongoing nuclear waste storage;⁸⁴ inadequate environmental monitoring by Northern States; increased emergency preparedness costs; and fear and anxiety among tribal members about their health and safety.⁸⁵ Finally, PIIC alleges that the National Academy of Sciences has called into question the long-term health impact studies on which Northern States and the NRC rely to establish lifetime cancer risk.⁸⁶

The Staff states that it plans to conduct an environmental justice review in its Environmental Assessment. According to the Staff, NRC regulations do not require applicants to discuss environmental justice concerns in their applications — although, even were they obligated to do so, the Staff views Northern States’ ER as containing sufficient socioeconomic data for the Staff to begin its review.⁸⁷ Nevertheless, because petitioners are required to bring their environmental contentions at the petition stage against the ER, the Staff concedes that this contention is timely and admissible as a placeholder for PIIC to contest the adequacy of the Staff’s yet-to-be-completed environmental justice review.⁸⁸

Even then, however, the Staff urges that Contention 4 be narrowed to exclude certain claims that are outside the scope of this proceeding because they implicate impacts and features of the PINGP reactor units (rather than the ISFSI itself), such as spent fuel pools.⁸⁹ The Staff also cites case law holding that agencies need not consider psychological impacts from fear and anxiety as part of a NEPA analysis.⁹⁰ Third, the Staff asserts that Northern States’ ER already considers skyshine as part of its overall dose calculation for radiation exposure.⁹¹ Finally, the Staff states that the National Academy of Sciences report cited by PIIC has not been finalized or incorporated by the NRC, and therefore Northern States’ ER is “not deficient for failing to consider the report’s findings.”⁹²

⁸⁴ Skyshine refers to radiation that is reflected by the atmosphere and is redirected toward the ground. See Tr. at 166.

⁸⁵ See Petition at 45-48.

⁸⁶ *Id.* at 48 (citing National Academy of Sciences, Analysis of Cancer Risks in Populations Near Nuclear Facilities (Phase I) (2012)).

⁸⁷ NRC Staff Answer at 15.

⁸⁸ *Id.* at 15, 17.

⁸⁹ *Id.* at 16.

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.* at 17.

Northern States opposes admission of Contention 4 in its entirety. It echoes the Staff's concerns with the individual bases of the contention and argues further that the remaining portions of the contention lack support, fail to present a material dispute with the application, and are outside the scope of the proceeding.⁹³ In Northern States' view, the contention as a whole fails to allege the "significant, high and adverse" disparate impacts that are necessary to form a valid environmental justice contention.⁹⁴

We disagree. PIIC has stated an admissible contention with respect to two disparate impacts on PIIC as a minority population (1) potential disturbance of historic and archaeological resources and (2) skyshine radiation. These impacts are similar to those asserted in Contention 2 in that they stem from the likely future expansion of the ISFSI that is not examined in the ER.

As we observed in admitting Contention 2, to the extent a future expansion of the ISFSI will disturb the ground and risk adversely affecting historical and archaeological resources, these impacts will be felt particularly by PIIC. These alleged impacts are material to the Staff's review, and their absence from the environmental justice analysis in the ER creates a genuine dispute regarding the adequacy of Northern States' application.

Secondly, PIIC asserts that the ER does not consider the expansion of the ISFSI to encompass as many as ninety-eight casks⁹⁵ that could result in an increase in skyshine radiation, some of which may find its way within PIIC's borders. According to PIIC, it is reasonably foreseeable that there will be a disproportionate impact on PIIC from additional skyshine.⁹⁶ The Staff's claim that the application already considers skyshine as part of the overall dose calculation is thus incorrect — for that analysis was based on an ISFSI of only forty-eight casks.⁹⁷ Northern States goes even further than the Staff to argue that because PIIC itself has characterized the impact of additional skyshine in its Petition as a "small incremental risk," we must conclude that the impact on PIIC is trivial.⁹⁸ In fact, however, the Petition makes clear that PIIC is concerned with the effects of long-term exposure to this low-level radiation.⁹⁹ Accordingly, there is a genuine dispute as to whether the skyshine impacts are "significant, high, and adverse."

⁹³ Northern States Answer at 24.

⁹⁴ Northern States Answer at 28 (*citing Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-20, 56 NRC 147, 154 (2002)).

⁹⁵ At oral argument, counsel for the PIIC alleged that upon decommissioning of the PINGP, the waste remaining in the reactor and the spent fuel pools will necessitate ninety-eight casks for long-term storage. Tr. at 80.

⁹⁶ Petition at 47-48.

⁹⁷ See ER at E-50 to -51; Reply at 30-31.

⁹⁸ Northern States Answer at 32.

⁹⁹ Petition at 48.

The remaining portions of Contention 4 are not admissible. First, PIIC's concerns about impacts from the spent fuel pool and from radiological and thermal pollution are challenges to the reactor units, and are thus outside the scope of this proceeding. The ISFSI renewal does not afford PIIC a second bite of the apple to relitigate issues it had the opportunity to raise in the recent PINGP relicensing proceeding. PIIC also raises grievances about Northern States' past behavior (prior destruction of burial mounds, previous failure to provide jobs and infrastructure) that cannot be adjudicated in this forum. Additionally, PIIC's assertion that continued operation of the ISFSI causes fear and anxiety among PIIC members is not a valid claim under NEPA.¹⁰⁰ Finally, PIIC's citation to the National Academy of Sciences Phase 1 study to challenge other, unspecified studies on which the NRC and Northern States rely is in effect a challenge to NRC regulations setting maximum dose limits for the protection of the public, and therefore is beyond the permissible scope of this proceeding.

E. Contention 5¹⁰¹

PIIC's Contention 5 is as follows:

The [Northern States] License Application Is Deficient Because It Does Not Include the ISFSI Pressure Monitoring System as a SSC Within the Aging Management Program

Contention 5 concerns the pressure monitoring system, which gauges the helium pressure between the inner and outer seals of each spent fuel cask.¹⁰² The pressure monitoring system functions to alert ISFSI operators of potential storage problems, specifically a leak of one of the seals. Such a capability is intended to meet the requirements of 10 C.F.R. § 72.122(h)(4) for monitoring of dry spent fuel storage. PIIC argues that, because the pressure monitoring system "is needed to provide the capability to determine when corrective action needs to be taken to maintain safe storage conditions,"¹⁰³ the system itself should be considered one

¹⁰⁰ See *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 775-79 (1983); *Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station)*, CLI-12-15, 75 NRC 704, 725 (2012) ("NEPA is not intended to encompass every possible impact, and does not encompass potential losses due to individuals' 'perception' of a risk.").

¹⁰¹ Judge Gibson concurs separately as to the Board's ruling on Contention 5. See *infra*, Concurring Statement of Judge Gibson.

¹⁰² See Northern States Answer at 34 (*citing* Prairie Island Independent Spent Fuel Storage Installation, Safety Analysis Report, Rev. 14, at 1.3-1, A1.3-1 (Sept. 2011) (ADAMS Accession No. ML113040131) [SAR]).

¹⁰³ Petition at 49.

of the “structures, systems, and components [SSCs] important to safety” that are evaluated within the scope of license renewal.¹⁰⁴

PIIC cites to the guidance in NUREG/CR-6407, which defines items having a “major impact on safety” as those SSCs “whose failure or malfunction could indirectly result in a condition adversely affecting public health and safety.”¹⁰⁵ PIIC claims the pressure monitoring system falls squarely within this definition.

PIIC provides support for Contention 5 by highlighting two examples of seal leaks detected by a pressure monitoring system.¹⁰⁶ These incidents occurred at the Peach Bottom Atomic Power Station ISFSI in 2011 and at the Surry Power Station ISFSI in 2000.¹⁰⁷ PIIC alleges that “[n]either of these two leaks would have been discovered if the management of the aging of the pressure monitoring system was outside the scope of license renewal.”¹⁰⁸

The Staff supports admission of Contention 5. The Staff informs us that it “is currently reviewing the Applicant’s determination that the pressure monitoring system is not within the scope of the license renewal.”¹⁰⁹ Because Contention 5 is based on factors that the Staff is considering in its review, the Staff maintains that the contention is material and within the scope of this proceeding. In the Staff’s view, PIIC’s references to prior seal leaks provide sufficient support for its contention that the pressure monitoring system is incorrectly scoped in the application.¹¹⁰

Northern States characterizes Contention 5 as an inappropriate attack on the licensing basis of the ISFSI, which it argues cannot be challenged in a license renewal proceeding.¹¹¹ The current licensing basis, as described in Northern States’ Safety Analysis Report (SAR), classifies the pressure monitoring system as “not important to safety.”¹¹² Northern States draws an analogy to the NRC’s practice regarding license renewal for reactors, which requires aging management

¹⁰⁴ See NUREG-1927, “Standard Review Plan for Renewal of Spent Fuel Dry Cask Storage System Licenses and Certificates of Compliance,” Section 2.4.2, “Structures, Systems, and Components Within the Scope of License Renewal” (ADAMS Accession No. ML111020115) (Mar. 2011) [NUREG-1927].

¹⁰⁵ Petition at 50 (citing NUREG/CR-6407, “Classification of Transportation Packaging and Dry Spent Fuel Storage System Components According to Importance to Safety” (Feb. 1996), at 4).

¹⁰⁶ *Id.* at 51.

¹⁰⁷ See NRC Inspection Report Nos. 05000277/2010010 and 05000278/2010010, Exelon Nuclear Peach Bottom Atomic Power Station (July 29, 2011) (ADAMS Accession No. ML112101576); NRC Inspection Report No. 72-002/2000-06, Surry Power Station Independent Spent Fuel Storage Installation (ISFSI) (Aug. 4, 2000) (ADAMS Accession No. ML003738176).

¹⁰⁸ Petition at 52.

¹⁰⁹ NRC Staff Answer at 18.

¹¹⁰ *Id.* at 19.

¹¹¹ Northern States Answer at 35-37.

¹¹² *Id.* at 35, 38 (citing SAR at 4.5-2, A4.5-24).

review only for passive components. Northern States argues that the pressure monitoring system is an active system, not a passive one, and therefore it is appropriately placed outside the scope of license renewal. Additionally, Northern States suggests that an aging management program would be superfluous because the system is already checked once a day and the alarm system is tested annually.

Contention 5 is inadmissible. NRC regulations require that applications for renewal of an ISFSI license contain “[a] description of the AMP [aging management plan] for management of issues associated with aging that could adversely affect structures, systems, and *components important to safety*.”¹¹³

Northern States has cited to current license documents that define the pressure monitoring system not to be safety related.¹¹⁴ Petitioners charge that this classification is incorrect. But this classification is part of the current licensing basis, and the time to have challenged this classification was when it was originated, during initial licensing of the ISFSI.

The Commission has explained that it is not “necessary or appropriate to throw open the full gamut of provisions in a [facility’s] current licensing basis to re-analysis during the license renewal review,” because the current licensing basis “is effectively addressed and maintained by ongoing agency oversight, review, and enforcement.”¹¹⁵ Although providing guidance rather than regulations, NUREG-1927 states concerning ISFSI license renewal:

The NRC bases a license . . . renewal on the continuation of the existing licensing basis throughout the period of extended operation and on the maintenance of the intended functions of the SSCs important to safety. The NRC does not intend a license . . . renewal to be a vehicle for imposing new regulatory requirements. If new safety-related deficiencies are discovered, they must be addressed through the license . . . amendment process.¹¹⁶

This is sufficient for us to conclude that the Commission intends the scope of ISFSI license renewal to be limited similar to renewal of operating licenses where challenges to the current licensing basis are inadmissible.¹¹⁷

Here, the current licensing basis for the Prairie Island ISFSI classifies the

¹¹³ 10 C.F.R. § 72.42(a)(2) (emphasis added).

¹¹⁴ Northern States Answer at 35 (citing SAR at 4.5-2, A4.5-2).

¹¹⁵ *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 9 (2001).

¹¹⁶ NUREG-1927, at 9.

¹¹⁷ See *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 272 n.209 (2009) (“a challenge to the adequacy of the acceptance criteria (or any other component of the current licensing basis) is not within the scope of the license renewal proceeding”); *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-08-22, 68 NRC 590, 601 (2008).

pressure monitoring system as “not important to safety.”¹¹⁸ For this reason alone, this challenge is outside the scope of license renewal and this contention is not admissible.

F. Contention 6

PIIC’s Contention 6 is as follows:

[Northern States’] License Renewal Application Is Deficient Because It Did Not Adequately Address the Potential Degradation of High Burnup Fuel Due to Aging During Storage, Subsequent Handling, and Transportation. 10 CFR § 72.122 Requires Confinement Barriers and Systems to Protect Degradation of Fuel and to Not Pose Operational Safety Problems.

PIIC alleges significant uncertainty concerning the behavior of high-burnup fuel during dry storage and its subsequent handling and transportation.¹¹⁹ It cites to reports of the NRC, the Department of Energy, and the Nuclear Waste Technical Review Board to support its allegations that expected physical and chemical aging processes¹²⁰ could lead to degradation of the high-burnup fuel cladding and threaten the containment systems.¹²¹ PIIC argues that the license renewal application does not address these issues or uncertainties, and that Northern States’ ER has failed to satisfy “the requirements of 10 C.F.R. § 72.122 to protect spent fuel from significant degradation during the proposed extended storage period.”¹²²

The Staff would have us admit this contention in part. The Staff states that the contention invokes Northern States’ responsibility both under 10 C.F.R.

¹¹⁸ Our acknowledgment that the pressure monitoring system is defined as not safety-related in the current license basis is not a judgment that this categorization is correct. It is only an acknowledgment that the system is defined that way in the current license.

¹¹⁹ Petition at 53.

¹²⁰ These physical and chemical aging processes include hydriding effects, creep, stress corrosion cracking, embrittlement, oxidation, and galvanic corrosion. Petition at 52-54.

¹²¹ *Id.* (citing U.S. NRC, Draft Report for Comment, Identification and Prioritization of the Technical Information Needs Affecting Potential Regulation of Extended Storage and Transportation of Spent Nuclear Fuel (May 2012) (ADAMS Accession No. ML120580143); U.S. Department of Energy, Gap Analysis to Support Extended Storage of Used Nuclear Fuel, Rev. 0 (Jan. 31, 2012), available at [http://www.nuclear.energy.gov/pdfFiles/Gap Analysis Rev 0 Final.pdf](http://www.nuclear.energy.gov/pdfFiles/Gap%20Analysis%20Rev%200%20Final.pdf); U.S. Nuclear Waste Technical Review Board, Evaluation of the Technical Basis for Extended Dry Storage and Transportation of Used Nuclear Fuel (Dec. 2010), available at <http://www.nwtrb.gov/reports/eds-final.pdf>).

¹²² *Id.* at 54. The Petition also charges that Northern States “has not provided adequate justification and support for use of full burnup credit in the criticality analysis,” *id.*, but during oral argument, PIIC abandoned this argument. Tr. at 235.

§ 72.122(h)(1) — either to protect fuel cladding from degradation during storage, or to confine the fuel in such a way that degradation does not cause operational problems when removed from storage — and under section 72.122(l) to provide for ready retrieval of the spent fuel from storage for further processing or disposal.¹²³ Additionally, the Staff cites to its standard review plan for spent fuel storage licenses, NUREG-1927, which instructs applicants to “provide any new supporting data demonstrating high-burnup fuel performance during extended storage.”¹²⁴ Accordingly, relative to these matters, the Staff deems Contention 6 to raise issues material to its review of the application.

Northern States opposes admission of Contention 6, arguing that the application not only discusses aging management of high-burnup fuel but also follows NRC guidance in doing so.¹²⁵ Northern States specifically states that it has addressed the acceptance criteria of the NRC Interim Staff Guidance document concerning spent fuel cladding during storage,¹²⁶ and has demonstrated that these criteria will be met.¹²⁷ Further, Northern States asserts that the three reports cited by PIIC fail to provide support for the contention.¹²⁸ According to Northern States, each of these reports considered storage for periods longer than 60 years (i.e., the length of time the Prairie Island ISFSI will have been operational at the end of the relicensing period), and are therefore not relevant to the current license renewal.¹²⁹

At oral argument, PIIC noted that, although the Prairie Island ISFSI is licensed for storage of high-burnup fuel, the current licensing action extends that approval for an additional 40 years.¹³⁰ PIIC explained that available data and experience with high-burnup fuels are inadequate to support the safe dry storage of high-burnup fuel for such an extended period.¹³¹ In essence, PIIC is alleging that there is no available information to support Northern States’ claim that it can meet 10 C.F.R. § 72.122(h)(1) during the planned relicensing period of 40 years.

PIIC has presented an admissible contention. To date the Prairie Island ISFSI has stored only low-burnup fuel,¹³² and so the effects and challenges of storing high-burnup fuel over the 40-year renewal term are new and material safety

¹²³ Staff Answer at 20.

¹²⁴ *Id.* (citing NUREG-1927, at 20).

¹²⁵ Northern States Answer at 40-41.

¹²⁶ Cladding Considerations for Transportation and Storage of Spent Fuel, ISG-11, Rev. 3 (Nov. 2003) (ADAMS Accession No. ML033230335) [ISG-11].

¹²⁷ Northern States Answer at 41 (citing Application at 3-11; SAR at A3.3-12 to -13).

¹²⁸ *Id.* at 42-43.

¹²⁹ *Id.*

¹³⁰ Tr. at 239-40.

¹³¹ Tr. at 243-44.

¹³² *See* Tr. at 246 (Statement by Ms. Harshaw: “We will be loading our first high-burnup fuel in 2013.”).

issues within the scope of this proceeding. PIIC has raised a genuine dispute that Northern States' application did not sufficiently consider the uncertainties associated with long-term dry storage of high-burnup fuel. Contrary to Northern States' argument that the studies on which the Staff and PIIC rely relate only to "extended storage" (and so of necessity must be for a period longer than the 40 remaining years were the ISFSI license renewed), PIIC's claim is that no such bright line can be drawn to mark the age at which degradation becomes a concern. Whether these studies are adequate to show that high-burnup fuel is safe from serious degradation within the 40-year time frame is a question appropriate for adjudication on the merits. At this contention admissibility stage, there is a genuine dispute as to the studies' interpretation. Accordingly, Contention 6 is admissible.

G. Contention 7

PIIC's Contention 7 is as follows:

The [Northern States] License Renewal Application Does Not Address the Potential for Operational Radiological Effluent Releases in Excess of the Limits in NRC Regulations from the Fuel Cask Confinement System Due to Aging of the System.

PIIC posits that, over the 40-year renewal period, "it can reasonably be anticipated that one or more TN casks¹³³ will experience confinement failure" due to degradation of materials and seals, potentially leading to offsite doses of radiation to the public.¹³⁴ PIIC challenges the ER's exclusive focus on direct radiation doses and its conclusion that there will be no releases of radioactive material.¹³⁵ Additionally, PIIC alleges that the ER should apply the stricter regulatory dose limits for operational releases, rather than treat a release of radioactive material as an accident condition. PIIC bases the contention on "the history of defects that have caused leaks to occur in TN casks."¹³⁶

The Staff argues that Contention 7 should be dismissed because it is outside the scope of the proceeding, lacks factual support, and fails to show a genuine dispute with the application.¹³⁷ First, the Staff observes that because Northern States' current licensing basis contains technical specifications limiting radioactive releases to levels below NRC's regulatory standards, it is beyond the permissible scope of

¹³³ TN Casks are spent fuel storage casks manufactured by Transnuclear, Inc. Petition at 51.

¹³⁴ Petition at 55.

¹³⁵ *Id.*

¹³⁶ *Id.*

¹³⁷ Staff Answer at 21.

adjudication here.¹³⁸ The basis for the Staff's claim in this regard is the Applicant's demonstration "that the casks will not leak radionuclides into the environment under normal conditions of operations."¹³⁹ Second, the Staff presumes that the "history of defects" cited by PIIC refers to the leaks at Surry and Peach Bottom discussed as support for Contention 5, and notes that neither leak resulted in a loss of containment. From this, the Staff argues that PIIC has shown neither that there has been a history of operational radioactive releases nor that any such release would be greater than the dose limits set by NRC regulations.¹⁴⁰

Northern States also argues that the contention is unsupported, and that the examples of seal leaks contained in the Petition do not establish that it can "reasonably be anticipated" that an operational release will occur.¹⁴¹ Further, Northern States argues that the current licensing basis established that "no credible mechanisms that could result in leakage of radioactive products have been identified," and that the application contains both an analysis of accidental releases and an aging management plan to guard against degradation of the seals and other components.¹⁴²

We agree with Northern States and the Staff that Contention 7 is inadmissible. NRC regulations require ISFSI licensees to limit releases of radioactive materials to "as low as is reasonably achievable," and to establish operational limits to prevent doses to the public that exceed the limits in 10 C.F.R. § 72.104(a).¹⁴³ The current licensing basis for the ISFSI specifies that under normal operating conditions, there will be no release of radioactive material from the casks.¹⁴⁴ Were such a release to occur, whether due to some catastrophic event or simply due to aging, the current licensing basis treats this as an accident.¹⁴⁵ As PIIC observes, Northern States' SAR estimates that a loss of confinement would produce a dose of 0.15 rem at the nearest site boundary, which is less than the 5-rem limit set by 10 C.F.R. § 72.106(b).¹⁴⁶ In essence, PIIC's contention challenges not only the current licensing basis, but as well the NRC's regulatory dose limit. Challenges to the current licensing basis are outside the scope of license renewal proceedings, and contentions that pose a challenge to Commission regulations are inadmissible in licensing proceedings, absent a waiver, which has not been sought in this

¹³⁸ *Id.* at 21-22.

¹³⁹ *Id.* at 22.

¹⁴⁰ *Id.* at 22-23.

¹⁴¹ Northern States Answer at 44-45.

¹⁴² *Id.* at 48 (citing SAR at 8.2-4, A8.2-5).

¹⁴³ 10 C.F.R. § 72.104(a)-(c).

¹⁴⁴ See SAR at A7A.8-6.

¹⁴⁵ *Id.*

¹⁴⁶ Petition at 55 (citing SAR at 8.2-13).

instance.¹⁴⁷ Further, PIIC's unsupported statement that loss of confinement can "reasonably be expected" over the license renewal term fails to present a genuine dispute with the application. Contention 7 is therefore inadmissible.

V. CONCLUSION

For the reasons stated above, we grant PIIC's Request for Hearing and Petition to Intervene and we admit PIIC as a party to this proceeding. We further admit Contentions 2, 4, and 6, as narrowed herein, and hold in abeyance Contention 1, as well as those portions of Contentions 2 and 4 that implicate the WCD and the TSR.

We will issue a further order governing the schedule for this proceeding in due course. Because no party requested to conduct the proceeding under the procedures specified in 10 C.F.R. Part 2, Subpart G, we will conduct the proceeding in accordance with the procedures of 10 C.F.R. Part 2, Subpart L. An appeal of the selection of hearing procedures may be filed within ten (10) days, pursuant to 10 C.F.R. § 2.311(e).

An appeal of this Memorandum and Order may be filed within twenty-five (25) days of service of this Memorandum and Order by filing a notice of appeal and an accompanying supporting brief, in accordance with 10 C.F.R. § 2.311(b). Any party opposing an appeal may file a brief in opposition to the appeal. All briefs must conform to the requirements of 10 C.F.R. § 2.341(c)(2).

¹⁴⁷ 10 C.F.R. § 2.335(a) ("no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding"), (b).

It is so ORDERED.

FOR THE ATOMIC SAFETY
AND LICENSING BOARD

Michael M. Gibson, Chairman
ADMINISTRATIVE JUDGE

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE

Rockville, Maryland
December 20, 2012

Dissenting Statement of Judge Arnold

Although I agree with the other members of the Board on most of this Order, I differ from the majority of the Board on admissibility of Contentions 2 and 4. I discuss each of my alternative opinions in turn.

Contention 2

Contention 2 states that “Northern States Power’s Environmental Report fails to address cumulative impacts of related projects on the PIIC, its members, and its lands.”¹ There is nothing in the contention, as written, that indicates that the contention was intended to be one alleging inadequacy of a cumulative impacts analysis that is present. The phrase “fails to address” clearly indicates that this contention is solely one of omission; that the ER failed to address something that the Petitioners believe should have been addressed.

As addressed in the discussion of Contention 2 in the majority decision and at oral argument, this contention has two main concepts.² The first is that the ER did not consider cumulative impacts of extending the ISFSI license along with activities related to long-term storage of waste and the Waste Confidence Rule.³ I agree with the majority of the Board that this must be held in abeyance. The second concept was that the ER did not consider the cumulative impacts of extending the ISFSI license along with recent and reasonably foreseeable actions. The two specific examples of this latter concept provided in the petition are the recent renewal of the operating license and the foreseeable future expansion of the ISFSI.⁴

The second part of the contention is the source of disagreement between myself and the majority of the Board. Prior to discussing the issue, it is informative to review the specific regulatory requirement that an ISFSI license renewal application contain an ER. This is found in 10 C.F.R. § 51.60. However, this section allows for the ER for a license renewal to be provided in an abbreviated form:

If the application is for an amendment to or a renewal of a license or other form

¹ Petition at 26.

² See Tr. 106-08.

³ Tr. at 30-31.

⁴ Tr. at 32-33.

of permission for which the applicant has previously submitted an environmental report, *the supplement to applicant's environmental report may be limited to incorporating by reference, updating or supplementing the information previously submitted* to reflect any significant environmental change, including any significant environmental change resulting from operational experience or a change in operations or proposed decommissioning activities.⁵

The second part of Contention 2 alleges that the ER is required to consider the cumulative effects of extending the ISFSI license along with the recent extension of the operating licenses of the two PI units and the future expansion of the ISFSI, and challenges that the ER fails to do so. I believe that the Applicant did provide such an analysis in its ER by incorporating by reference the Supplemental Environmental Impact Statement (SEIS) provided by NRC Staff for relicensing of the two PI operating licenses.⁶

The cumulative impacts analysis provided in this earlier SEIS is introduced with:

The NRC staff considered potential cumulative impacts in the environmental analysis of continued operation of PINGP 1 and 2. For the purposes of this analysis, past actions are those related to the resources at the time of the power plant licensing and construction, present actions are those related to the resources at the time of current operation of the power plant, and future actions are considered to be those that are reasonably foreseeable through the end of plant operation including the period of extended operation. . .

The impacts of the proposed action, as described in Sections 4.14.9, are combined with other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. *Actions which NSP has expressed an interest in pursuing are the license renewal of the independent spent fuel storage installation (ISFSI), expanding the number of spent fuel casks stored at the ISFSI, and a power uprate increase.*⁷

As stated in the quote above, the cumulative impacts evaluation contained

⁵ 10 C.F.R. § 51.60 (emphasis added).

⁶ Prairie Island Independent Spent Fuel Storage Installation Application for Renewed ISFSI Site-Specific License (Application) at E-4:

The GEIS, the PINGP ER, and the NRC's SEIS address the PI ISFSI operations during a plant's period of extended operation. Because these documents have previously defined the impacts of the PI ISFSI, NSPM adopts appropriate material from these documents by reference.

⁷ NUREG-1437, Supplement 39, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Prairie Island Nuclear Generating Plant, Units 1 and 2 — Final Report," at 4-55 (SEIS) (emphasis added).

in section 4.11 of the SEIS consists of a 12-page discussion of the various cumulative impacts associated with the combination of operating license renewal, ISFSI license renewal, and future ISFSI expansion. This evaluation has been incorporated in the ISFSI license renewal application by reference.⁸ Contention 2 does not cite or in any way refer to this cumulative impacts analysis. Petitioners do not challenge that this evaluation is inadequate or out of date. In fact, the contention provides no indication that the Petitioners were even aware of this analysis.

To find this second part of Contention 2 admissible, the Board would have to consider that the SEIS for operating license renewal was not a legitimate part of the current ISFSI license renewal application. Such a decision could be based either on the concept that the SEIS was improperly incorporated into the ER or upon a decision that the cumulative impacts analysis in the SEIS was inadequate. The majority of the Board seems to believe both.

The majority provides three reasons why Applicant's incorporation by reference of the cumulative impact evaluation of the EIS for operating license renewal is inadequate. These are: (1) incorporation of the cumulative impacts evaluation occurs in the wrong part of the ER, (2) incorporation was not sufficiently specific, and (3) the ER failed to evaluate cumulative impacts in the "Historical and Cultural Resources" section of the ER.⁹ None of these arguments hold water as discussed below.

The majority of the Board takes issue with the fact that incorporation of the cumulative impacts was performed under the "Scoping and Methodology" section of the ER rather than under the section on "Historical and Cultural Resources." However, examination of the FEIS for most operating plants demonstrates that cumulative impacts, even those of historical and cultural resources are not discussed in the "Historical and Cultural Resources" section of the EIS. For instance, the EIS for South Texas contains in section 5 ("Operational Impacts at the Proposed Site") discussions of impacts on historical and cultural resources.¹⁰ However, the discussion of cumulative impacts on historical and cultural resources is contained in section 7.5 (Cumulative Impacts — Historical and Cultural Resources). Therefore, contrary to the assertion of the majority, the "Historical and Cultural Resources" section of the ER is not the appropriate location for a cumulative impacts evaluation. Instead, Applicant appropriately placed incorporation of the cumulative impacts analysis of the license renewal EIS in the "Scoping and Methodology" section of the ER.

⁸ Application at E-4.

⁹ See Majority Opinion, *supra* pp. 514-16.

¹⁰ NUREG-1937, Vol. 1, "Environmental Impact Statement for Combined Licenses for South Texas Project Electric Generating Station Units 3 and 4," Table of Contents at xii, xv.

Second, the majority stated that the incorporation was not sufficiently specific.¹¹ They cite the Commission's statement in the recent *Seabrook* decision:

The Commission has made clear that it is not sufficient to incorporate by reference large portions of material where doing so would force one "to sift through it in search of asserted factual support" that is not otherwise specified.¹²

The information incorporated by reference by the Applicant in its ER is the EIS for the PINGP operating license renewal. This is a Staff-authored document that is clearly indexed and easily accessed on the NRC public web site. While the majority indicates that accessing relevant portions of the SEIS amounts to a major exercise, in reality, locating this public document and finding the cumulative impacts analysis requires less than 10 minutes. Furthermore it should be noted that the Commission's admonitions on referencing large portions of materials are directed at Petitioners or Intervenors attempting to bolster weak contentions. To my knowledge the Commission has never admonished an Applicant for incorporating by reference too much information into an application.

The third reason that the majority of the Board finds the Applicant's incorporation of the cumulative impacts analysis to be inadequate is similar to the first reason and focuses on the fact that the ER's evaluation of "Historical and Cultural Resources" does not consider cumulative impacts. However, as I discussed previously, the ER did consider cumulative impacts elsewhere and was not required to consider them in the "Historical and Cultural Resources" section.

The Board's decision fails to provide any reasonable justification to exclude the discussion of cumulative impacts that was contained in the SEIS for the renewal of the operating license and which was incorporated in the ISFSI license renewal application by reference.

The majority of the Board then assumes "arguendo that this language from the ER [is] sufficient to incorporate by reference cumulative impacts analysis from these extrinsic documents."¹³ The majority concludes that even so, the cumulative impacts analysis contained therein is inadequate. This decision is based on a claimed lack of support in the SEIS for its conclusion of "no significant cumulative impacts." This is effectively a challenge to the SEIS as well as to the ER. However, it is far too late to challenge the adequacy of an SEIS for a

¹¹ Incorporation was accomplished with the words, "NSPM adopts appropriate material from these documents by reference." ER at E-4. Admittedly this is not specific to page or section numbers. However, it is not a great extrapolation to conclude that "appropriate material" refers to those parts of the documents that pertain to the ISFSI.

¹² See Majority Opinion, *supra* p. 515 (citing *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 332 (2012)).

¹³ See Majority Opinion, *supra* p. 516.

license renewal completed over a year ago. Furthermore, the PIIC, in pleadings and at oral argument made no challenge concerning the adequacy of this earlier cumulative impacts evaluation. I believe that the majority of the Board is improperly evaluating licensing documents for a completed licensing action that have not been challenged and has improperly declared them inadequate.

The majority of the Board also notes that their decision on admission of Contention 2 is consistent with the opinion expressed by NRC Staff. While I believe that Staff's opinion is informative, I believe that in this case it is even more informative to look at the reasons given by Staff for its opinion. The Staff states:

While the regulation at 10 C.F.R. § 51.45 does not require an assessment of cumulative impacts from the applicant in its ER, the applicable guidance in NUREG-1748 requests that an applicant discuss "any past, present or reasonably foreseeable future actions which could result in cumulative impacts when combined with the proposed action.[""]¹⁴

Thus, the Staff's willingness to support admission of this contention is not based upon a legal requirement, but rather because the intent of this contention is consistent with NRC guidance. As expressed by Staff, there is no legal requirement for the ER to contain the subject analysis. This is in itself sufficient for the contention to be inadmissible.

Contention 4

For many of the same reasons, I disagree with the majority of the Board on the admissibility of Contention 4. The majority admits the contention with respect to two disparate impacts: disturbance of historic and archeological resources and the effects of skyshine radiation. But the Board also notes that these effects stem from the likely future expansion of the ISFSI. Hence, this is not a challenge of environmental justice impacts relative to this license renewal alone, but is rather a challenge to cumulative impacts concerning environmental justice at PI as a whole. This is because the alleged impacts will only occur if other, reasonably foreseeable federal actions actually occur. Such an analysis must be included in the EIS (and by extension in the ER), but how the analysis is included and its location in the document is not defined by regulation.

The ER does not discuss cumulative impacts, but rather it incorporates by reference the cumulative impacts evaluation of the SEIS for operating license renewal. Even a superficial reading of the appropriate sections of this document demonstrates that the disparate impacts mentioned above were addressed in the

¹⁴ Staff Answer at 11.

SEIS.¹⁵ Yet the PIIC challenge did not identify or in any other way discuss the existence of this information.

One of the criteria that a proffered contention must meet to be admissible is that it must:

[P]rovide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. *This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes . . .*¹⁶

Having failed to identify or otherwise discuss the existing cumulative impacts analysis, it is not obvious that the Petitioners were even aware that the material they challenged was provided in a document for an earlier licensing proceeding. For failing to satisfy 10 C.F.R. § 2.309(f)(1)(vi), in that the Petitioners have failed to allege any deficiency in the material that is actually present, this contention is not admissible.

¹⁵ See SEIS § 4.11.5, “Cumulative Environmental Justice Impacts.”

¹⁶ 10 C.F.R. § 2.309(f)(1)(vi) (emphasis added).

Concurring Statement of Judge Gibson

I write separately to note that while I agree that the Commission's regulations require us to deny admission of Contention 5, I find the result unfortunate.

As the majority states, the categorization of the pressure monitoring system as not important to safety is part of the current licensing basis (CLB) for the Prairie Island ISFSI. NRC Regulations state that the CLB includes "the plant-specific design-basis information defined in 10 CFR 50.2 as documented in the most recent [FSAR]." ¹ "Design bases" are defined, in part, in 10 C.F.R. § 50.2 as "that information which identifies the specific functions to be performed by a structure, system, or component of a facility." ² Northern States' conclusion, in its FSAR, that the pressure monitoring system is "not important to safety" appears to be "information which identifies the specific functions to be performed" by an SSC. In other words, that determination is "design-basis information," which is, in turn, part of the CLB.

The NRC's Standard Review Plan for renewal of ISFSI licenses makes clear that the CLB defines the scope of license renewal. ³ It states that the scope of license renewal includes SSCs that "are classified as important to safety" or "are classified as *not* important to safety but, according to the licensing basis, their failure could prevent fulfillment of a function that is important to safety, or their failure as support SSCs could prevent fulfillment of a function that is important to safety." ⁴ Therefore, the scope of license renewal, at least according to NUREG-1927, is defined by the classifications of SSCs made by an applicant/licensee in its FSAR. While this conclusion seems to me to be legally correct, it is also deeply troubling.

Because the Commission has excluded issues relating to the CLB from the scope of license renewal, ⁵ and because the scope of a facility's CLB is defined largely by the contents of an applicant/licensee's FSAR, it appears that an applicant/licensee, by defining (at least in part) the scope of the CLB, can also define the scope of license renewal. This conclusion, while apparently demanded by NRC regulations, seems patently unfair to potential petitioners. The petitioner here, PIIC, simply wants to raise the claim that a component — although classified by Northern States as "not important to safety" — should instead be characterized as one that is in fact important to safety, and therefore should be included in an

¹ 10 C.F.R. § 54.3(a).

² *Id.* § 50.2.

³ NUREG-1927, "Standard Review Plan for Renewal of Spent Fuel Dry Cask Storage System Licenses and Certificates of Compliance, Final Report" (Mar. 2011).

⁴ *Id.* at 12.

⁵ See *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 117-18 (2006) (stating that "review of a license renewal application does not reopen issues relating to a plant's current licensing basis").

aging management program. This strikes me as a not unreasonable claim, and one that would likely benefit from an evidentiary hearing. However, PIIC is precluded from raising it because the determination that Northern States made in its FSAR has, in effect, removed it from the scope of license renewal.

While a petitioner presumably could file a request under 10 C.F.R. § 2.206 to suspend, modify, or revoke a license or could seek a regulation waiver under 10 C.F.R. § 2.335(b), these avenues are likely to be just as unavailing as the result that has been reached here. As has been rather convincingly pointed out elsewhere, section 2.206 petitions rarely, if ever, result in any meaningful action on the part of the NRC.⁶ And while section 2.335 allows petitioners to seek waiver of a regulation by demonstrating both “special circumstances” and that the regulation “would not serve the purposes for which [it] was adopted,”⁷ the Commission established a much higher (and in my estimation, nearly insurmountable) burden in *Millstone*.⁸ As a practical matter, then, these alternative remedies afford petitioners no meaningful relief.

While I agree with the result reached by the majority that current NRC regulations demand the result reached on Contention 5, I question whether it reflects good policy insofar as it effectively empowers applicants/licensees to define the scope of *their own* license renewal,⁹ and thus prevents petitioners from raising a large swath of issues in a license renewal proceeding (and anywhere else, really). For these reasons, I reluctantly concur with my colleagues in their decision to deny admission of Contention 5.

⁶ See *All Operating Boiling Water Reactor Licensees with Mark I and Mark II Containments*, LBP-12-14, 76 NRC 1, 12 (additional opinion of Judge Rosenthal) (2012).

⁷ 10 C.F.R. § 2.335(b).

⁸ See *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 559-60 (2005) (holding that a waiver should be granted only if “(i) the rule’s strict application ‘would not serve the purposes for which [it] was adopted’; (ii) the movant has alleged ‘special circumstances’ that were ‘not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived’; (iii) those circumstances are ‘unique’ to the facility rather than ‘common to a large class of facilities’; and (iv) a waiver of the regulation is necessary to reach a ‘significant safety problem.’” (citations omitted)).

⁹ It may be worth noting that the Staff did not oppose admitting this contention on the grounds that it “is currently reviewing the Applicant’s determination that the pressure monitoring system is not within the scope of the license renewal.” NRC Staff Answer at 18. Perhaps this is a recognition that too much has been ceded to its licensees.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alex S. Karlin, Chairman
Dr. Anthony J. Baratta
Nicholas G. Trikouros

In the Matter of

**Docket Nos. 50-361-LA
50-362-LA
(ASLBP No. 12-923-01-LA-BD01)**

**SOUTHERN CALIFORNIA
EDISON COMPANY
(San Onofre Nuclear Generating
Station, Units 2 and 3)**

December 21, 2012

The Board denies the petition to intervene and request for hearing regarding a license amendment request because petitioner has failed to proffer an admissible contention as required by 10 C.F.R. § 2.309(a). In these circumstances, the Board need not decide timeliness and standing.

RULES OF PRACTICE: CONTENTIONS (MATERIALITY)

The Commission's decision in *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349 (2001), compels the rejection of the contention challenging the "relocation" of various technical specifications (dealing with surveillance frequencies) from the license to certain licensee-controlled documents.

RULES OF PRACTICE: CONTENTIONS (MATERIALITY)

While the effect of "relocation" of technical specifications from the license to the licensee-controlled documents is to delete these as "technical specifications"

under 10 C.F.R. § 50.36, to authorize the licensee to unilaterally make future changes in the surveillance frequencies, and to deprive the public of the opportunity to scrutinize or challenge such future changes, *Millstone* holds that this alone does not give rise to an admissible contention. The Petitioner must also explain with specificity, particular safety or legal reasons why moving a specific requirement from the license to a licensee-controlled document would be of safety significance, i.e., why it is material under 10 C.F.R. § 2.309(f)(1)(iv).

RULES OF PRACTICE: CONTENTIONS (SCOPE OF PROCEEDING)

The scope of the hearing opportunity is limited to challenging the proposed license amendments or any health, safety, or environmental issues fairly raised by them. Contentions that attack provisions of the current license that are not being changed and that are not fairly related to the license amendment request are outside the scope and inadmissible under 10 C.F.R. § 2.309(f)(1)(iii).

MEMORANDUM AND ORDER **(Denial of Petition to Intervene and Request for Hearing)**

This case arises from an application submitted by Southern California Edison Company (SCE) to the U.S. Nuclear Regulatory Commission (NRC) seeking to amend the technical specifications contained in the licenses that govern the operation of SCE's two nuclear power reactors located near San Onofre, California.¹ These reactors are referred to as San Onofre Nuclear Generating Station (SONGS) Units 2 and 3. On October 17, 2012, an entity known as Citizens Oversight, Inc. challenged the proposed license amendment by filing a petition to intervene and request for hearing.²

For the reasons set forth below, we deny the petition to intervene and request for hearing.

I. BACKGROUND³

On July 29, 2011, SCE applied to NRC to change many of the "technical

¹ Southern California Edison, San Onofre Nuclear Generating Station, Units 2 and 3; Application and Amendment to Facility Operating License Involving Proposed No Significant Hazards Consideration Determination, 77 Fed. Reg. 49,463 (Aug. 16, 2012).

² Petition to Intervene and Request for Hearing by Citizens Oversight (Oct. 17, 2012) [Petition].

³ NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders" are set forth in 10 C.F.R. Part 2. Some of these regulations were amended on August 3, 2012. Amendments

(Continued)

specifications” set forth in the licenses governing SONGS Units 2 and 3. 77 Fed. Reg. at 49,464. The main thrust of the license amendment request was to conform the technical specifications in the license to a set of standardized technical specifications approved by the NRC Staff in a guidance document, NUREG-1432.⁴ *See id.* The license amendment request covered fifteen volumes and exceeded 3000 pages.⁵ Some of the requested changes would establish “more restrictive” technical specifications and others would establish “less restrictive” technical specifications.⁶ *Id.* In addition, SCE asked NRC for permission to “relocate” many of these technical specifications by deleting them from the actual NRC licenses and placing them in “licensee-controlled documents.”⁷ *Id.* at 49,465. As set forth below, Citizens Oversight’s primary challenge is to the proposed “relocation.”

On August 16, 2012, the NRC published a notice of opportunity to request a hearing regarding the proposed amendments to the SONGS licenses in the *Federal Register*. *Id.* at 49,463.⁸ The deadline to file a request for hearing was October 15, 2012. *Id.* at 49,463.

On October 17, 2012, Citizens Oversight, represented *pro se* by Mr. Raymond Lutz, filed its petition to intervene and request for a hearing. Petition at 1, 17. The petition contains three contentions. *Id.* at 5-16. Among other things, it asserts that “removing surveillance frequencies from the operating license document obfuscates the minimum requirements, may introduce human error, and limits review by the public.” *Id.* at 5.

to Adjudicatory Process Rules and Related Requirements, 77 Fed. Reg. 46,562 (Aug. 3, 2012). These amendments became effective on September 4, 2012, and are applicable to the disputes raised in this adjudication. *Id.* All citations in this ruling are to the regulations as amended on August 3, 2012.

⁴ The full title of NUREG-1432 is “Standard Technical Specifications — Combustion Engineering Plants.”

⁵ *Id.*; Letter from Douglas R. Bauder, SCE, to NRC, License Amendment Requests (LAR) 260 and 246 Technical Specifications Conversion to NUREG-1432, Rev. 3.0 Plus Selected Approved Travelers (July 29, 2011).

⁶ The proposed “less restrictive” changes covered several categories including the “Deletion of Surveillance Requirement[s],” the “Deletion of [Certain] Reporting Requirements,” the “Relaxation of Surveillance Requirement Acceptance Criteria,” and the “Relaxation of Surveillance Frequency.” 77 Fed. Reg. at 49,464. Citizens Oversight did not challenge these proposed “less restrictive” changes.

⁷ In addition, SCE proposes to adopt a “Surveillance Frequency Control Program” (SFCP), which, while not actually containing the details of the surveillance frequencies, would govern them and how they may be modified. The SFCP would be incorporated into the license technical specifications. *See* License Amendment Request, Enclosure 3, at 2; *see also* TSTF-425-A, Rev. 3, “Relocate Surveillance Frequencies to Licensee Control — RITSTF Initiative 5b”; NEI-04-10, Rev. 1, “Risk-Informed Technical Specifications Initiative 5B, Risk-Informed Method for Control of Surveillance Frequencies.”

⁸ This also served as notice that the NRC Staff proposed a “no significant hazards consideration determination” with regard to SCE’s proposed amendments. 77 Fed. Reg. at 49,471.

On November 9, 2012, the NRC Staff filed an answer, asserting that the petition was unjustifiably untimely, that Citizens Oversight had failed to establish that it had standing, and that Citizens Oversight had failed to show that any of the contentions were admissible under 10 C.F.R. § 2.309(f)(1).⁹ On November 13, 2012, SCE filed its answer asserting the same three arguments.¹⁰ On November 20, 2012, Citizens Oversight filed its reply.¹¹

Meanwhile, on October 25, 2012, this Board was established to preside over this adjudication,¹² and, on December 5, 2012, we heard oral argument from the parties on the issues raised in the pleadings. The oral argument was conducted in the Board's hearing room in Rockville, Maryland, and was webcast to the public. Order (Setting Oral Argument) (Nov. 20, 2012) (unpublished). Counsel for SCE and the NRC Staff participated in person. Tr. at 3. Mr. Lutz participated by video conference from San Diego, California. *Id.*

NRC regulations state that, in order for a request for hearing and petition to intervene to be granted, a petitioner must (1) establish that it has standing and (2) propose at least one "admissible" contention. 10 C.F.R. § 2.309(a). In addition, the petitioner must either file its petition by the date specified in the *Federal Register* notice or show "good cause" for filing after the deadline. 10 C.F.R. § 2.309(b)-(c).¹³ All three — timeliness, standing, and contention admissibility — must be met.

As set forth below, we conclude that Citizens Oversight has failed to proffer a contention that is admissible under the criteria of 10 C.F.R. § 2.309(f)(1)(i)-(vi); therefore, its petition must be denied. In these circumstances, we need not decide the other two issues — timeliness and standing.

⁹ NRC Staff's Answer to Petition to Intervene and Request for a Hearing by Citizens Oversight (Nov. 9, 2012) [Staff Answer].

¹⁰ Southern California Edison Company's Answer Opposing Petition to Intervene and Request for Hearing by Citizens Oversight (Nov. 13, 2012) [SCE Answer].

¹¹ Citizens Oversight's Answer to Submissions by NRC Staff and Southern California Edison Opposing the Petition to Intervene and Request for a Hearing by Citizens Oversight. (Nov. 16, 2012) [Reply].

¹² Southern California Edison Company; Establishment of Atomic Safety and Licensing Board, 77 Fed. Reg. 65,909 (Oct. 31, 2012).

¹³ A petitioner can justify filing a petition after the initial deadline has expired in one of two ways. First, the petitioner can show that the contention is based on new information (i.e., material information that was not previously available) and that the petition was filed promptly after the new information became available. See 10 C.F.R. § 2.309(c)(1)(i)-(iii); 77 Fed. Reg. at 46,591. Alternatively, the petitioner can justify missing the filing deadline by showing that the delay was caused by factors such as a weather event or unexpected health issues. See 10 C.F.R. §§ 2.309(c)(2), 2.307; 77 Fed. Reg. at 46,571, 46,591.

II. LEGAL STANDARDS GOVERNING CONTENTION ADMISSIBILITY¹⁴

To be admissible, a contention must satisfy six basic requirements set forth in 10 C.F.R. § 2.309(f)(1)(i)-(vi). These can be summarized as follows:

- (i) *Specificity*: “Provide a specific statement of the issue of law or fact to be raised or controverted”;
- (ii) *Brief Explanation*: “Provide a brief explanation of the basis for the contention”;
- (iii) *Within Scope*: “Demonstrate that the issue raised in the contention is within the scope of the proceeding”;
- (iv) *Materiality*: “Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding”;
- (v) *Concise Statement of Alleged Facts or Expert Opinion*: “Provide a concise statement of the alleged facts or expert opinions which support the requestor’s/petitioner’s position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue”; and
- (vi) *Genuine Dispute*: “[P]rovide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant’s environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner’s belief.”

10 C.F.R. § 2.309(f)(1)(i)-(vi). Failure to comply with any of these requirements is grounds for not admitting a contention.¹⁵

The purpose of 10 C.F.R. § 2.309(f)(1) is to “focus litigation on concrete issues and result in a clearer and more focused record for decision.” Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004). The Commission

¹⁴ The August 3, 2012, amendments to the Part 2 regulations did not change the six basic requirements of 10 C.F.R. § 2.309(f)(1)(i)-(vi).

¹⁵ *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 636 (2004).

has stated that “the hearing process . . . [is only intended for] issue[s] that [are] appropriate for, and susceptible to, resolution in an NRC hearing.” *Id.* “While a board may view a petitioner’s supporting information in a light favorable to the petitioner . . . the petitioner (not the board) [is required] to supply all of the required elements for a valid intervention petition.”¹⁶ The rules on contention admissibility are “strict by design.”¹⁷

III. ANALYSIS AND RULING ON CONTENTION 1

A. Statement of Contention 1

Contention 1 reads as follows:

Petitioner contends that removing surveillance frequencies from the operating license document obfuscates the minimum requirements, may introduce human error, and limits review by the public.

Petition at 5.

B. Arguments Regarding Contention 1

The current licenses governing SONGS Units 2 and 3 specify that SCE must conduct tests, calibrations, or inspections to assure the necessary quality of systems and components is maintained and that facility operation will be within safety limits. In particular, provisions in the current licenses specify how frequently SCE must conduct these inspections. These are referred to as “surveillance frequency” technical specifications. SCE is requesting that hundreds of these surveillance frequency technical specification provisions be deleted from the licenses and inserted into separate documents. Tr. at 24, 49; 77 Fed. Reg. at 49,465.

Citizens Oversight objects to relocating the surveillance frequency technical specifications from the NRC-issued license to the SCE-controlled documents. Petition at 5-6. It asserts that “moving surveillance frequency specifications completely out of the Technical Specification document makes it difficult for

¹⁶ *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 260 (2009).

¹⁷ *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-08-17, 68 NRC 231, 233 (2008); *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 213 (2003); *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001); see *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334-35 (1999).

the public and other organizations to review the surveillance frequencies in use and to provide useful feedback to correct assumptions made by operators.” *Id.* at 6. Citizens Oversight argues that if the surveillance frequency provisions are moved into SCE-controlled documents, then SCE will have “free rein” to amend these provisions. *Id.* at 7. Citizens Oversight believes that SCE “will opt to decrease the surveillance frequencies . . . to reduce cost while ignoring the fact that many surveillances will be omitted or incorrectly performed by leaving out necessary steps.” *Id.* at 6. Citizens Oversight states that “it is very difficult to conceive of all failure scenarios” and that there is a “likelihood that risk scenarios will underestimate the risk, and therefore allow surveillances to be improperly reduced in frequency.” *Id.* at 7. Citizens Oversight asserts that “moving the surveillance frequencies to a secondary document obfuscates the requirements for the licensee, and increases the complexity of the surveillance program.” *Id.* This, it says, decreases the safety of the program and “makes it more difficult for the surveillance frequencies to be understood by the public and outside technical experts who are attempting to perform needed review of operational safety.” *Id.*

The central thrust of Contention 1 is the following:

The petitioner asserts that allowing the licensee free-rein to reduce the surveillance frequencies so as to reduce cost will not improve safety at the plant, and therefore, objects to the relocation of these to a licensee-controlled document. These specifications must be provided in the main license document so as to provide a single place where all information about the license can be obtained.

Petition at 7-8.

Citizens Oversight adds that “surveillance frequencies of critical operational parameters . . . are far too low (infrequent) to allow operators to — through those surveillances — catch an ongoing failure of the plant.” *Id.* at 8. As an example, Citizens Oversight says that “checking leakage from the steam generators only once every 72 hours is ridiculously infrequent,” citing to the “steam generator failure on January 31, 2012, when the leak expanded 40% . . . within an hour.” *Id.* Citizens Oversight states that it is concerned about “the safety implications implied by ignoring these critical parameters for the time intervals specified.” *Id.* at 9.

SCE and the NRC Staff oppose the admission of Contention 1. First, SCE and the NRC Staff state that the nuclear industry thinks that standardizing the technical specifications for nuclear reactors of a similar design, including relocating surveillance frequency technical specifications from the license to

licensee-controlled documents, is an excellent idea.¹⁸ SCE Answer at 19; Staff Answer at 2.

Second, SCE and the NRC Staff assert that the Commission agrees with the principle of standardization, including standardizing the relocation of surveillance frequencies from the license to the licensee-controlled documents. SCE Answer at 19-21; Staff Answer at 2. In this regard, they point to the NRC's "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors," 58 Fed. Reg. 39,132 (July 22, 1993), and to NRC's 1992 guidance document — NUREG-1432, "Standard Technical Specifications, Combustion Engineering Plants." SCE Answer at 3, 21; Staff Answer at 2. And, most specifically, SCE and the NRC Staff point to NEI-04-10 and to the NRC's "Notice of Availability of Technical Specification Improvement to Relocate Surveillance Frequencies to Licensee Control — Risk-Informed Technical Specification Task Force (RITSTF) Initiative 5b, Technical Specification Task Force — 425, Revision 3," 74 Fed. Reg. 31,996 (July 6, 2009). SCE Answer at 19 & n.87, 24; Staff Answer at 15 n.78, 19.

Third, SCE points out that many other reactor licensees have, with NRC Staff approval, relocated some of their surveillance frequency technical specifications from the license to the licensee-controlled documents. SCE Answer at 21-22.

Fourth, turning specifically to the contention admissibility criteria, both SCE and the NRC Staff argue that Contention 1 does not raise a material issue, as required by 10 C.F.R. § 2.309(f)(1)(iv). SCE Answer at 2, 20-22; Staff Answer at 17. The NRC Staff says that Citizens Oversight fails to cite any legal requirement that mandates that the surveillance frequency provisions must stay in the license so that the public will have the opportunity to oversee any changes to them. Staff Answer at 17. The Staff rejects Citizens Oversight's "claim that SCE will have 'free rein to reduce the surveillance frequencies'" on the ground that 10 C.F.R. § 50.59 would apply to any such changes and would prevent SCE from making "any change that results in a substantial change from previous analyses or results in a 'more than minimal' increase in risk." *Id.* at 20. The Staff says that we cannot assume that SCE will violate 10 C.F.R. § 50.59.¹⁹ *Id.* at 21.

¹⁸ According to SCE, nuclear industry groups that promote such standardization include (1) the "Technical Specification Task Force" (TSTF), (2) the "Risk Informed Technical Specification Task Force" (RITSTF), and (3) the Nuclear Energy Institute (NEI). SCE Answer at 19. Each has apparently issued reports endorsing the relocation of surveillance frequencies to licensee-controlled documents. *See* TSTF-425-A, Rev. 3, "Relocate Surveillance Frequencies to Licensee Control — RITSTF Initiative 5b"; NEI-04-10, Rev. 1 "Risk-Informed Technical Specifications Initiative 5B, Risk-Informed Method for Control of Surveillance Frequencies"; *see also* SCE Answer at 19.

¹⁹ In contrast, during oral argument, SCE and the NRC Staff asserted that 10 C.F.R. § 50.59 does *not* apply to subsequent changes SCE might make to the surveillance frequencies in the licensee-controlled

(Continued)

SCE's argument that Contention 1 fails the materiality criterion of 10 C.F.R. § 2.309(f)(1)(iv) relies on *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349 (2001) (*Millstone*). SCE Answer at 21. SCE asserts that, "[i]n *Millstone*, the Commission upheld rejection of a contention challenging the removal of details from the licensee's Technical Specifications to a licensee-controlled document." *Id.* SCE says that Citizens Oversight likewise has "provided no safety or legal reason for rejecting" the requested transfer of the surveillance frequencies from the license to a licensee-controlled document and therefore Contention 1 must fail. *Id.* at 22.

With regard to the final component of Contention 1 — Citizens Oversight's assertion that "checking leakage from the steam generators only once every 72 hours is ridiculously infrequent," Petition at 8 — SCE and the NRC Staff argue that this challenge is not within the scope of the license amendment proceeding as required by 10 C.F.R. § 2.309(f)(1)(iii). SCE Answer at 25; Staff Answer at 22. They assert that the 72-hour surveillance frequency for steam generator leakage is in the current license and it will remain unchanged in the amended license. SCE Answer at 23; Staff Answer at 22-23. Therefore, SCE and the NRC Staff conclude that this part of Contention 1 is inadmissible as not within the scope of the proposed license amendment.²⁰

In its reply brief, Citizens Oversight states that "the key issue [raised by Contention 1] is that these [frequency] specifications will no longer be subject to review according to the license amendment process." Reply at 11. Citizens Oversight states:

The way the technical specifications are currently written, changing a surveillance frequency will require a license amendment. If these surveillance frequencies are relocated to the licensee-controlled document, they can be changed without an LAR, without notice in the *Federal Register* and without any opportunity for the public to make comments, intervene, or request a hearing.

Id. at 12.

C. Analysis and Ruling on Admissibility of Contention 1

We conclude that the Commission's *Millstone* decision compels the rejection

documents. Tr. at 52-61. Instead, SCE argued that NEI-04-10, not 10 C.F.R. § 50.59, would apply if SCE subsequently sought to change the surveillance frequencies set forth in the SFCP document. Tr. at 52-56. The NRC Staff agreed. Tr. at 60-61. SCE argued that NEI-04-10 provides more stringent requirements for changing a surveillance frequency. Tr. at 52-54.

²⁰ SCE and the NRC Staff raise a number of other arguments against the admission of Contention 1. These do not need to be enumerated here.

of Contention 1 on the ground that it fails to raise a material issue and is therefore inadmissible under 10 C.F.R. § 2.309(f)(1)(iv). The “key issue” raised by Contention 1 is that “relocating”²¹ the surveillance frequency requirements from the license to a licensee-controlled document is improper because it will deprive the public of any opportunity to scrutinize or challenge further changes to the surveillance frequencies. It is clear to us that Citizens Oversight is correct on one point — If SCE’s license amendment request is granted, then SCE will be able to make future changes to the surveillance frequencies with no opportunity for public scrutiny and oversight. *See* Tr. at 49-50 (SCE), 89 (NRC Staff). Indeed SCE and the NRC Staff state that SCE will not even need to inform the NRC Staff of such changes.²² *See* Tr. at 74-75 (SCE), 90 (NRC Staff). But it is equally clear to us that *Millstone* held that such a “relocation” is legal and unobjectionable.

Millstone provides a useful overview of the evolution of NRC’s policy for determining which provisions need to be included in a license, and which need not. Under section 182 of the Atomic Energy Act, 42 U.S.C. § 2232, every license to operate a nuclear power reactor “must contain a list of technical specifications necessary for adequate protection of public health and safety.” *Millstone*, CLI-01-24, 54 NRC at 351. “Technical specifications must include information on the amount, kind, and source of special nuclear material; the place of use; and the particular characteristics of the facility.” *Id.* (citing 42 U.S.C. § 2232). However, the AEA “leaves it up to the Commission to determine, and to prescribe by rule or regulation, what additional information should be included

²¹ It is somewhat misleading to say that the technical specifications have been “relocated.” “Technical Specifications” are those technical requirements that are incorporated in an NRC license. *See* 10 C.F.R. §§ 50.36, 50.59(c)(1)(i). If the technical requirement is deleted from the license and placed in a licensee-controlled document, then it is no longer a “technical specification.” *See* Tr. at 47 (SCE), 87 (NRC Staff). Instead, it becomes a “written commitment” by the licensee. *See id.* at 49. Thus, rather than merely being “relocated,” the technical specification is being eliminated and replaced by a qualitatively different provision, a “written commitment.” Compliance with a technical specification is *required* and *directly enforceable* by the Commission, whereas compliance with written commitments contained in licensee-controlled documents is not. *See* Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, 58 Fed. Reg. at 39,138 (“Compliance with Technical Specifications is *required* by the Commission, and adherence to commitments contained in licensee-controlled documents is *expected*.” (emphasis added)). We note, however, that an NRC Enforcement Manual specifies that a failure to fulfill a written commitment can be the basis for a Notice of Deviation. *See* NRC Enforcement Manual Rev. 7 (Oct. 1, 2007) at 3-26. Also, SCE postured that a change to the frequency that did not use the NEI-04-10 process would be a violation of Criterion V, Appendix B, of 10 C.F.R. Part 50. *See* Tr. at 61-63. Criterion V, Appendix B states, in part, “Activities affecting quality shall be prescribed by documented instructions [or] procedures . . . and shall be accomplished in accordance with these instructions [or] procedures.”

²² The Board finds it odd that a procedure that accomplishes much the same as the process in 10 C.F.R. § 50.59 does not have a formal reporting requirement. We suggest that the Staff consider adding a biannual requirement to report changes to the frequency of inspections and tests similar to the reporting requirement of changes done under 10 C.F.R. § 50.59.

in technical specifications to ensure public health and safety.” *Id.* NRC’s original rule governing technical specifications, 10 C.F.R. § 50.36, was promulgated in 1968 and lacked well-defined criteria as to what requirements need to be in the license (i.e., need to be a “technical specification”) and what provisions need not be in the license. *Id.* at 351-52. As a result, the number of items included in the technical specifications “mushroomed.” *Id.* at 352. In 1993, NRC issued a Final Policy Statement on Technical Specifications pushing the standardization of technical specifications and their reduction in number. 58 Fed. Reg. 39,132. In 1995, the NRC revised 10 C.F.R. § 50.36 and established clearer criteria as to what constitutes a technical specification that must be in the license. *See* Technical Specifications, 60 Fed. Reg. 36,953, 36,954 (July 19, 1995).

As part of its technical specifications initiative, the NRC revised section 50.36, which now identifies criteria to be used in determining what items must be included in technical specifications. If a procedural or other requirement meets any one of the criteria, it must be retained in the technical specifications. Technical specifications that do not meet any of the criteria may be transferred to licensee-controlled documents. . . . Thus, the agency policy is to prune technical specifications of voluminous details that are relatively less significant, and thereby focus licensee and plant operator attention on the most significant technical concerns.

Millstone, CLI-01-24, 54 NRC at 352 (citations and internal quotation marks omitted).

It was in this context that the petitioners in the *Millstone* case filed their sole contention, challenging a proposed license amendment that would “eliminate from the technical specifications numerous detailed procedures for monitoring routine radioactive releases” and transfer them to a licensee-controlled document. *Id.* at 353. As a consequence of the proposed transfer, the licensee would be able to make future changes to the radiation monitoring procedures without going through another license amendment. *Id.* at 355. The Commission noted that the *Millstone* petitioners “rely . . . on their loss of future opportunities to challenge — by adjudicatory intervention — licensee-initiated changes in the low-level effluent monitoring details.” *Id.* at 359. “The Petitioners suggest that without full public participation, effluent monitoring ‘may become unduly lax’ and ‘fail [] to pick up [a] release.’” *Id.*

The Commission affirmed the board’s rejection of the contention in the *Millstone* case. “[T]he allegations surely fall short of an admissible contention, for they fail to offer any specific explanation, factual or legal, for why the consequences they fear will occur if these particular technical specifications are transferred to the [licensee-controlled document].” *Id.* at 359. The Commission acknowledged that “almost every item originally contained in technical specifications has some conceivable connection to safety,” but reasoned that “this general premise is

insufficient, by itself, as a ground for intervention.” *Id.* at 360. The Commission noted that the “Petitioners’ theory essentially means that *no* item could ever be transferred from the technical specifications because one could always argue that there is a potential, however remote, of a greater possibility of injury if the item in the future can be changed without a full license amendment.” *Id.* The Commission stated, in words apropos here:

This license amendment proceeding offers the Petitioners the opportunity to come forward and state why the nature of these effluent procedures at issue here is such that they should not be removed from the technical specifications. The Petitioners have not done so. Nowhere, for instance . . . do the Petitioners even refer to the section 50.36 criteria that govern which technical specifications must be retained and which can be relocated to licensee-controlled documents. The license application, in some detail, applies these criteria to the proposed changes to conclude that the procedural details relocated by these license amendments can be taken out of the technical specifications. The Petitioners do not even attempt to rebut the licensee’s analyses. Our contention-pleading rule, however, calls on intervention petitioners to “include references to the specific portions of the application . . . that the petitioner disputes and the supporting reasons for each dispute.”

Id. at 361.

The *Millstone* decision is directly on point here and compels the rejection of Contention 1. *Millstone* holds that “relocation,” and the loss of future oversight and hearing opportunities that goes with it, does not give rise to an admissible contention. Instead, the petitioner must “explain, with specificity, particular safety or legal reasons” why moving a requirement from the license into a licensee-controlled document would be improper, i.e., why it is material. *Id.* at 359-60. This Citizens Oversight has not done. Citizens Oversight has not provided the minimal factual or legal basis to suggest either (a) that the surveillance frequencies in question are of such safety significance that they must remain in the license as “technical specifications,” or (b) that, because of some particular aspect of the other conditions in the SCE license or some alleged deficiencies in the SCE surveillance program, these surveillance frequencies must be retained in the SCE license. *See id.* at 360.

On this basis, we hold that Contention 1, with the exception of the 72-hour provision discussed immediately below, is inadmissible because it fails to raise a material issue as required by 10 C.F.R. § 2.309(f)(1)(iv).²³

²³ Given this conclusion, we do not need to decide whether Contention 1 satisfies the other criteria of 10 C.F.R. § 2.309(f)(1)(i)-(vi). But we do reject the suggestions by SCE and the NRC Staff that the “relocation” of these surveillance frequency requirements is necessarily legal because (a) the nuclear industry endorses this practice, (b) NRC policy endorses it, or (c) everybody else is doing it. Nor do

(Continued)

We turn now to the one portion of Contention 1 that challenges a specific aspect of the SCE license — the assertion that “checking leakage from the steam generators only once every 72 hours is ridiculously infrequent.” Petition at 8. Citizens Oversight is concerned about “the safety implications implied by ignoring these critical parameters for the time intervals specified.” *Id.* at 9.

Although the 72-hour portion of Contention 1 provides some needed specificity, it fails because SCE’s license amendment request does not ask for a change to the current 72-hour provision. Section 2.309(f)(1)(iii) of 10 C.F.R. specifies that, in order to be admissible, a contention must raise issues that are “within the scope” of the proceeding. The hearing notice specifies that SCE is requesting certain changes to its technical specifications and states, “Contentions shall be limited to matters within the scope of the amendment under consideration.” 77 Fed. Reg. at 49,471. The Commission has stated that “the scope of any hearing should include the proposed license amendments, and any health, safety or environmental issues fairly raised by them.”²⁴ The 72-hour portion of Contention 1 challenges a provision that is in the current license, that is not being changed, and that is not part of the requested license amendment. Therefore, this part of Contention 1 is not within the scope of this proceeding and is inadmissible under 10 C.F.R. § 2.309(f)(1)(iii).

IV. ANALYSIS AND RULING ON CONTENTION 2

A. Statement of Contention 2

Contention 2 asserts that “there are a number of mistakes and other problems” in the license amendment request, Petition at 9, and goes on to articulate five specific concerns or issues that we will denominate as Contentions 2A through 2E. These can be summarized as follows:

Contention 2A: Citizens Oversight objects to “the proposed change . . . to reduce [the steam generator] level from 25% to 20%.” *Id.* Citizens Oversight says that this “loosening of the licensee requirement . . . puts the plant in severe danger.” *Id.*

Contention 2B: Citizens Oversight complains that “[t]he operational license

we endorse their argument that henceforth 10 C.F.R. § 50.59 does not apply to subsequent changes SCE might want to make to the surveillance frequencies in the licensee-controlled documents. The degree to which section 50.59 applies would, it seems to us, be controlled not by how the modification is labeled (i.e., as a change to a licensee-controlled document) but by whether the substance of the change brings that revision within the confines of section 50.59.

²⁴ *Commonwealth Edison Co.* (Dresden Nuclear Power Station, Unit 1), CLI-81-25, 14 NRC 616, 624 (1981).

has a severe internal inconsistency” because at one point it says that “there can be no pressure boundary leakage at all, due to material degradation” whereas at another spot the license “allows significant leakage to occur, up to 150 gallons per day through any one [steam generator].” *Id.* at 10-11 (emphasis omitted). Citizens Oversight then suggests some revised language to cure this ostensible inconsistency. *Id.* at 13.

Contention 2C: Citizens Oversight “objects to [sic] change to the license which incorrectly allows a single Atmospheric Dump Valve.” *Id.* Citizens Oversight “contends this change is unsafe.” *Id.* at 14.

Contention 2D: Citizens Oversight “contends the exclusion area specified in the technical specifications is insufficiently protected.” *Id.* It notes that Interstate Highway 5 penetrates the exclusion area and asserts that SCE has failed to provide “appropriate and effective arrangements . . . to control traffic on the highway” as required by 10 C.F.R. § 50.2. *Id.* at 14-15. In the same vein, Citizens Oversight complains that SCE must take appropriate measures to limit public access to the exclusion area on the “beach next to the seawall.” *Id.* at 15.

Contention 2E: Citizens Oversight asserts that the two-sentence paragraph found in Attachment 1, Volume 7, Chapter 3.4 of the license amendment request that deals with tube repair and plugging “doesn’t make much sense.” *Id.* at 16. The entire text and discussion of Contention 2E reads as follows:

Attachment 1 Vol 7 (Chapter 3.4 Reactor Coolant System (RCS)) (ADAMS ML11251A100), Page 510 — This paragraph doesn’t make much sense. This is probably an artifact of the change of eliminating the option to repair steam generator tubes, which is not an option for this plant. Why would any tube that satisfies the repair criteria not be plugged. Plus “Repair Criteria” should be “Plug Criteria,” and if a tube satisfies the repair criteria but is not plugged, [sic] probably does not have tube integrity.

During an SG inspection, any inspected tube that satisfies the Steam Generator Program repair criteria is removed from service by plugging. If a tube was determined to satisfy the repair criteria but was not plugged, the tube may still have tube integrity.

Petitioner suggests that the second sentence of this paragraph be deleted.

Id. at 16.

B. Arguments Regarding Contention 2

SCE and the NRC Staff oppose the admission of Contentions 2A through 2D on the ground that they are outside of the scope of the license amendment request

because the provisions about which Citizens Oversight complains are part of SCE's current technical specifications and would not be changed in the proposed license amendment.²⁵ SCE Answer at 28-39; Staff Answer at 23-32.

With regard to Contention 2A, the Staff states, "The current technical specifications already list the steam generator level reactor trip as 20% and the LAR does not change this requirement." Staff Answer at 23. SCE agrees, stating that it "has not changed the steam generator level from 25% to 20%; the value of 20% is part of the current licensing basis." SCE Answer at 29.

Likewise, with regard to Contention 2B, the Staff and SCE both agree that there is nothing in the license amendment request that changes the pressure boundary leakage clause about which Citizens Oversight complains. SCE Answer at 30-31; Staff Answer at 25. "The requirements challenged by [Citizens Oversight] already exist in the SONGS [current technical specifications], and SCE is not proposing to modify them in any manner." SCE Answer at 30-31. SCE and the NRC Staff also argue that the two pressure boundary leakage provisions cited by Citizens Oversight (one prohibiting pressure boundary leakage excluding leakage through the steam generator and the other dealing with primary to secondary leakage through the steam generators) are not inconsistent. *Id.* at 31-33; Staff Answer at 26.

SCE and the NRC Staff make the same points with regard to Contentions 2C and 2D. They assert that these contentions are outside of the scope of this proceeding because the provisions complained of by Citizens Oversight are not being changed. They state that the license amendment request does not ask to change the current Atmospheric Dump Valve license provision. SCE Answer at 35; Staff Answer at 27. Likewise the proposed license amendment seeks no change in the current license provisions related to the exclusion area. SCE Answer at 36; Staff Answer at 29.

With regard to Contention 2E, SCE and the NRC Staff raise several other arguments.²⁶ SCE asserts that Citizens Oversight misunderstands the tube repair/plugging provision, which is the subject of Contention 2E, and says that the contention is not admissible because Citizens Oversight has failed to demonstrate a genuine dispute with regard to this provision, contrary to 10 C.F.R. § 2.309(f)(1)(vi). SCE Answer at 38. SCE also says Contention 2E is not admissible because Citizens Oversight has failed to provide "alleged facts or expert opinions which support the requestor's/petitioner's position on the issue" contrary to 10 C.F.R. § 2.309(f)(1)(v). *Id.* at 38-39. The NRC Staff asserts that Citizens Oversight has misread the two sentences in question because it has failed

²⁵ SCE and the NRC Staff assert several other grounds on which Contentions 2A through 2D are not admissible. We need not review them here.

²⁶ Neither SCE nor the NRC Staff assert that the tube repair/plugging provision complained of in Contention 2E is part of the current licensing basis of SONGS Units 2 or 3.

to understand the definition of “SG performance criteria . . . elaborate[s] and explain[s] the sentence which Petitioner found confusing.” Staff Answer at 32.

C. Analysis and Ruling on Admissibility of Contention 2

For the reasons stated in section IV.B, the Board concludes that Contentions 2A through 2D are not admissible because they attack provisions of SCE’s current license, provisions that are not the subject of SCE’s license amendment request.²⁷ Thus, these contentions are outside the scope of this proceeding. While Citizens Oversight may consider filing a petition pursuant to 10 C.F.R. § 2.206 requesting that the NRC Executive Director for Operations change these provisions, Contentions 2A through 2D are not admissible here.

Contention 2E consists mainly of several conclusory editorial comments and a suggested sentence deletion. It states the “paragraph doesn’t make much sense,” supposes that this is due to some artifact in the change process, asks a hypothetical question, and then suggests that the second sentence in the two sentence quoted paragraph be deleted. Petition at 16. We do not understand Citizens Oversight’s point, and we have difficulty conceiving what would be litigated if Contention 2E were admitted and we were to hold an evidentiary hearing on it. But, basically, we find that Citizens Oversight has not provided us with sufficient information to assess whether there is a genuine dispute here. *See* 10 C.F.R. § 2.309(f)(1)(vi). In addition, Contention 2E is not admissible because, among other things, it fails to provide “alleged facts or expert opinion which support” Citizens Oversight’s position, as required by 10 C.F.R. § 2.309(f)(1)(v).

V. ANALYSIS AND RULING ON CONTENTION 3

A. Statement of Contention 3

The following is the entire statement and discussion of Contention 3 as found in Citizens Oversight’s petition:

²⁷ The fundamental point is that SCE is not asking to change the license provisions challenged in Contentions 2A through 2D. The source of Citizens Oversight’s confusion seems to be as follows: The current license specifies, for example, that steam generator reactor trip level is 20%. Meanwhile, SCE is proposing to standardize its technical specifications to conform, generally, with a generic/standardized document referred to as the “Improved Standard Technical Specifications” (ISTS) based on NUREG-1432. But the ISTS states that the steam generator reactor trip level is 25%. In order to *keep* the level at the 20% contained in the *current* license, SCE is asking to adopt the ISTS, except that the ISTS value of 25% should be changed to be 20%. In short, it is NOT asking for a change to the current technical specification; it is asking for a change to the generic/standardized technical specification document that will keep technical specifications at the same level specified in the current SCE licenses. *See* Tr. at 103-06.

Petitioner contends that the licensee may attempt to claim that the current LAR also applies to the recent request by licensee to operate SONGS Unit 2 at reduced power output (70%) to avoid fluid-elastic instability and excessive steam velocity that resulted from design changes to the steam generators during the steam generator replacement project. The matter of operating Unit 2 or Unit 3 after the emergency shutdown on January 31, 2012, and after the discovery of severe steam generator tube wear is distinct from the changes proposed in the current LAR and the scope of the LAR must not be allowed to encompass those very important concerns. Petitioner furthermore contends that a new LAR must be processed to allow the plant to operate in a reduced-power configuration so that the NRC and the public can review their proposal in detail.

Petition at 16.

B. Arguments Regarding Contention 3

SCE objects to Contention 3 on almost every conceivable ground. It says that this contention is “outside the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii); not material, contrary to 10 C.F.R. § 2.309(f)(1)(iv); not adequately supported, contrary to 10 C.F.R. § 2.309(f)(1)(v); and does not raise a genuine dispute, contrary to 10 C.F.R. § 2.309(f)(1)(vi).” SCE Answer at 39. If true, any one of these defects would be fatal.

The NRC Staff agrees, asserting that Contention 3 fails to raise issues that are within the scope of this license amendment proceeding, that Contention 3 is not material to the proceeding, and that Citizens Oversight has failed to provide sufficient information to support the contention, in violation of 10 C.F.R. §§ 2.309(f)(1)(iii), (iv), (v), and (vi), respectively. Staff Answer at 33. The Staff adds that,

Although the proposed restart of SONGS Unit 2 is not an appropriate inquiry for this proceeding, [Citizens Oversight] is not without remedy. If SCE ultimately submits a license amendment to support restart, [Citizens Oversight] will have an opportunity to file a petition to intervene on the amendment at that time.

Id. at 33-34 (citing 42 U.S.C. § 2239(a)).

In its reply, Citizens Oversight acknowledges that Contention 3 “does not raise issues within the LAR request,” but asserts that it “does raise issues regarding the LAR as a whole. It is a contention about how the LAR is processed with respect to the potential need for a subsequent LAR to allow operation of the plant at a ‘partial power level,’ which is a MODE that is not defined in the license.” Reply at 23.

C. Analysis and Ruling on Admissibility of Contention 3

The Board concludes that Contention 3, contrary 10 C.F.R. § 2.309(f)(1)(iii), fails to raise issues that are within the scope of SCE's current license amendment request and therefore is not admissible. The current license amendment request, filed on July 29, 2011, focuses on various changes to the technical specifications governing the operation of SONGS Units 2 and 3. In contrast, Contention 3 focuses on the "matter of operating Unit 2 or Unit 3 after the emergency shutdown on January 31, 2012," which Citizens Oversight says is "distinct from the changes proposed in the current LAR." Petition at 16. Contention 3 states that "a new LAR must be processed to allow the plant to operate in a reduced-power configuration so that the NRC and the public can review their proposal in detail." *Id.*

It is not the province of this Board to determine whether the confirmatory action letter that the NRC Staff issued to SCE in March 2012 is a de facto license amendment²⁸ or whether the restart of SONGS Unit 2 or Unit 3 requires a license amendment.²⁹ Nor do we put much stock in the Staff's reassurance that "[i]f SCE ultimately submits a license amendment to support restart [*then* Citizens Oversight] will have an opportunity to file a petition to intervene on the amendment at that time." Staff Answer at 33. There is no reason to think that SCE plans to submit a license amendment request.

What we do know is that Contention 3 is not within the scope of SCE's license amendment request and is therefore not admissible.

VI. CONCLUSION AND ORDER

For the foregoing reasons, the request for hearing and petition to intervene filed by Citizens Oversight is denied.³⁰

²⁸ This appears to be an issue confronting an Atomic Safety and Licensing Board that was recently established pursuant to CLI-12-20, 76 NRC 437 (2012). *See* Southern California Edison Company; Establishment of Atomic Safety and Licensing Board, 77 Fed. Reg. 70,487 (Nov. 26, 2012) (SONGS II).

²⁹ In the SONGS II adjudication, the NRC Staff has stated that it is "separately reviewing whether the licensee's Restart Plan, if adopted, would result in a proceeding for the granting, suspending, revoking, or amending of any license." *See* NRC Staff's Answer to Petitioner's Motion to Amend the Proposed Scheduling Order and Clarify Scope of Disclosure, *Southern California Edison Co.* (San Onofre Nuclear Generating Station Units 2 and 3), Nos. 50-361-CAL/50-362-CAL (Dec. 14, 2012) at 7.

³⁰ On December 2, 2012, Citizens Oversight filed an addendum to its reply. Addendum to Citizens Oversight's Answer to Submissions by NRC Staff and Southern California Edison Opposing the Petition to Intervene and Request for a Hearing by Citizens Oversight (Dec. 2, 2012). On December 4, 2012, SCE filed a motion to strike the addendum. Southern California Edison Company's Motion
(Continued)

This order is subject to appeal to the Commission in accordance with 10 C.F.R. § 2.311(c). Any such appeal must be filed within 25 days of the service of this memorandum and order.³¹ 10 C.F.R. § 2.311(b).

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Alex S. Karlin, Chairman
ADMINISTRATIVE JUDGE

Anthony J. Baratta
ADMINISTRATIVE JUDGE

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE

Rockville, Maryland
December 21, 2012

to Strike Citizens Oversight's Addendum to Its Reply (Dec. 4, 2012). In light of the Board's ruling today, SCE's motion is moot.

³¹ The time allotted for filing an appeal was changed from 10 days to 25 days on August 3, 2012. 77 Fed. Reg. at 46,572-73, 46,592.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

William J. Froehlich, Chairman
Nicholas G. Trikouros
Dr. William E. Kastenberg

In the Matter of

Docket No. 50-346-LR
(ASLBP No. 11-907-01-LR-BD01)

FIRSTENERGY NUCLEAR
OPERATING COMPANY
(Davis-Besse Nuclear Power
Station, Unit 1)

December 28, 2012

SUMMARY DISPOSITION

The applicant's motion for summary disposition of Contention 4 is granted because there exists no genuine dispute of material fact concerning Contention 4, and the applicant is entitled to judgment as a matter of law.

SUMMARY DISPOSITION

The standard governing motions for summary disposition establishes a two-part test: first, the Board must determine if any material facts remain genuinely in dispute; and second, if no such disputes remain, the Board must determine if the movant's legal position is correct.

SUMMARY DISPOSITION

The proponent of the motion for summary disposition bears the burden of establishing that no facts remain in dispute, even if the motion is unopposed.

SUMMARY DISPOSITION

Summary disposition is an appropriate vehicle to resolve a purely legal dispute.

SEVERE ACCIDENT MITIGATION ALTERNATIVES

To challenge an application, a petitioner must point with support to an asserted deficiency that renders the Severe Accident Mitigation Alternatives (SAMA) analysis unreasonable under the National Environmental Policy Act.

SEVERE ACCIDENT MITIGATION ALTERNATIVES

Practically speaking, a SAMA analysis requires a baseline Probabilistic Risk Assessment (PRA) for each plant and a set of plant or operational changes (i.e., mitigation alternatives) that could reduce the frequency or consequences (or both) of a severe accident sequence or set of sequences. The cost of implementing the mitigation alternative is then compared to the “monetized” value of the benefit received in terms of risk averted.

NATIONAL ENVIRONMENTAL POLICY ACT: SEVERE ACCIDENT MITIGATION ALTERNATIVES

While NEPA requires that the NRC take a “hard look” at SAMA analyses, we have found no legal basis for the suggestion that this “hard look” includes some sort of independent validation of the computer codes used to generate source terms within SAMA analyses.

NATIONAL ENVIRONMENTAL POLICY ACT: SEVERE ACCIDENT MITIGATION ALTERNATIVES

The Commission’s NEPA jurisprudence explicitly provides that an analysis of mitigation alternatives within an ER or an EIS need *not* present a worst-case analysis.

NATIONAL ENVIRONMENTAL POLICY ACT: SEVERE ACCIDENT MITIGATION ALTERNATIVES

There is no requirement that applicants use NUREG-1465 source terms in their SAMA analysis.

**NATIONAL ENVIRONMENTAL POLICY ACT: SEVERE
ACCIDENT MITIGATION ALTERNATIVES**

Differences between source terms calculated from MAAP4 or calculated in NUREG-1465 are simply not relevant to whether the applicant's SAMA analysis was conducted in a reasonable manner.

**NATIONAL ENVIRONMENTAL POLICY ACT: SEVERE
ACCIDENT MITIGATION ALTERNATIVES**

Intervenors have not put forward a credible argument that use of the MAAP code "render[s] the SAMA analysis altogether unreasonable under NEPA," as required by the Commission.

**MEMORANDUM AND ORDER
(Ruling on Motion for Summary Disposition of Contention 4)**

This proceeding concerns the application of FirstEnergy Nuclear Operating Company (FENOC) to renew the 10 C.F.R. Part 50 operating license for Davis-Besse Nuclear Power Station, Unit 1 (Davis-Besse), for an additional 20-year term.¹ The current operating license for Davis-Besse expires at midnight on April 22, 2017.² Currently pending before this Licensing Board is a FENOC motion for summary disposition of Contention 4,³ wherein Beyond Nuclear, Citizens Environment Alliance of Southwestern Ontario, Don't Waste Michigan, and the Green Party of Ohio (collectively, Intervenors) challenge FENOC's analysis of severe accident mitigation alternatives (SAMAs).⁴ For the reasons discussed herein, the motion for summary disposition is GRANTED.

¹ License Renewal Application; Davis-Besse Nuclear Power Station, 1.0-1 (Aug. 2010) (ADAMS Accession Nos. ML102450567, ML102450563) [hereinafter Application or LRA]. The Application also seeks renewal of the associated source material, special nuclear material, and byproduct material licenses under 10 C.F.R. Parts 30, 40, and 70. *See id.*

² *Id.*

³ *See* FirstEnergy's Motion for Summary Disposition of Contention 4 (SAMA Analysis Source Terms) (July 26, 2012) [hereinafter Motion for Summary Disposition].

⁴ We note that there is another series of motions pending before this Board relating to the admission of a new proposed contention (Contention 5) concerning cracking in the Davis-Besse shield building. We address this series of motions by separate Order issued this day. *See* LBP-12-27, 76 NRC 583 (2012).

I. PROCEDURAL HISTORY

On December 27, 2010, Intervenors filed a petition to intervene and a request for a hearing in this proceeding, proffering four contentions.⁵ On April 26, 2011, this Board admitted the Intervenors as parties to the proceeding and admitted two of their proffered contentions: Contention 1, concerning alternative energy sources, and Contention 4, a SAMA contention.⁶ Contention 4, as admitted by this Board, reads as follows:

The Environmental Report (ER) is inadequate because it underestimates the true cost of a severe accident at Davis-Besse in violation of 10 C.F.R. § 51.53(c)(3)(ii)(L) and further analysis by the Applicant, [FENOC], is called for because of:

- (1) Minimization of the potential amount of radioactive material released in a severe accident by using a source term based on radionuclide release fractions which are smaller for key radionuclides than the release fractions specified in NRC guidance;
- (2) Use of an inappropriate air dispersion model, the straight-line Gaussian plume, that does not allow consideration for the fact that winds for a given time period may vary spatially, ignores the presences of Great Lakes “sea breeze” circulations which dramatically alter air flow patterns, fails to account for hot spots of radioactivity caused by plumes blowing offshore over Lake Erie, and is based on meteorological inputs collected from just one site — at Davis-Besse itself; and
- (3) Use of inputs that minimized and inaccurately reflected the economic consequences of a severe accident, specifically particle size and cleanup costs for urban areas.⁷

Ruling on an appeal by FENOC, the Commission reversed the Board’s decision in part by holding that Contention 1, in its entirety, and parts (2) and (3) of Contention 4, as quoted above, were inadmissible.⁸ As such, Contention 4 as narrowed by the Commission challenges only FENOC’s use of source terms generated by the Modular Accident Analysis Program (MAAP) computer code in its SAMA analysis. This Board has reiterated that the scope of Contention 4 is now “very narrow.”⁹

⁵ See Beyond Nuclear, Citizens Environment Alliance of Southwestern Ontario, Don’t Waste Michigan, and the Green Party of Ohio Request for Public Hearing and Petition for Leave to Intervene (Dec. 27, 2010) [hereinafter Petition to Intervene].

⁶ See LBP-11-13, 73 NRC 534, 588-89 (2011).

⁷ *Id.*

⁸ See CLI-12-8, 75 NRC 393, 409-18 (2012).

⁹ See Licensing Board Order (Granting Motion to Strike) at 6 (Oct. 11, 2012) (unpublished).

On July 26, 2012, FENOC filed the instant motion for summary disposition of Contention 4.¹⁰ FENOC states its motion is based on a revised SAMA analysis for Davis-Besse, which it submitted to the Nuclear Regulatory Commission (NRC) on July 16, 2012.¹¹ FENOC argues that it is entitled to summary disposition of Contention 4 because its revised SAMA analysis demonstrates that “there is no genuine issue of material fact arising from any of Intervenor’s claims.”¹²

On September 14, 2012, the NRC Staff filed an answer supporting the motion and Intervenor filed an answer opposing it.¹³ On September 24, 2012, FENOC filed a motion to strike the Intervenor’s answer in its entirety,¹⁴ to which the Intervenor replied on October 4, 2012.¹⁵ Holding that Intervenor’s answer was not responsive to FENOC’s motion and consisted solely of arguments well beyond the scope of Contention 4, this Board granted the motion to strike in an October 11 Order.¹⁶ The Intervenor filed a motion for reconsideration of this ruling on October 22,¹⁷ which the NRC Staff and FENOC opposed on October 31, 2012, and November 1, 2012, respectively.¹⁸ This motion for reconsideration remains pending before this Board. For failure to meet the high standard established by 10 C.F.R. § 2.323(e), the Board now DENIES Intervenor’s October 22, 2012 motion for reconsideration.

¹⁰ See Motion for Summary Disposition.

¹¹ Letter from John C. Dominy, Director, Site Maintenance, FirstEnergy, to Document Control Desk, U.S. NRC, Correction of Errors in the Davis-Besse Nuclear Power Station, Unit No. 1, License Renewal Application (TAC No. ME4613) Environmental Report Severe Accident Mitigation Alternatives Analysis, and License Renewal Application Amendment No. 29 (July 16, 2012) (ADAMS Accession No. ML12200A024) [hereinafter Revised SAMA Analysis].

¹² Motion for Summary Disposition at 3.

¹³ NRC Staff’s Answer to FirstEnergy’s Motion for Summary Disposition of Contention 4 (SAMA Analysis Source Terms) (Sept. 14, 2012) [hereinafter NRC Staff Answer]; Intervenor’s Reply in Opposition to “FirstEnergy’s Motion for Summary Disposition of Contention 4 (SAMA Analysis — Source Terms)” (Sept. 14, 2012).

¹⁴ FENOC’s Motion to Strike Intervenor’s Reply in Opposition to “FirstEnergy’s Motion for Summary Disposition of Contention 4 (SAMA Analysis — Source Terms)” (Sept. 24, 2012).

¹⁵ See Intervenor’s Response in Opposition to FENOC’s Motion to Strike Intervenor’s Reply in Opposition to “FirstEnergy’s Motion for Summary Disposition of Contention 4 (SAMA Analysis — Source Terms)” (Oct. 4, 2012).

¹⁶ See Licensing Board Order (Granting Motion to Strike) (Oct. 11, 2012) (unpublished).

¹⁷ Intervenor’s Motion for Reconsideration of ASLB Order Granting FENOC’s Motion to Strike Intervenor’s Reply in Opposition to “FirstEnergy’s Motion for Summary Disposition of Contention 4 (SAMA Analysis — Source Terms)” (Oct. 22, 2012).

¹⁸ NRC Staff’s Answer to Intervenor’s Motion for Reconsideration of ASLB Order Granting FENOC’s Motion to Strike Intervenor’s Reply in Opposition to FirstEnergy’s Motion for Summary Disposition of Contention 4 (SAMA Analysis — Source Terms) (Oct. 31, 2012); FENOC’s Answer Opposing Intervenor’s Motion for Reconsideration of Order Striking Intervenor’s Answer to FENOC’s Motion for Summary Disposition of Contention 4 (Nov. 1, 2012).

This Board conducted an oral argument on the motion for summary disposition of Contention 4 on November 5, 2012, in Toledo, Ohio.¹⁹

II. LEGAL STANDARDS²⁰

A. Standards for Granting Motions for Summary Disposition

The standards governing motions for summary disposition are found in 10 C.F.R. § 2.710. Subsection (d)(2) of that section states, “The presiding officer shall render the decision sought if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.”²¹ This standard establishes a two-part test: first, the Board must determine if any material facts remain genuinely in dispute; and second, if no such disputes remain, the Board must determine if the movant’s legal position is correct.²²

Because we have stricken Intervenor’s answer opposing FENOC’s motion for summary disposition, two other standards are relevant here. First, 10 C.F.R. § 2.710(a) provides that “[a]ll material facts set forth . . . by the moving party will be considered to be admitted unless controverted by . . . the opposing party.”²³ Second, 10 C.F.R. § 2.710(b) states, “If no answer is filed, the decision sought, *if appropriate*, must be rendered.”²⁴ This language does not suggest that an unopposed motion for summary disposition must automatically be granted. Rather, the proponent of the motion bears the burden of establishing that no facts remain in dispute, even if the motion is unopposed.²⁵

¹⁹ See Notice and Order (Scheduling Oral Argument) (Sept. 20, 2012) (unpublished); Tr. at 275-509.

²⁰ NRC’s “Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders” are set forth in 10 C.F.R. Part 2. Some of these regulations were amended on August 3, 2012. Amendments to Adjudicatory Process Rules and Related Requirements, 77 Fed. Reg. 46,562 (Aug. 3, 2012). These amendments “govern all obligations and disputes that arise after the effective date of the final rule,” September 4, 2012. *Id.* at 46,562. Because FENOC filed its Motion for Summary Disposition before September 4, 2012, this dispute arose before the effective date of the amendments. Therefore, all citations in this Order are to the regulations as they existed prior to the above amendments.

²¹ 10 C.F.R. § 2.710(d)(2). See also 10 C.F.R. § 2.1205(c).

²² See *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-31, 74 NRC 643, 648 (2011).

²³ 10 C.F.R. § 2.710(a).

²⁴ 10 C.F.R. § 2.710(b) (emphasis added).

²⁵ See *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-443, 6 NRC 741, 753-54 (1977).

B. Legal Standards Regarding SAMA Analysis Related Contentions

Since this Board admitted Contention 4, the Commission has issued a series of rulings that bear directly on the issue of adjudicatory challenges to SAMA analyses. For example, in the *Pilgrim* case, CLI-12-1, the Commission stated:

With respect to a SAMA analysis in particular, unless a contention, submitted with adequate factual, documentary, or expert support, raises a potentially *significant deficiency* in the SAMA analysis — that is, a deficiency that could credibly render the SAMA analysis altogether unreasonable under NEPA standards — a SAMA-related dispute will not be material to the licensing decision, and is not appropriate for litigation in an NRC proceeding.²⁶

In addition, the Commission held in *Seabrook*, CLI-12-5:

Given the quantitative nature of the SAMA analysis, where the analysis rests largely on selected inputs, it may always be possible to conceive of alternative and more conservative inputs, whose use in the analysis could result in greater estimated accident consequences. But the proper question is not whether there are plausible alternative choices for use in the analysis, but whether the analysis that was done is reasonable under NEPA. . . . SAMA adjudications would prove endless if hearings were triggered merely by suggested alternative inputs and methodologies that conceivably could alter the cost-benefit conclusions. A contention proposing alternative inputs or methodologies must present some factual or expert basis for why the proposed changes in the analysis are warranted (e.g., why the inputs or methodology used is unreasonable, and the proposed changes or methodology would be more appropriate). Otherwise, there is no genuine material dispute with the SAMA analysis that was done, only a proposal for an alternative NEPA analysis that may be no more accurate or meaningful.²⁷

Finally, in ruling on FENOC's appeal of our Order admitting the narrowed Contention 4, the Commission stated:

[B]ecause the SAMA analysis is largely quantitative, resting on inputs used in computer modeling, it will always be possible to propose that the analysis use one or more other inputs. But simply because a computer model also could have been run with alternate inputs does not suggest that the inputs used were unreasonable. We therefore have stressed that the "proper question is not whether there are plausible alternative choices for use in the analysis, but whether the analysis that was done

²⁶ *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-1, 75 NRC 39, 57-58 (2012) (emphasis in original).

²⁷ *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 323-24 (2012).

is reasonable under NEPA.” To challenge an application, a petitioner must point with support to an asserted deficiency that renders the SAMA analysis unreasonable under NEPA. . . . Unless a petitioner sets forth a supported contention pointing to an apparent *error or deficiency* that may have significantly skewed the environmental conclusions, there is no genuine material dispute for hearing.²⁸

With these recent statements of the Commission’s SAMA-related jurisprudence in mind, we consider FENOC’s motion for summary disposition of Contention 4.

III. ANALYSIS AND RULING

A. Timeliness

NRC regulations require that a motion be filed “no later than ten (10) days after the occurrence or circumstance from which the motion arises.”²⁹ This Board has previously held in this proceeding that this 10-day deadline applies to dispositive motions as it would to any other motion.³⁰ While FENOC has again expressed its dissatisfaction with the Board’s interpretation of this requirement,³¹ we remain convinced that it is the correct reading of the regulation.³² As such, FENOC must demonstrate that its motion was filed within 10 days of the “occurrence or circumstance” from which it arose, or a “triggering event.”

FENOC points to a July 16, 2012 filing³³ wherein it revised its SAMA analysis as the “triggering event” giving rise to the instant motion.³⁴ In addition, FENOC retained two experts to review Intervenors’ claims in Contention 4, and views their review and resulting affidavit “as a supporting basis for the motion as well.”³⁵

FENOC states that it performed “some new MAAP code runs” during the process of revising its SAMA analysis, and that, as a result, “[FENOC] re-characterized the source terms and release fractions by using radionuclide masses . . . to specify the fission product inventory. So there were some changes in the

²⁸ CLI-12-8, 75 NRC at 406-07 (emphasis in original).

²⁹ 10 C.F.R. § 2.323(a).

³⁰ See Licensing Board Memorandum and Order (Denying Motion to Dismiss Contention 1) (Jan. 10, 2012) at 5 (unpublished); Licensing Board Order (Denying Motion for Leave to File a Motion for Reconsideration) (Jan. 30, 2012) at 3-4 (unpublished).

³¹ See Tr. at 308, 336.

³² Indeed, the NRC has recently amended § 2.323(a) “to state that ‘all motions,’ instead of [the previous] ‘a motion,’ must be made within ten days after the occurrence or circumstance from which the motion arises.” 77 Fed. Reg. 46,562, 46,567 (emphasis added).

³³ See Revised SAMA Analysis.

³⁴ See *id.*; Motion for Summary Disposition at 5-6.

³⁵ Tr. at 312.

actual source terms and release fractions that were used in the SAMA analysis.”³⁶ Because Contention 4 challenges the release fractions and source terms used in FENOC’s SAMA analysis, FENOC contends that there is “a direct nexus between [the Revised SAMA analysis] and the original contention.”³⁷ In addition, FENOC states that the experts it engaged to review Contention 4 “did a very thorough review of those claims, and ultimately determined that they lacked technical or factual merit. They also concluded that the use of MAAP is reasonable and appropriate for developing environmental source terms for purposes of a SAMA analysis.”³⁸

While it appears that the revised SAMA analysis was not tailored to address the faults in the SAMA analysis alleged in Contention 4 (indeed, the revised SAMA analysis appears to have been performed to correct five errors unrelated to Contention 4),³⁹ it is sufficiently related to Contention 4 to serve as a triggering event. As such, because FENOC filed its motion within 10 days of this “occurrence or circumstance,” the motion is timely.

B. Analysis of the Motion for Summary Disposition

As the name implies, a Severe Accident Mitigation Alternatives (SAMA) analysis is focused on the identification of candidate modifications (e.g., hardware, software, or operational changes) that have the potential to mitigate severe accident risk and to determine whether or not implementation of each potential candidate is cost-beneficial.

With certain exceptions not applicable here, a SAMA analysis for relicensing must be performed by the licensee and included in the license renewal application (LRA).⁴⁰ Practically speaking, a SAMA analysis requires a baseline Probabilistic Risk Assessment (PRA) for each plant and a set of plant or operational changes (i.e., mitigation alternatives) that could reduce the frequency or consequences (or both) of a severe accident sequence or set of sequences. The cost of implementing the mitigation alternative is then compared to the “monetized” value of the benefit received in terms of risk averted (i.e., offsite radiation exposure cost averted, offsite economic cost averted, onsite radiation exposure cost averted, and onsite economic cost averted). From both a regulatory perspective and a technical perspective, a SAMA analysis is a plant- and site-specific assessment.⁴¹

³⁶ Tr. at 310.

³⁷ *Id.*

³⁸ Tr. at 311.

³⁹ See Revised SAMA Analysis at 1.

⁴⁰ 10 C.F.R. § 51.53(c)(3)(ii)(L).

⁴¹ CLI-12-8, 75 NRC at 406.

As defined in the NRC's "Policy Statement on Severe Accidents Regarding Future Designs and Existing Plants," a severe accident is one in which there is substantial damage to the reactor core whether or not there are serious offsite consequences.⁴² In order to evaluate the arguments advanced by the parties in this proceeding, it is important to outline the analytical method or framework for quantifying such severe accidents. PRA is comprised of three sequential activities called Levels:⁴³

Level 1 PRA: A quantification of initiating events and accident sequences leading to core damage in terms of annual probability or frequency of core damage, the summation of which results in an overall "core damage frequency" or CDF.

Level 2 PRA: A quantification of core and containment physical response, called accident progression, that results in fission product release from the core into containment and fission product release from the core and containment into the environment, as well as conditional probabilities of containment failure for each core damage sequence or state.

Level 3 PRA: A quantification of consequences in terms of annualized (frequency or annual probability) values of individual and public health effects, environmental effects, and economic effects of radioactive releases from containment to the environment.

It is this integral quantification, in terms of frequency (annual probability) and consequence (generally accompanied with a measure of the uncertainty), that is called the "risk." And although the NRC has found, through its Individual Plant Examination (IPE)⁴⁴ and Individual Plant Examination for External Events (IPEEE)⁴⁵ processes and other risk studies, that the risks are small for all United

⁴² See Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants, 50 Fed. Reg. 32,138, 32,138 (Aug. 8, 1985).

⁴³ See Motion for Summary Disposition, Attach. 2, Joint Declaration of Kevin O'Kula and Grant Teagarden in Support of FirstEnergy's Motion for Summary Disposition of Contention 4 (SAMA Analysis Source Terms) (July 26, 2012) at 12, 27 [hereinafter Joint Declaration].

⁴⁴ Individual Plant Examination or IPE contains the PRA for each licensed nuclear plant in the United States. See NRC Generic Letter 88-20, "Individual Plant Examination for Severe Accident Vulnerabilities — 10 CFR 50.54(f)" (Nov. 1988).

⁴⁵ Individual Plant Examination for External Events or IPEEE contains the PRA for extreme external phenomena such as earthquakes, tsunamis, and hurricanes. See NRC Generic Letter 88-20, Supp. 4, "Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities — 10 CFR 50.54(f)" (June 1991).

States licensed nuclear power plants,⁴⁶ the NRC Staff is required under NEPA to consider mitigation alternatives during its license renewal review.⁴⁷

At issue in this proceeding is the contention that the Modular Accident Analysis Program (MAAP) code⁴⁸ utilized by FENOC in carrying out the baseline PRA for its SAMA analysis calculates an unrealistically low amount of radioactive material released in a severe accident. As support, Intervenors claim that the MAAP code uses a source term based on radioactive release fractions that is smaller for key radionuclides than the release fractions specified in NRC guidance (actually, specified in a number of NRC risk assessments and risk studies using the MELCOR⁴⁹ code and its predecessors discussed later in this decision). If this claim were substantiated, it would mean that the potential benefit or risk averted for some candidates is underestimated in the cost-beneficial determination. Hence, the issue in this proceeding is the reasonableness or adequacy of the release fractions and/or source term(s) used in the Davis-Besse SAMA analysis.

In determining whether or not to grant FENOC's Motion, this Board has considered the following:⁵⁰

1. Source terms have played an integral role in the regulatory process in meeting requirements such as the 10 C.F.R. Part 100 site criteria, the 10 C.F.R. Part 50, Appendix A General Design Criteria, and a number of other regulatory requirements.
2. The quantification of source terms has evolved over the past 50 years. The first source term used in siting existing nuclear power plants in the United States appeared in Technical Information Document-14844 (TID-14844),

⁴⁶ See, e.g., 10 C.F.R. Part 51, Subpart A, Appendix B, Table B-1.

⁴⁷ 10 C.F.R. § 51.53(c)(3)(ii)(L) and 10 C.F.R. Part 51, Subpart A, Appendix B, Table B-1 define the NEPA requirement.

⁴⁸ MAAP stands for Modular Accident Analysis Program, and it has been developed by the industry and owned and licensed by the Electric Power Research Institute. Licensees typically use the MAAP code in support of their SAMA analyses. See Joint Declaration at 20; Motion for Summary Disposition, Attach. 25, *Nuclear Engineering Handbook* 539 (Kenneth D. Kok, ed. 2009).

⁴⁹ MELCOR is a severe accident analysis computer code developed and used by the NRC and its contractors to perform severe accident analyses.

⁵⁰ Many of the arguments advanced by the parties in this case are of a highly technical nature. Indeed, FENOC's Motion contains 48 Attachments, mainly comprised of highly technical papers, positions and reports. The Staff's answer also contains several highly technical appendices and an independent technical analysis. Rather than citing verbatim "Chapter and Verse" from these attachments and appendices, we have attempted to distill the most salient points for consideration in the analysis of this motion.

published in 1962.⁵¹ It was a generic (not based on any one reactor, but intended for all reactors), postulated (based on engineering judgment) source term and based on a few experiments. NUREG-1465, published in 1989, updated the TID-14844 source term utilizing the results of several mechanistic or physical models in conjunction with the results of several plant-specific PRAs to arrive at an updated generic source term. Finally, the most current mechanistic understanding of source terms calculated in such codes as MELCOR and MAAP is based on thermo-physical phenomena and time-dependent behavior of fission product release from failed fuel as a function of specific plant design, accident sequence progression, and containment failure mode.

3. Beginning with WASH-1400,⁵² through NUREG-1150⁵³ and the recent State-of-the-Art Reactor Consequence Analyses (SOARCA) studies,⁵⁴ the NRC Staff and its contractors have developed and utilized the MELCOR code for quantifying source terms and hence, risk. In parallel efforts, the nuclear industry and its contractors have developed a series of severe accident progression codes leading up to the current version of the MAAP code, for quantifying source terms and hence, risk.
4. A number of studies reported in the open literature have compared versions of MAAP and MELCOR using several aspects of accident progression and fission product release in a number of risk studies. These studies conclude, in general, that the comparisons yield results that are in “reasonably good agreement,” and differences in results can be explained by the use of different computational models in describing some aspects of the thermo-physical behavior of core melt progression.⁵⁵
5. Regarding SAMA analysis under NEPA, the Commission has stated that “there is no NEPA requirement to use the best scientific methodology, and

⁵¹ See U.S. Atomic Energy Commission, Division of Licensing and Regulation, Calculation of Distance Factors for Power and Test Reactor Sites, TID-14844 (Mar. 1962) (ADAMS Accession No. ML083380438) [hereinafter TID-14844].

⁵² See Reactor Safety Study: An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants, WASH-1400 (NUREG-75/014) (Oct. 1975) (ADAMS Accession No. ML083570090).

⁵³ See Office of Nuclear Regulatory Research, Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants, Final Summary Report, NUREG-1150 (Dec. 1990) (ADAMS Accession No. ML100780066) [hereinafter NUREG-1150].

⁵⁴ See Office of Nuclear Regulatory Research, State-of-the-Art Reactor Consequence Analyses (SOARCA) Report, Draft Report for Comment, NUREG-1935, at 82-83 (Jan. 2012) (ADAMS Accession No. ML120250406).

⁵⁵ See Affidavit of Kyle Ross Concerning the Motion for Summary Disposition of Contention 4 (Sept. 14, 2012) [hereinafter Ross Affidavit]; see also NRC Staff Answer, Attach. B, “A Direct Comparison of MELCOR 1.8.3 and MAAP4 Results for Several PWR and BWR Accident Sequences.”

NEPA should be construed in light of reason if it is not to demand virtually infinite study and resources NEPA requires the NRC to provide a ‘reasonable’ mitigation alternatives analysis, containing ‘reasonable’ estimates . . . and significant uncertainties”⁵⁶

In its Motion for Summary Disposition, FENOC enumerates three “bases” that Intervenor claim support their contention:

1. The MAAP code “has not been validated by the NRC.” (Basis 1)
2. The radionuclide release fractions generated by MAAP “are consistently smaller for key radionuclides than the release fractions specified in NUREG-1465” and result in “anomalously low” accident consequences. (Basis 2)
3. It previously has been observed that MAAP generates lower release fractions than those derived and used by NRC in other severe accident studies. (Basis 3)⁵⁷

We note that Intervenor did not explicitly list these as purported “bases” in their original Petition to Intervene.⁵⁸ As such, we initially view with a skeptical eye FENOC’s construction of its opponents’ arguments. However, upon independent review of the Petition to Intervene, as well as the statement of the Commission further narrowing Contention 4, we believe that FENOC’s characterization of Intervenor’s bases of support for Contention 4 is both fair and efficient, and so we will use this basic framework as we proceed.

1. Basis 1

In support of Contention 4, Intervenor assert that use of the MAAP code in FENOC’s SAMA analysis is not reasonable because the MAAP code “has not been validated by the NRC.”⁵⁹ In its Motion for Summary Disposition, FENOC states, “Intervenor do not explain what they mean by an ‘independent validation’ or why such a validation by the NRC is a prerequisite to an applicant’s use of the MAAP code.”⁶⁰ In addition, FENOC argues that the NRC has accepted the use of the MAAP code in license renewal proceedings, essentially satisfying Intervenor’s demand for “validation.”⁶¹ As noted above, this Board struck Intervenor’s answer to this Motion in its entirety, and therefore these arguments have gone un rebutted.

⁵⁶ See NRC Staff Answer at 5-7.

⁵⁷ Motion for Summary Disposition at 3.

⁵⁸ See generally Petition to Intervene.

⁵⁹ *Id.* at 112.

⁶⁰ Motion for Summary Disposition at 18.

⁶¹ *Id.* at 20.

Even so, we gave Intervenors the opportunity to elaborate on what they meant by “validation” during the oral argument. Kevin Kamps, a representative of Intervenors, stated that Intervenors “are concerned that validation would include actual independence applied to these codes, and the [use of the] most conservative code possible.”⁶² Essentially, Intervenors seem to argue that the MAAP code must undergo a review by some independent body in addition to the review the NRC must perform. In addition, they claim that an Applicant must use “the most conservative code possible.” Intervenors have not pointed to any NRC regulation in support of these arguments.

FENOC has discussed at length, both in its Motion for Summary Disposition and at oral argument, MAAP’s benchmarking and use within the nuclear industry. For example, FENOC states, “[MAAP] has been applied to numerous containment designs and sequences across the world for more than two decades. MAAP is the most commonly used code in the U.S. for such purposes.”⁶³ FENOC also notes that “numerous NRC license renewal applicants, including very recent recipients of renewed operating licenses, have used the MAAP code to support NRC-approved SAMA analyses.”⁶⁴ Counsel for the NRC Staff reiterated this latter point at the oral argument.⁶⁵

In addition, during oral argument, counsel for both FENOC and the NRC Staff addressed the benchmarking that the MAAP code has undergone.⁶⁶ While the NRC Staff conceded that benchmarking, or the comparison of a code’s results with those of other codes, is not necessarily the same as validation,⁶⁷ both it and FENOC stated that “validation” is not a normal part of the NRC’s regulatory process in reviewing license applications.⁶⁸ In essence, FENOC and the NRC Staff are arguing that benchmarking establishes the reliability of the MAAP code in lieu of the sort of independent “validation” that Intervenors seek.

Finally, the NRC Staff noted in response to Intervenors’ claim that FENOC must use the “most conservative code possible” that Intervenors are essentially requesting that FENOC perform a “worst-case analysis,” which the Staff asserts the National Environmental Policy Act (NEPA) does not require.⁶⁹

We find that summary disposition of Contention 4 is appropriate insofar as Contention 4 challenges the MAAP code’s lack of “validation.” There exists no

⁶² Tr. at 391.

⁶³ Motion for Summary Disposition at 20.

⁶⁴ *Id.*

⁶⁵ Tr. at 404 (“[MAAP] has been used previously, and the results have been found to be acceptable in those cases.”).

⁶⁶ See Tr. at 401-03.

⁶⁷ Tr. at 402, 403.

⁶⁸ Tr. at 401.

⁶⁹ Tr. at 392.

genuine dispute of material fact regarding the validation of the MAAP code. Indeed, all the parties agree that the MAAP code has not been independently validated. As such, the first “step” of summary disposition is satisfied. That is, FENOC has demonstrated that “there is no genuine issue as to any material fact.”⁷⁰

Even where no factual dispute exists, summary disposition may only be granted if the moving party is entitled to judgment as a matter of law.⁷¹ The Intervenor has not cited a law, a regulation, or a Board or Commission decision that would require the “validation” they seek. While NEPA requires that the NRC take a “hard look” at SAMA analyses,⁷² we have found no legal basis for the suggestion that this “hard look” includes some sort of independent validation of the computer codes used to generate source terms within SAMA analyses. We also find no legal basis for Intervenor’s suggestion that FENOC must use the “most conservative code possible” in its SAMA analysis. Indeed, the Commission’s NEPA jurisprudence explicitly provides that an analysis of mitigation alternatives within an ER or an EIS need *not* present a worst-case analysis.⁷³

For these reasons, we conclude that FENOC is entitled to judgment as a matter of law in this regard. Thus, FENOC’s Motion for Summary Disposition of Contention 4 is granted insofar as Contention 4 challenges the lack of “validation” of the MAAP code.

2. *Basis 2*

In support of Contention 4, Intervenor asserts that the source terms produced by the MAAP code and used in FENOC’s SAMA analysis are “consistently smaller for key radionuclides than the release fractions specified in NUREG-1465.”⁷⁴ From this Intervenor infers that the MAAP code releases are nonconservatively low, resulting in unreasonable SAMA analysis results. FENOC responds that the differences in source terms produced by MAAP and NUREG-1465 are not only explainable, but also expected, as MAAP and NUREG-1465 serve different

⁷⁰ 10 C.F.R. § 2.710(d)(2).

⁷¹ *Id.*

⁷² See, e.g., *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-11-14, 74 NRC 801, 813 (2011) (stating that “[NEPA] requires a ‘hard look’ at mitigation measures”).

⁷³ See, e.g., *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC 479, 487 (2012) (“A NEPA mitigation alternatives analysis need not reflect the most conservative — or worst case — analysis.”).

⁷⁴ Petition to Intervene at 112.

purposes.⁷⁵ FENOC further asserts that the latter is inappropriate for a SAMA analysis.⁷⁶

As a preliminary matter, it appears that there exists no genuine dispute of material fact concerning this basis of Contention 4. Indeed, FENOC appears to *agree* that MAAP produces source terms “consistently smaller for key radionuclides” than does NUREG-1465.⁷⁷ FENOC contends, however, that this difference is technically and legally irrelevant for a number of reasons.⁷⁸ This remaining dispute — that is, whether the difference between the source terms produced by MAAP and NUREG-1465 is relevant to the SAMA determination the Staff must make — is essentially legal, rather than factual, in nature. The parties also agree as to the nature of the facts. However, Intervenor contends that these facts show that use of MAAP is unreasonable under NEPA, while FENOC contends that they demonstrate that MAAP is reasonable under NEPA. Summary disposition is an appropriate vehicle to resolve such a purely legal dispute.⁷⁹ Because no genuine issue as to any material fact remains in dispute, we move on to the second requirement for summary disposition — whether FENOC is entitled to judgment on this claim as a matter of law.⁸⁰

The purpose of NUREG-1465, published by the NRC in 1995,⁸¹ was to revise the TID-14844 “source term” originally published in 1962,⁸² and which had been utilized by applicants of existing reactors in meeting the NRC’s reactor site criteria, 10 C.F.R. Part 100, and other plant performance requirements. TID-14844 specified a release of fission products from the core of a reactor to the reactor containment in the event of a postulated accident involving a “substantial melt-down of the core.”⁸³ On the other hand, NUREG-1465 attempted to utilize the results of 30 years of post-TID-14844 research and analysis, to provide more realistic estimates of the “source term” released into containment, in terms of timing, nuclide types, quantities, and chemical form, given a severe core-melt

⁷⁵ Motion for Summary Disposition at 21.

⁷⁶ *Id.* at 26.

⁷⁷ *Id.* at 21.

⁷⁸ *Id.* at 21-29.

⁷⁹ See, e.g., *General Public Utilities Nuclear Corp.* (Oyster Creek Nuclear Generating Station), LBP-97-1, 45 NRC 7, 12-13 (1997).

⁸⁰ 10 C.F.R. § 2.710(d)(2).

⁸¹ Office of Nuclear Regulatory Research, Accident Source Terms for Light-Water Nuclear Power Plants, Final Report, NUREG-1465 (Feb. 1995) (ADAMS Accession No. ML041040063) [hereinafter NUREG-1465].

⁸² See TID-14844.

⁸³ See NUREG-1465, at vii, 1; TID-14844, at 6. The releases specified in TID-14844 are nonmechanistic, that is, they are postulated to be 100% of the core inventory of noble gases, 50% of the iodines (half of which are assumed to deposit on the interior surfaces very rapidly) and 1% of the solid fission products. See TID-14844, at 14.

accident. Hence the purpose of NUREG-1465, as stated in its Preface, is “to provide a postulated fission product source term released into containment that is based on [then] current understanding of LWR accidents and fission product behavior.”⁸⁴

The Preface of NUREG-1465 goes on to state:

The information contained in this document is applicable to LWR designs and is intended to form the basis for the development of regulatory guidance, primarily for future LWRs An applicant may propose changes in source term parameters (timing, release magnitude, and chemical form) from those contained in this report, based upon and justified by design specific features.⁸⁵

Indeed, when counsel for the NRC Staff was asked during oral argument whether or not there was a requirement that applicants use NUREG-1465, he replied, “there’s no requirement for them to use it. We can’t make them adopt NUREG-1465.”⁸⁶

In addressing the question of whether or not the radionuclide release fractions generated by MAAP “are consistently smaller” for key radionuclides than the release fractions specified in NUREG-1465 and “result in anomalously low accident consequences,” we first distinguish between fission product radionuclides that are released from damaged or molten fuel into containment and the fraction of fission product radionuclides that are released into the environment. Here we rely on the Joint Declaration of FENOC’s two experts⁸⁷ and the Affidavit of the NRC Staff’s expert,⁸⁸ as well as their independent analyses and the technical papers and reports provided as Attachments to the Motion and Staff Answer.⁸⁹

All three experts agree, and Intervenor does not contest, that the source terms identified in NUREG-1465 are releases to the containment while the source terms identified in FENOC’s SAMA analysis using the MAAP code are releases to the environment.⁹⁰ And all three experts agree that MAAP would be expected to produce release fractions that are different from, and generally smaller, than the release fractions reported in NUREG-1465.⁹¹ This difference occurs because MAAP accounts for both physical processes and fission product removal mechanisms, and engineered safety features in containment that are designed to mitigate

⁸⁴ NUREG-1465, at vii.

⁸⁵ *Id.*

⁸⁶ Tr. at 385.

⁸⁷ See Joint Declaration.

⁸⁸ See Ross Affidavit.

⁸⁹ See generally Motion for Summary Disposition, Attachs. 1-48; NRC Staff Answer, Apps. A-E.

⁹⁰ See Joint Declaration at 7; Ross Affidavit at 5.

⁹¹ See Joint Declaration at 23; Ross Affidavit at 7.

releases to the environment.⁹² Although NUREG-1465 describes a number of fission product removal mechanisms in containment, it is left to the reader to use appropriate methodologies to account for such mechanisms, in site-specific analyses.⁹³ MAAP, in contrast, is an integrated analysis, that tracks fission product releases from the damaged core through the reactor primary and containment systems accounting for both engineered safeguard features and fission product retention mechanisms, out to the environment.⁹⁴

Secondly, the NUREG-1465 “in-containment source terms” are meant to be generic; that is, they are determined as a composite of several dominant accident sequences for the reactors assessed in NUREG-1150 plus additional reactors.⁹⁵ For pressurized water reactors (PWRs), such as Davis-Besse, a generic PWR source term into containment was developed in NUREG-1465 for various stages of a core melt accident based on the Surry, Sequoyah, and Zion nuclear plant assessments in NUREG-1150, and the independent PRA assessments for the Calvert Cliffs and Oconee-3 nuclear power plants.⁹⁶ As noted by FENOC’s experts, “Use of the NUREG-1465 source term as a surrogate for the release into the environment, instead of the Davis-Besse, plant specific Level 2 PRA, which develops accident-specific release categories for input to the consequence analysis for the SAMA analysis, leads to an overly conservative estimate and lacks technical merit.”⁹⁷

Lastly, regarding the question of whether the Davis-Besse source terms lead to anomalously low accident consequences, we refer to Figures 1⁹⁸ and 3⁹⁹ in the Joint Declaration, which show that SAMA-related consequences are dependent on the type of release and on site-specific factors. The type of release is plant-design- and accident-sequence-specific, while site-specific factors include meteorology, population density, and evacuation parameters. Intervenors have not presented any evidence that utilizing plant and site-specific factors in conjunction with NUREG-1465 source terms would render the consequences reported in FENOC’s SAMA analysis “anomalously low.”

We find all these uncontroverted showings compelling: (a) that there is no requirement that applicants use NUREG-1465 source terms, (b) that the differences between the NUREG-1465 source terms and the MAAP source terms are due in part to containment engineered safety features and passive and active fission product removal mechanisms and hence are not an appropriate comparison,

⁹² See, e.g., Joint Declaration at 34; Ross Affidavit at 4.

⁹³ NUREG-1465, at 18.

⁹⁴ Joint Declaration at 24.

⁹⁵ See NUREG-1465, at Tables 3.1, 3.2, 3.3, 3.4.

⁹⁶ *Id.*, Table 3.13.

⁹⁷ Joint Declaration at 29.

⁹⁸ *Id.* at 12.

⁹⁹ *Id.* at 27.

and (c) that the NUREG-1465 source terms are generic in nature as compared to the MAAP source terms that are Davis-Besse plant- and site-specific, the latter in accordance with NRC requirements that SAMA analyses be site-specific.¹⁰⁰ Nor have we been made aware of anything provided by Intervenor showing that the consequences are “anomalously low.” Furthermore, we agree with the NRC Staff’s statement that “Intervenor’s concern about the differences between source terms calculated from MAAP4 or calculated in NUREG-1465 are simply not relevant to whether [FENOC’s] SAMA analysis was conducted in a reasonable manner.”¹⁰¹

For these reasons, we conclude that FENOC is entitled to judgment as a matter of law. Thus, FENOC’s Motion for Summary Disposition of Contention 4 is granted insofar as Contention 4 challenges the consistently smaller radionuclide release fractions generated by MAAP as compared to the release fractions specified in NUREG-1465.

3. *Basis 3*

Intervenor also allege that the MAAP code “generates lower release fractions than those derived and used by NRC in studies such as NUREG-1150.”¹⁰² They cite a Brookhaven National Laboratory (BNL) report comparing SAMA analyses performed at two different plants and purportedly demonstrating that the release fractions found in NUREG-1150 (which were obtained using the Source Term Code Package and MELCOR) were higher by a factor of four as compared to those obtained using MAAP.¹⁰³

Once again, we must first determine whether there exists a genuine dispute of material fact. As above, the parties seem to agree on the nature of the material facts — that is, none of the parties disputes that the MAAP code produces lower release fractions than those found in NUREG-1150, or that the BNL report cited by Intervenor demonstrates such a difference. The parties simply dispute the relevance of these facts to the Staff’s SAMA determination. While the Intervenor contend that these differences demonstrate that use of the MAAP code is unreasonable, FENOC argues that “neither of the documents cited by Intervenor [i.e., NUREG-1150 and the BNL report] is pertinent to the use of MAAP-generated source terms in the Davis-Besse *plant-specific* SAMA analysis.”¹⁰⁴ This dispute regarding the relevance of the documents cited by

¹⁰⁰ See, e.g., *id.* at 10.

¹⁰¹ NRC Staff Answer at 11.

¹⁰² Petition to Intervene at 113.

¹⁰³ *Id.*

¹⁰⁴ Motion for Summary Disposition at 29 (emphasis in original).

Intervenors seems to be a legal, rather than factual, dispute. As such, FENOC has demonstrated that no genuine issue of material fact remains concerning Basis 3 of Contention 4. We therefore must determine whether FENOC is entitled to judgment as a matter of law.

NUREG-1150, “Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants,” was published by the NRC in December 1990.¹⁰⁵ As the name implies, the report contains the results of severe accident risk assessments for five nuclear power plants: three PWRs (Unit 1 of the Surry Power Station, Unit 1 of the Zion Nuclear Power Plant, and Unit 1 of the Sequoya Nuclear Power Plant) and two boiling water reactors (BWRs) (Unit 2 of the Peach Bottom Atomic Power Station and Unit 1 of the Grand Gulf Nuclear Station). Among other things, the Introduction explains:

NUREG-1150 is a snapshot in time of severe accident risks in five specific commercial nuclear power plants. This snapshot is obtained using, in general, PRA techniques and severe accident phenomenological information of the mid-1980’s, but with significant advances in certain areas. The plant analyses reflect design and operational information as of roughly March 1988.¹⁰⁶

The Introduction further states:

NUREG-1150 is not an estimate of the risks of all commercial power plants in the United States or abroad. One of the clear perspectives of this study of severe accident risks and other such studies is that characteristics of design and operation specific to individual plants can have a substantial impact on the estimated risk.¹⁰⁷

Indeed, although all designed by Westinghouse, the three PWRs have very different primary (nuclear reactor) systems and very different containments leading to very different source terms.¹⁰⁸ Surry is a three-loop reactor in a reinforced concrete, subatmospheric dry containment, Zion is a four-loop reactor in a pre-stressed concrete, large dry containment, and Sequoya is a four-loop reactor in a wet ice condenser containment. In stark contrast to these PWRs, Davis-Besse is a Babcock and Wilcox designed reactor, with design and operational features (e.g., a once-through steam generator, an integrated control system, and a freestanding steel containment vessel completely surrounded by a reinforced concrete shield

¹⁰⁵ See NUREG-1150.

¹⁰⁶ *Id.* at 1-3.

¹⁰⁷ *Id.*

¹⁰⁸ See *id.* at 3-2, 5-2, 7-2. The two BWRs operate on sufficiently different physical principles that they simply have nothing to do with this case.

building with an annular space in between) that differs substantially from the three PWRs assessed in NUREG-1150.

In assessing whether or not MAAP generates lower release fractions than those derived and used by NRC in other severe accident studies, namely the NUREG-1150 radionuclide releases, and the BNL report comparing the results of the MAAP/Catawba releases with the Sequoyah/NUREG-1150 releases, we turn to the unrefuted testimony of FENOC's and NRC Staff's experts, along with the reports and documents they have included. All three of the experts agree that "comparisons between results from modern codes such as MELCOR or MAAP to early codes such as those used in NUREG-1150 are of limited value."¹⁰⁹ The Joint Declaration goes on to state, "While the final 1990 NUREG-1150 report still is relevant to the nuclear safety community's understanding of severe accident progression, additional severe accident research performed in the U.S. and abroad in the 25 years since the 1987 draft of NUREG-1150 was issued has significantly improved that understanding."¹¹⁰ All three experts conclude that modern codes such as MELCOR and MAAP are more realistic (mechanistic) than their predecessor codes, which were conservative and parametric, and were used in support of the NUREG-1150 risk analyses, thus explaining the major differences between NUREG-1150 and Davis-Besse source terms.¹¹¹

The BNL report referred to by the Intervenor "provides an estimate of the benefit accrued from enhancing the currently installed combustible gas control systems in PWR nuclear power plants with ice condenser containments and BWR plants with Mark III containments."¹¹² In particular, Intervenor points to the Sequoyah PRA analysis obtained from NUREG-1150 using the Source Term Code Package and MELCOR, and the Catawba (also an ice condenser plant) PRA analysis performed using the MAAP code. Intervenor claims that these studies confirm the point that the "release fractions for the important radionuclides are about a factor of 4 higher than the ones used in the Duke PRA."¹¹³ The BNL report attributes these differences in the release fractions to the use of different codes in the two analyses.¹¹⁴ Moreover, the difference reported by BNL is for a

¹⁰⁹ Ross Affidavit at 7; *see also* Joint Declaration at 33.

¹¹⁰ Joint Declaration at 33.

¹¹¹ *See* Ross Affidavit at 7-8; Joint Declaration at 34.

¹¹² Brookhaven National Laboratory, Energy Sciences and Technology Department, Benefit Cost Analysis of Enhancing Combustible Gas Control Availability at Ice Condenser and Mark III Containment Plants, Final Letter Report (Dec. 2002) at 2 (ADAMS Accession No. ML031700011) [hereinafter BNL Report].

¹¹³ *Id.* at 17; Petition to Intervene at 113.

¹¹⁴ BNL Report at 17.

“typical release class” and was obtained from a 2002 e-mail from Duke Power for their “latest PRAs” and a “typical release class” obtained from NUREG-1150.¹¹⁵

All three experts give technical reasons, which Intervenor does not dispute, for the major differences in the Sequoyah and Catawba results that are congruent with the discussion above, and in particular, the Staff expert presents an “apples to apples” comparison of the Davis-Besse source term and the NUREG-1150 PWR source terms.¹¹⁶ FENOC’s experts reference results from the recently published Draft SOARCA reports that concluded, “[I]n addition to delayed radiological releases, the magnitude of the radioactive releases, especially with respect to the key radionuclides (iodine and cesium) is much smaller than estimated in prior studies, such as the 1982 Sandia Siting Study.”¹¹⁷ FENOC’s experts also point to the 2002 Generic Environmental Impact Statement for License Renewal regarding the Catawba plant, wherein the NRC Staff compared similar sequences between NUREG-1150 and Revision 2b of the Catawba PRA and concluded there was reasonable agreement for the closest corresponding release categories.¹¹⁸ The Staff expert goes one step further and compares the source terms identified in NUREG-1150 for the Zion Plant and the source terms used in FENOC’s SAMA analysis. He concludes that on a “consistent basis, including looking at the entire statistical description of the source term and the type of accident, it is apparent that the source terms generated by FENOC using MAAP4 are comparable with NUREG-1150 and actually produced higher amounts of the key radionuclides of concern in some accident calculations.”¹¹⁹

We again find all of these uncontroverted showings compelling: (a) the differences in NUREG-1150 source terms and the Davis-Besse source terms are due in part to major differences in reactor design and containment design; (b) advancements in the understanding and modeling of accident progression during the last 25-plus years have made sound technical comparisons difficult at best; (c) whether the Catawba source terms compare favorably to the Sequoyah source terms is immaterial to the present proceeding regarding the Davis-Besse

¹¹⁵ *Id.*

¹¹⁶ See Ross Affidavit at 8-10; Tr. at 301.

¹¹⁷ Joint Declaration at 38-39; Office of Nuclear Regulatory Research, State-of-the-Art Reactor Consequence Analyses (SOARCA) Report, Draft Report for Comment, NUREG-1935, at 82-83 (Jan. 2012) (ADAMS Accession No. ML120250406). While FENOC’s experts refer to this Draft Report, we note that a Final Report has since been published and is available at ADAMS Accession No. ML12332A057.

¹¹⁸ See Joint Declaration at 35; see also Division of Regulatory Improvement Programs, Office of Nuclear Reactor Regulation, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supp. 9, Regarding Catawba Nuclear Station, Units 1 and 2, Final Report, NUREG-1437, at 5-9 to 5-10 (Dec. 2002).

¹¹⁹ NRC Staff Answer at 11-12; Ross Affidavit at 8-11.

plant and SAMA analysis, which is of a very different design;¹²⁰ and d) the NRC has found that use of the MAAP code source term is “reasonable” in a number of assessments.¹²¹ Intervenor’s have provided no factual or expert support to controvert these arguments. We therefore agree with the NRC Staff’s assertion that “[s]ince the source terms produced by MAAP4 were consistent with the source terms identified in NUREG-1150, Intervenor’s concern that MAAP produces non-conservative source terms is simply not supported. Thus FirstEnergy is entitled to judgment as a matter of law.”¹²² And as such, Intervenor’s have not put forward a credible argument that use of the MAAP code “render[s] the SAMA analysis altogether unreasonable under NEPA,” as required by the Commission.¹²³

For all these reasons, we conclude that FENOC is entitled to judgment as a matter of law. Thus, FENOC’s Motion for Summary Disposition of Contention 4 is granted insofar as Contention 4 challenges the lower release fractions generated by MAAP as compared to the release fractions specified in other severe accident studies (namely NUREG-1150).

IV. CONCLUSION AND ORDER

We conclude that FENOC’s use of the MAAP code to generate fission product source terms for use in the Davis-Besse SAMA analysis is reasonable under NEPA and therefore deny the claim that it fails to meet the NRC SAMA requirements specified in 10 C.F.R. § 51.53(c)(3)(ii)(L). For the foregoing reasons, we hold that there exists no genuine dispute of material fact concerning Contention 4, and that FENOC is entitled to judgment as a matter of law. As such, FENOC’s motion for summary disposition of Contention 4 is GRANTED.¹²⁴

¹²⁰ Again, Catawba and Sequoyah are Westinghouse PWR four-loop plants with U-tube steam generators and with ice-condenser containments that are very different than Davis-Besse, a Babcock and Wilcox two-loop plant with once-through steam generators in a large dry containment.

¹²¹ The NRC has approved a number of LRAs from applicants that used the MAAP code for their SAMA analyses. *See* Joint Declaration at 41.

¹²² NRC Staff Answer at 12.

¹²³ CLI-12-1, 75 NRC at 57.

¹²⁴ Although this ruling disposes of the only admitted contention in this proceeding, it does not conclude this case. As is noted in our ruling today finding Intervenor’s Contention 5 to be inadmissible, there remains to be determined the admissibility of a contention filed by Intervenor on July 9, 2012, concerning the need under NEPA to include a discussion of the environmental impacts of spent fuel pool (SFP) leakage, SFP fires, and the lack of a spent fuel repository, as required by the recent decision of the United States Court of Appeals for the District of Columbia Circuit in *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012). *See* LBP-12-27, 76 NRC at 611-12 n.176. As was also noted in today’s other decision, that matter remains in abeyance pending further Commission direction. *See id.*

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

William J. Froehlich, Chairman
ADMINISTRATIVE JUDGE

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE

Dr. William E. Kastenber
ADMINISTRATIVE JUDGE

Rockville, Maryland
December 28, 2012

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

William J. Froehlich, Chairman
Nicholas G. Trikouros
Dr. William E. Kastenberg

In the Matter of

Docket No. 50-346-LR
(ASLBP No. 11-907-01-LR-BD01)

FIRSTENERGY NUCLEAR
OPERATING COMPANY
(Davis-Besse Nuclear Power
Station, Unit 1)

December 28, 2012

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

Section 2.309(f)(1) of 10 C.F.R. provides the general requirements for admissibility for all contentions. Specifically, a contention must provide (1) a specific statement of the legal or factual issue sought to be raised; (2) a brief explanation of its basis; (3) a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (4) sufficient information demonstrating that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief. In addition, the petitioner must demonstrate that the issue raised in the contention is both "within the scope of the proceeding" and "material to the findings the NRC must make to support the action that is involved in the proceeding."

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

The strict contention rule is designed to avoid resource-intensive hearings where petitioners have not provided sufficient support for their technical claims, and do not demonstrate a potential to meaningfully participate and inform a hearing.

RULES OF PRACTICE: CONTENTIONS (TIMELINESS)

If a contention is submitted after the initial filing period for receipt of petitions to intervene, Intervenor must satisfy section 2.309(f)(2). To file an admissible contention under section 2.309(f)(2), with leave of the Board, Intervenor must show that:

- (i) The information upon which the amended or new contention is based was not previously available;
- (ii) The information upon which the amended or new contention is based is materially different than information previously available; and
- (iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.

RULES OF PRACTICE: CONTENTIONS (TIMELINESS)

A contention that does not meet the timeliness requirements of 10 C.F.R. § 2.309(f)(2)(i)-(iii) might be admissible as a nontimely contention under 10 C.F.R. § 2.309(c). Section 2.309(c) sets out an eight-factor balancing test to determine whether the nontimely contention should be admitted. Of the eight factors, the first factor — good cause for the failure to file on time — is afforded the most weight. The burden is on the Intervenor to demonstrate that a balancing of the factors weighs in favor of granting the petition.

RULES OF PRACTICE: MOTIONS (CONSULTATION REQUIREMENT)

NRC regulations make clear that a motion must be rejected if it does not include a certification by the attorney or representative of the moving party that the movant has made a sincere effort to contact other parties in the proceeding and resolve the issue(s) raised in the motion, and that the movant's efforts to resolve the issue(s) have been unsuccessful.

RULES OF PRACTICE: MOTIONS TO AMEND

Intervenors’ second Motion to Amend highlights the differences between the February Root Cause Report and the Shield Building AMP. There is no showing as to the significance of any of the “differences” highlighted. Intervenors’ challenge to the AMP must consist of more than allegations that the AMP is deficient. Intervenors must point to specific ways the AMP is inadequate or wrong.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

Asking questions and seeking additional information is an essential part of the NRC’s licensing process, and it is clear that such questioning does not automatically give rise to an admissible contention.

RULES OF PRACTICE: CONTENTIONS (SCOPE)

Challenges to current licensing issues and safety culture are beyond the scope of this relicensing proceeding.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

Intervenors need not prove their case at the contention admissibility stage. However, a petitioner must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate.

RULES OF PRACTICE: CONTENTIONS (MOOTNESS)

Where a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by the applicant, the contention is moot.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

The Commission has made abundantly clear that contentions based on pure speculation are not admissible.

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MEMORANDUM AND ORDER
(Denying Motions to Admit, to Amend, and to
Supplement Proposed Contention 5)

Before this Board is a motion from Beyond Nuclear, Citizens Environment Alliance of Southwestern Ontario, Don't Waste Michigan, and the Green Party of Ohio (collectively, Intervenors) seeking admission of a newly proposed contention regarding the cracking of the shield building at the Davis-Besse Nuclear Power Station, Unit 1 (Davis-Besse).¹ Also before the Board are Intervenors' five motions to amend or supplement the proposed cracking contention.²

¹ See Motion for Admission of Contention No. 5 on Shield Building Cracking (Jan. 10, 2012) [hereinafter Motion to Admit].

² See Intervenors' Motion to Amend "Motion for Admission of Contention No. 5" (Feb. 27, 2012) [hereinafter First Motion to Amend]; Intervenors' Motion to Amend and Supplement Proposed Contention No. 5 (Shield Building Cracking) (June 4, 2012) [hereinafter Second Motion to Amend]; Intervenors' Third Motion to Amend and/or Supplement Proposed Contention No. 5 (Shield Building Cracking) (July 16, 2012) [hereinafter Third Motion to Amend]; Intervenors' Motion to Amend and

(Continued)

Applicant, FirstEnergy Nuclear Operating Company (FENOC), opposes the Motion to Admit and its five amendments. FENOC contends that all Intervenor's motions are untimely and fail to meet the standards in 10 C.F.R. § 2.309(f)(1). The NRC Staff also opposes Intervenor's Motion to Admit and its five amendments. NRC Staff argues generally that the motions do not meet the 10 C.F.R. § 2.309(f)(1) admissibility requirements, as they raise issues that are outside the scope of this license renewal proceeding, are unsupported, and/or are immaterial.

For the reasons discussed in detail below, Intervenor's motion to admit Contention 5 and the five subsequent motions to amend and/or supplement proposed Contention 5 are DENIED.

I. PROCEDURAL BACKGROUND

On August 27, 2010, FENOC submitted a License Renewal Application (LRA), requesting that the Davis-Besse operating license be renewed for an additional 20 years, i.e., until April 22, 2037.³ The LRA was accepted for docketing and the NRC published a Notice of Opportunity for Hearing in the *Federal Register* on October 25, 2010.⁴

On December 27, 2010, Intervenor's filed a timely Request for Public Hearing and Petition for Leave to Intervene.⁵ Intervenor's proposed four contentions. By Memorandum and Order issued April 26, 2011, this Board found that Intervenor's had demonstrated standing, admitted three "alternative energy" contentions (as reformulated and combined into one contention designated Contention 1), and also admitted a limited severe accident mitigation alternatives (SAMA) analysis contention (Contention 4).⁶

FENOC appealed the Board's Order to the Commission.⁷ On March 27, 2012,

Supplement Proposed Contention No. 5 (Shield Building Cracking) (July 23, 2012) [hereinafter Fourth Motion to Amend]; Intervenor's Fifth Motion to Amend and/or Supplement Proposed Contention No. 5 (Shield Building Cracking) (Aug. 16, 2012) [hereinafter Fifth Motion to Amend].

³License Renewal Application; Davis-Besse Nuclear Power Station 1.0-1, 1.1-1 (Aug. 2010) (ADAMS Accession Nos. ML102450567, ML102450563) [hereinafter Application]. The application also seeks renewal of the associated source material, special nuclear material, and by-product material licenses under 10 C.F.R. Parts 30, 40, and 70. *Id.* at 1.0-1.

⁴Notice of Acceptance for Docketing of the Application, Notice of Opportunity for Hearing for Facility Operating License No. NPF-003 for an Additional 20-Year Period; FirstEnergy Nuclear Operating Company, Davis-Besse Nuclear Power Station, Unit 1, 75 Fed. Reg. 65,528, 65,529 (Oct. 25, 2010) [hereinafter Hearing Notice].

⁵See Beyond Nuclear, Citizens Environment Alliance of Southwestern Ontario, Don't Waste Michigan, and the Green Party of Ohio Request for Public Hearing and Petition for Leave to Intervene (Dec. 27, 2010) [hereinafter Petition to Intervene].

⁶See LBP-11-13, 73 NRC 534, 588-89 (2011).

⁷FirstEnergy's Notice of Appeal of LBP-11-13 (May 6, 2012).

the Commission issued CLI-12-8, reversing our admission of Contention 1 and reversing in part our admission of Contention 4.⁸ The Commission permitted that part of Contention 4 that relates to the Modular Accident Analysis Program (MAAP) code to move forward toward an evidentiary hearing.⁹

On January 10, 2012, Intervenor moved to admit proposed Contention 5 concerning recently discovered concrete cracking at the Davis-Besse shield building.¹⁰ Intervenor alleged that FENOC must describe how it will manage the shield building cracking during the license renewal term and that the NRC Staff must consider the implications of the shield building cracking in its Supplemental Environmental Impact Statement (SEIS).¹¹ On February 6, 2012, FENOC filed an answer opposing admission of proposed Contention 5.¹² The NRC Staff filed an answer that same day, in which it maintained that a revised and substantially limited portion of proposed Contention 5 should be admitted.¹³ FENOC sought leave to respond to the NRC Staff (and filed such a response) on February 9, 2012, or alternatively, proceed to oral argument on this issue.¹⁴ The Board denied FENOC's request for leave to respond on February 13, 2012, stating, "Rather than begin a flurry of responsive pleadings, the Board believes that oral argument would be helpful in deciding the admissibility of proposed Contention 5," and noting that an oral argument would be scheduled at a later date.¹⁵

On February 13, 2012, Intervenor filed a combined reply to FENOC's and the NRC Staff's answers.¹⁶ On February 23, 2012, FENOC moved to strike portions of this reply, arguing that Intervenor put forth claims beyond the scope of the initial motion and the answers.¹⁷ FENOC further sought to strike unsupported allegations

⁸ CLI-12-8, 75 NRC 393, 419 (2012).

⁹ We address a Motion for Summary Disposition of Contention 4 filed by FENOC in a separate Order issued this day. *See* LBP-12-26, 76 NRC 559 (2012).

¹⁰ *See* Motion to Admit.

¹¹ *Id.* at 2-6.

¹² *See* FENOC's Answer Opposing Intervenor's Motion for Admission of Contention No. 5 on Shield Building Cracking (Feb. 6, 2012) [hereinafter FENOC's Answer to Motion to Admit].

¹³ *See* NRC Staff's Answer to Motion to Admit New Contention Regarding the Safety Implications of Newly Discovered Shield Building Cracking at 9 (Feb. 6, 2012) [hereinafter NRC Staff's Answer to Motion to Admit].

¹⁴ *See* FENOC's Unopposed Motion for Leave to Respond to the NRC Staff's Answer to Proposed Contention 5 on Shield Building Cracking (Feb. 9, 2012) at 2.

¹⁵ Licensing Board Order (Denying Unopposed Motion for Leave to Respond to NRC Staff's Answer to Proposed Contention 5 and Setting Proposed Contention 5's Admissibility for Oral Argument) (Feb. 13, 2012) (unpublished).

¹⁶ *See* Intervenor's Combined Reply in Support of Motion for Admission of Contention No. 5 (Feb. 13, 2012) [hereinafter Intervenor's Reply to Motion to Admit Answers].

¹⁷ FENOC's Motion to Strike Portions of Intervenor's Reply for the Proposed Contention 5 on Shield Building Cracking (Feb. 23, 2012) [hereinafter Motion to Strike].

of fraud against FENOC and the NRC.¹⁸ On February 27, 2012, Intervenor filed an answer opposing the motion to strike, claiming that the arguments in its reply were made legitimately in response to arguments in FENOC's and the NRC Staff's answers.¹⁹ The NRC Staff filed an answer supporting the motion to strike on March 5, 2012.²⁰ The Board granted in part and denied in part the motion to strike on October 11, 2012, and admonished Intervenor for their unsubstantiated charges of fraud against FENOC and the NRC Staff.²¹

On February 27, 2012, Intervenor moved to amend proposed Contention 5, seeking to add as allegations of fact a February 8, 2012 press release from Congressman Dennis Kucinich, and a January 31, 2012 NRC inspection report.²² FENOC and the NRC Staff each filed answers opposing Intervenor's motion to amend on March 8, 2012.²³

On March 28, 2012, this Board issued an Order setting the admissibility of proposed Contention 5 for oral argument to be held on May 18, 2012, in Port Clinton, Ohio.²⁴

On April 5, 2012, FENOC notified the Board that it had submitted revisions to the LRA.²⁵ The LRA revisions included, among other things, a new aging management program (AMP) in section B.2.43, "Shield Building Monitoring Program," that FENOC contends "ensure[s] that the intended functions of the Shield Building are maintained during the period of extended operation."²⁶ On April 16, 2012, FENOC filed an unopposed motion to supplement its answer, alleging that this new AMP moots both (1) Contention 5's challenges to whether FENOC addressed aging management of Shield Building cracking and (2) the

¹⁸ Motion to Strike at 1.

¹⁹ Intervenor's Answer to FENOC "Motion to Strike" at 1 (Feb. 27, 2012).

²⁰ See NRC Staff's Answer to FENOC's Motion to Strike Portions of Intervenor's Reply for the Proposed Contention 5 on Shield Building Cracking (Mar. 5, 2012).

²¹ Licensing Board Order (Granting in Part and Denying in Part Motion to Strike) (Oct. 11, 2012) (unpublished).

²² First Motion to Amend at 1-3.

²³ See FENOC's Answer Opposing Intervenor's Motion to Amend Proposed Contention 5 on Shield Building Cracking (Mar. 8, 2012); NRC Staff's Answer to Intervenor's Motion to Amend "Motion for Admission of Contention No. 5" (Mar. 8, 2012) [hereinafter NRC Staff's Answer to First Motion to Amend].

²⁴ Licensing Board Notice and Order (Scheduling Oral Argument) (Mar. 28, 2012) at 3 (unpublished).

²⁵ Letter from T. Matthews, FENOC Counsel, to the Board, Notification of Filing Related to Proposed Shield Building Cracking Contention (Apr. 5, 2012).

²⁶ Enclosure L-12-028, Amendment No. 25 to the DBNPS License Renewal Application (Apr. 5, 2012) at 10 (appended to "Attachment L-12-028" of the Board Notification's Enclosure 1, Reply to Request for Additional Information for the Review of the Davis-Besse Nuclear Power Station, Unit No. 1, License Renewal Application (TAC No. ME4640) and License Renewal Application Amendment No. 25 (Apr. 5, 2012)).

revised contention of omission set forth by the NRC Staff in its answer.²⁷ While Intervenor reserved the right to file a reply as a condition of not opposing FENOC's motion,²⁸ they never filed such a pleading. The Board subsequently granted FENOC's motion for leave to supplement its answer.²⁹

On May 14, 2012, Intervenor filed an unopposed motion to vacate and reschedule the oral argument previously scheduled for May 18, 2012.³⁰ Intervenor noted that they planned to file a motion to amend the proposed Contention 5 based on the revisions to FENOC's license renewal application explained in FENOC's April 5, 2012 filing.³¹ On May 15, 2012, the Board granted Intervenor's request and cancelled the oral argument, noting that another oral argument would be scheduled in the future should the Board deem it necessary.³²

On June 4, 2012, Intervenor filed a second motion to amend Contention 5.³³ FENOC filed an answer opposing the motion to amend on June 29, 2012.³⁴ The NRC Staff also filed an answer on that same day, noting that it no longer supported the admission of a limited version of Contention 5, because FENOC's April 5 filing now adequately addressed its concerns.³⁵ Intervenor filed a reply on July 6, 2012.³⁶

On July 16, 2012, Intervenor filed a third motion to amend Contention 5³⁷ and on July 23, 2012, Intervenor filed a fourth motion to amend Contention 5.³⁸

²⁷ FENOC's Unopposed Motion for Leave to Supplement Its Answer to the Proposed Shield Building Cracking Contention (Apr. 16, 2012).

²⁸ *Id.* at 2 n.7.

²⁹ Licensing Board Order (Granting FENOC's Unopposed Motion for Leave to Supplement Its Answer to the Proposed Shield Building Cracking Contention) (Apr. 17, 2012) (unpublished).

³⁰ *See* Intervenor's Unopposed Motion to Vacate and Reschedule Oral Argument on Proposed Contention No. 5 (May 14, 2012).

³¹ *Id.* at 2.

³² Licensing Board Order (Granting Unopposed Motion to Vacate Oral Argument) (May 15, 2012) at 2-3 (unpublished).

³³ *See* Second Motion to Amend.

³⁴ FENOC's Answer Opposing Intervenor's Motion to Amend and Supplement Proposed Contention No. 5 (Shield Building Cracking) (June 29, 2012).

³⁵ NRC Staff's Answer to Motion to Amend and Supplement Proposed Contention No. 5 (Shield Building Cracking) at 2 (June 29, 2010).

³⁶ Intervenor's Combined Reply to FENOC and NRC Staff Opposition to "Motion to Amend and Supplement Proposed Contention No. 5 (Shield Building Cracking)" (July 6, 2012) [hereinafter NRC Staff's Answer to Second Motion to Amend].

³⁷ *See* Third Motion to Amend.

³⁸ *See* Fourth Motion to Amend.

At the instruction of the Board,³⁹ on August 17, 2012, FENOC⁴⁰ and the NRC Staff⁴¹ each filed a combined answer to the third and fourth motions to amend. Intervenor filed a combined reply to the combined answers on August 24, 2012.⁴²

On August 16, 2012, Intervenor filed a fifth motion to amend Contention 5.⁴³ On September 10, 2012, FENOC and the NRC Staff filed answers opposing the fifth motion to amend.⁴⁴ This Board convened an oral argument on the admissibility of Contention 5 and the five motions to supplement or amend on November 5 and 6, 2012, in Toledo, Ohio.⁴⁵

II. LEGAL STANDARDS⁴⁶

The admissibility of a new or amended contention is governed by three sets of regulations: 10 C.F.R. § 2.309(f)(1)(i)-(vi) sets forth the general admissibility requirements for all contentions, 10 C.F.R. § 2.309(f)(2)(i)-(iii) sets forth the admissibility requirements for new or amended contentions filed after the deadline for receipt of petitions to intervene has passed, and 10 C.F.R. § 2.309(c) sets forth the admissibility requirement for nontimely contentions.

A. General Requirements for Admissibility

Section 2.309(f)(1) provides the general requirements for admissibility for all

³⁹ Licensing Board Order (Setting Dates for Answers and Reply to Motions to Amend Contention 5) (July 17, 2012) (unpublished).

⁴⁰ FENOC's Answer Opposing Intervenor's Third and Fourth Motions to Amend and/or Supplement Proposed Contention No. 5 (Shield Building Cracking) (Aug. 17, 2012) [hereinafter FENOC's Answer to Third and Fourth Motions to Amend].

⁴¹ NRC Staff's Answer to Intervenor's Third and Fourth Motions to Amend and/or Supplement Proposed Contention No. 5 (Shield Building Cracking) (Aug. 17, 2012) [hereinafter NRC Staff's Answer to Third and Fourth Motions to Amend].

⁴² Intervenor's Combined Reply to NRC and FENOC Answers to Intervenor's Third and Fourth Motions to Amend and/or Supplement Proposed Contention No. 5 (Shield Building Cracking) (Aug. 24, 2012) [hereinafter Intervenor's Combined Reply to the Combined Answers].

⁴³ Intervenor's Fifth Motion to Amend and/or Supplement Proposed Contention No. 5 (Shield Building Cracking) (Aug. 16, 2012) [hereinafter Fifth Motion to Amend].

⁴⁴ FENOC's Answer Opposing Intervenor's Fifth Motion to Amend and/or Supplement Proposed Contention No. 5 (Shield Building Cracking) (Sept. 10, 2012) [hereinafter FENOC's Answer to Fifth Motion to Amend]; NRC Staff's Answer to Intervenor's Fifth Motion to Amend and/or Supplement Proposed Contention No. 5 (Shield Building Cracking) (Sept. 10, 2012) [hereinafter NRC Staff's Answer to Fifth Motion to Amend].

⁴⁵ See Tr. at 275-712.

contentions.⁴⁷ Specifically, a contention must provide (1) a specific statement of the legal or factual issue sought to be raised; (2) a brief explanation of its basis; (3) a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (4) sufficient information demonstrating that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief.⁴⁸ In addition, the petitioner must demonstrate that the issue raised in the contention is both "within the scope of the proceeding" and "material to the findings the NRC must make to support the action that is involved in the proceeding."⁴⁹ Failure to comply with any of these requirements is grounds for not admitting a contention.⁵⁰ The Commission has explained that its "strict contention rule is designed to avoid resource-intensive hearings where petitioners have not provided sufficient support for their technical claims, and do not demonstrate a potential to meaningfully participate and inform a hearing."⁵¹

B. Timeliness of New or Amended Contentions

In addition to satisfying 10 C.F.R. § 2.309(f)(1), Intervenor must also satisfy the timeliness requirements of section 2.309(f)(2) or section 2.309(c).

If a contention is submitted after the initial filing period for receipt of petitions to intervene — in this case the initial filing deadline was December 27, 2010⁵² — Intervenor must satisfy section 2.309(f)(2). To file an admissible contention under section 2.309(f)(2), with leave of the Board, Intervenor must show that:

- (i) The information upon which the amended or new contention is based was not previously available;
- (ii) The information upon which the amended or new contention is based is materially different than information previously available; and

⁴⁷ The August 3, 2012 amendments to the Part 2 regulations did not change the six basic requirements of 10 C.F.R. § 2.309(f)(1)(i)-(vi).

⁴⁸ See 10 C.F.R. § 2.309(f)(1)(i), (ii), (v), (vi).

⁴⁹ *Id.* § 2.309(f)(1)(iii), (iv).

⁵⁰ See *South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 7 & n.33 (2010).

⁵¹ CLI-12-8, 75 NRC at 416.

⁵² Hearing Notice, 75 Fed. Reg. at 65,528-29.

(iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.⁵³

In this case, a contention or an amendment or supplement to a contention is considered timely under section 2.309(f)(2)(iii) if the contention, amendment, or supplement is filed “within sixty (60) days of the date when the material information on which it is based first becomes available to the moving party through service, publication, or any other means. If filed thereafter, the motion and proposed contention shall be deemed nontimely under 10 C.F.R. § 2.309(c).”⁵⁴

A contention that does not meet the timeliness requirements of 10 C.F.R. § 2.309(f)(2)(i)-(iii) might be admissible as a nontimely contention under 10 C.F.R. § 2.309(c).⁵⁵ Section 2.309(c) sets out an eight-factor balancing test to determine whether the nontimely contention should be admitted.⁵⁶ Of the eight factors, the first factor — good cause for the failure to file on time — is afforded

⁵³ 10 C.F.R. § 2.309(f)(2)(i)-(iii).

⁵⁴ Initial Scheduling Order (June 15, 2011) at 12 (unpublished) [hereinafter ISO].

⁵⁵ A petitioner can justify filing a petition after the initial deadline has expired in one of two ways. First, the petitioner can show that the contention is based on new information (i.e., material information that was not previously available) and that the petition was filed promptly after the new information became available. *See* 10 C.F.R. § 2.309(c)(1)(i)-(iii); 77 Fed. Reg. at 46,591. Alternatively, the petitioner can justify missing the filing deadline by showing that the delay was caused by factors such as a weather event or unexpected health issues. *See* 10 C.F.R. §§ 2.309(c)(2), 2.307; 77 Fed. Reg. at 46,571, 46,591.

⁵⁶ The eight-factor test provided in section 2.309(c) is as follows:

- (i) Good cause, if any, for the failure to file on time;
- (ii) The nature of the requestor’s/petitioner’s right under the Act to be made a party to the proceeding;
- (iii) The nature and extent of the requestor’s/petitioner’s property, financial or other interest in the proceeding;
- (iv) The possible effect of any order that may be entered in the proceeding on the requestor’s/petitioner’s interest;
- (v) The availability of other means whereby the requestor’s/petitioner’s interest will be protected;
- (vi) The extent to which the requestor’s/petitioner’s interests will be represented by existing parties;
- (vii) The extent to which the requestor’s/petitioner’s participation will broaden the issues or delay the proceeding; and
- (viii) The extent to which the requestor’s/petitioner’s participation may reasonably be expected to assist in developing a sound record.

10 C.F.R. § 2.309(c)(1).

the most weight.⁵⁷ The burden is on the Intervenor to demonstrate “that a balancing of the factors weighs in favor of granting the petition.”⁵⁸

C. NRC Case Law

1. *Scope of License Renewal Proceedings*

NRC regulations limit the scope of a license renewal proceeding to the specific matters that must be considered for the license renewal application to be granted.⁵⁹ All contentions must be within the scope of the proceeding as defined by the Commission in its initial Notice and Order referring the proceeding to the Licensing Board.⁶⁰ Any contention that falls outside the specified scope of the proceeding must be rejected.⁶¹

2. *Materiality*

To be admissible, the regulations require that all contentions proffer an issue of law or fact that is material to the outcome of a licensing proceeding, meaning that the subject matter of the contention must impact the grant or denial of a pending license application.⁶² This requirement of materiality often dictates that any contention alleging deficiencies or errors in an application also indicate some significant link between the claimed deficiency and either the health and safety of the public or the environment.⁶³

⁵⁷ See, e.g., *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 125-26 (2009) (“[Section 2.309(c)(1)] sets forth eight factors, the most important of which is ‘good cause’ for the failure to file on time. Good cause has long been interpreted to mean that the information on which the proposed new contention is based was not previously available.”).

⁵⁸ *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-88-12, 28 NRC 605, 609 (1988).

⁵⁹ See Final Rule: “Nuclear Power Plant License Renewal; Revisions,” 60 Fed. Reg. 22,461 (May 8, 1995); Final Rule: “Nuclear Power Plant License Renewal,” 56 Fed. Reg. 64,943 (Dec. 13, 1991).

⁶⁰ See 10 C.F.R. § 2.309(f)(1)(iii); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 329 (2000); *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985).

⁶¹ See *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 435-36 (2011).

⁶² See 10 C.F.R. § 2.309(f)(1)(iv).

⁶³ See *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 75-76 (1996), *rev’d in part on other grounds*, CLI-96-7, 43 NRC 235 (1996); see also *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 439-41 (2002), *petition for review denied*, CLI-03-12, 58 NRC 185, 191 (2003).

3. *Must Raise a Genuine Dispute*

A properly formulated contention must focus on the license application in question, challenging either specific portions of, or alleged omissions from, the application (including the safety analysis report/technical report and the ER) so as to establish that a genuine dispute exists with the applicant on a material issue of law or fact.⁶⁴ Any contention that fails to directly controvert the application or that mistakenly asserts the application does not address a relevant issue will be dismissed.⁶⁵

4. *Need for Adequate Factual Information or Expert Opinion*

To trigger a full adjudicatory hearing, petitioners must be able to “proffer at least some minimal factual and legal foundation in support of their contentions.”⁶⁶ It is the petitioner’s obligation to present factual allegations and/or expert opinion necessary to support its contention.⁶⁷ While a board may appropriately view a petitioner’s supporting information in a light favorable to the petitioner, failure to provide such information regarding a proffered contention requires that the contention be rejected.⁶⁸ Neither mere speculation nor bare or conclusory assertions, even by an expert, alleging that a matter should be considered will suffice to allow the admission of a proffered contention.⁶⁹ If a petitioner neglects to provide the requisite support for its contentions, it is not within the board’s power to make assumptions or draw inferences that favor the petitioner, nor may the board supply information that is lacking.⁷⁰ Likewise, simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information’s significance, is inadequate to support the admission of the contention.⁷¹

⁶⁴ See 10 C.F.R. § 2.309(f)(1)(vi).

⁶⁵ See *Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 557 (2009); *USEC Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 462-63 (2006).

⁶⁶ *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999).

⁶⁷ See 10 C.F.R. § 2.309(f)(1)(v); *American Centrifuge Plant*, CLI-06-10, 63 NRC at 457.

⁶⁸ See *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 143, 155 (1991).

⁶⁹ See *American Centrifuge Plant*, CLI-06-10, 63 NRC at 472; *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003).

⁷⁰ See *North Trend Expansion Project*, CLI-09-12, 69 NRC at 553; *Palo Verde*, CLI-91-12, 34 NRC at 155.

⁷¹ See *Fansteel*, CLI-03-13, 58 NRC at 204-05.

III. ANALYSIS AND RULING

Intervenors filed proposed Contention 5 on January 10, 2012. The wording of the contention has not changed in any of the subsequent motions to amend or supplement. The proposed contention reads as follows:

Intervenors contend that FirstEnergy's recently-discovered, extensive cracking of unknown origin in the Davis-Besse shield building/secondary reactor radiological containment structure is an aging-related feature of the plant, the condition of which precludes safe operation of the atomic reactor beyond 2017 for any period of time, let alone the proposed 20-year license period.⁷²

A. Timeliness

FENOC states that “[o]n October 10, 2011, workers identified indications of cracking below the surface of the Shield Building.”⁷³ FENOC further states that on October 10, 2011, it promptly notified the NRC Resident Inspector, placed the issue into the Corrective Action Program, and mobilized a team of experts to conduct an investigation, which included extensive visual inspections, electronic testing, and concrete sampling of the building's walls, and architectural elements.⁷⁴ Over the succeeding months, numerous tests, inspections, evaluations, and reports were issued concerning the source, severity, and impact of the cracking. On January 5, 2012, in Camp Perry, Ohio, FENOC made a presentation at an NRC public meeting to explain to the community its and the NRC's plans to address the shield building cracking.⁷⁵ FENOC was directed to submit a Root Cause Evaluation to the NRC by February 28, 2012.⁷⁶

There has been extensive debate among the parties in their pleadings⁷⁷ and

⁷² Motion to Admit at 11. During oral argument, the Board inquired whether Intervenors wanted the Board to formulate a revised contention based on Intervenors' Motions to Amend and/or Supplement because the wording of the original contention did not change through the course of the Motions. *See* Tr. at 581. Intervenors declared that there is no change in the wording of the original contention even though they submitted five subsequent Motions to Amend and/or Supplement the Motion to Admit. *See* Tr. at 581-82.

⁷³ FENOC's Answer to Motion to Admit at 4.

⁷⁴ *Id.* at 6.

⁷⁵ *See* FENOC's Answer to First Motion to Amend, Attach. 2, Davis-Besse Nuclear Power Station, Nuclear Regulatory Commission Public Meeting January 5, 2012.

⁷⁶ Letter from Cynthia D. Pederson, Acting Regional Administrator, U.S. NRC, to Barry Allen, Site Vice President, FENOC, Confirmatory Action Letter — Davis-Besse Nuclear Power Station (Dec. 2, 2011) (ADAMS Accession No. ML11336A355) [hereinafter CAL].

⁷⁷ *See* Motion to Admit at 6-10; Staff's Answer to Motion to Amend at 9-14; FENOC's Answer to Motion to Admit at 12-16; Intervenors' Reply to Motion to Admit Answers at 1-7.

at oral argument⁷⁸ about whether Intervenor's motion to admit was timely filed within 60 days of the date when the information upon which the motion is based first became available through service, publication, or any other means.

Intervenor's state that Contention 5 is timely under section 2.309(f)(2),⁷⁹ but do not explain how their pleading meets the standards in section 2.309(f)(2).⁸⁰ The Initial Scheduling Order (ISO) in this case instructs that if there is any uncertainty whether a new or amended contention was timely, Intervenor's could argue timeliness under section 2.309(f)(2) or section 2.309(c).⁸¹ Intervenor's did not address either of these sections.

In their motion, Intervenor's argue that Contention 5 is "based on structural damage — cracks — which were noticed by FENOC's contractors or employees in September 2011 and soon reported to the NRC."⁸² Intervenor's contend that initially FENOC described the cracks to be "superficial, cosmetic, [and] non-structural."⁸³ Intervenor's argue that they only discovered that the cracks were not limited to architecturally "decorative" elements of the building during a January 5, 2012 public NRC meeting.⁸⁴

Intervenor's also contend that their motion is based on a December 7, 2011 press release and information from the January 5, 2012 public NRC meeting. However, throughout their motion, Intervenor's cite earlier materials. For instance, Intervenor's cite to an October 31, 2011 letter FENOC sent to its investors that referred to "sub-surface hairline cracks in most of the building's architectural elements."⁸⁵ Intervenor's also refer to a November 1, 2011 *Toledo Blade* article discussing the letter to investors.⁸⁶ Intervenor's cite a November 20, 2011 *Toledo*

⁷⁸ See generally Tr. at 425-500.

⁷⁹ Intervenor's Reply to Answers to Motion to Admit at 6-7 (arguing that their Motion is based on Congressman's Kucinich's December 7, 2011 press release and the motion was filed 34 days after learning of the facts in the press release).

⁸⁰ See Motion to Admit at 6-9. Intervenor's state that "unless a deadline has been specified in the scheduling order for the proceeding, the determination of timeliness is subject to a reasonableness standard that depends on the facts and circumstances in this case." *Id.* at 7 (citing *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-07-15, 66 NRC 261, 266 n.11 (2007)).

⁸¹ See ISO at B.1.

⁸² Motion to Admit at 8. The Staff contends that the cracks were actually noticed in October 2011. See NRC Staff's Answer to Motion to Admit at 3 n.10 (citing CAL).

⁸³ Motion to Admit at 19.

⁸⁴ *Id.* at 8.

⁸⁵ As a note, at oral argument, Judge Froehlich asked FENOC how widely the letter to investors was distributed. See Tr. at 498. Counsel for FENOC indicated that the letter was sent to news outlets and financial media. See *id.*

⁸⁶ Motion to Admit at 18-19.

Blade article that states “[t]he areas where most of the cracks have appeared have structural significance, and are not merely ‘architectural elements.’”⁸⁷

While the above is only a sampling of the various materials referenced throughout the parties’ filings and oral argument regarding the timeliness of this motion, the NRC Staff and FENOC argue that Intervenor’s were untimely in filing their motion to admit because information about the shield building cracks was available as early as November 1, 2011⁸⁸ and Intervenor’s motion was not filed until January 10, 2012, more than 70 days later.⁸⁹

The NRC Staff maintains the contention was untimely under 10 C.F.R. § 2.309(f)(2) and notes that Intervenor’s failed to address the timeliness standards in 10 C.F.R. § 2.309(c).⁹⁰ NRC Staff argues, nonetheless, “that [the] Intervenor’s Motion demonstrates good cause, as well as meets the other § 2.309(c) factors.”⁹¹ The NRC Staff states that by their calculation, the filing was only 10 days late and the 60-day period contained several holidays. In addition, the NRC Staff argues that while Intervenor’s did not plead the section 2.309(c) factors, Intervenor’s meet the factors: Intervenor’s are a party to the proceeding and have a significant interest in their proceeding, Intervenor’s participation will not broaden the issues or delay the proceeding because their concerns mirror the NRC’s inquiries outlined in the December 27, 2011 Requests for Additional Information, and were Intervenor’s to obtain experts on this issue it would assist in developing the record.⁹²

In FENOC’s February 6, 2012 answer opposing Intervenor’s motion for admission of Contention 5, FENOC charges that Intervenor’s motion is either too late (filed more than 60 days from when the cracking was first discovered) or too early (because it was filed before a Root Causes Report was prepared).⁹³ FENOC also argues the contention is untimely because it was filed more than 60 days after the first discovery of cracks in the shield building and more than 60 days after FENOC’s disclosure and letter to investors dated October 31, 2012.⁹⁴ FENOC further argues that Intervenor’s motion to admit should be denied on multiple grounds: (1) the motion is untimely under 10 C.F.R. § 2.309(f)(2);⁹⁵ (2) the motion does not satisfy the late-filing requirements of 10 C.F.R. § 2.309(c)(1).⁹⁶

⁸⁷ *Id.* at 24.

⁸⁸ FENOC argues that information about the cracking was available as early as October 12, 2011. *See* FENOC’s Answer to Motion to Admit at 12 (citing Motion to Admit at 19).

⁸⁹ *See* NRC Staff’s Answer to Motion to Admit at 12.

⁹⁰ *Id.* at 12-13.

⁹¹ *Id.* at 13.

⁹² *Id.* at 13-14.

⁹³ FENOC’s Answer to Motion to Admit at 2-3.

⁹⁴ *Id.* at 14.

⁹⁵ *Id.* at 12-16.

⁹⁶ *Id.* at 16-17.

because Intervenor has not shown good cause for failing to file on time,⁹⁷ and (3) Intervenor has not made a compelling showing on the remaining factors.⁹⁸ Additionally, FENOC states, that the motion's reference to future documents is premature and does not cure its untimeliness.⁹⁹

Clearly, this contention was filed more than 60 days after the cracking was first discovered and reported by FENOC. It is also clear that it was filed more than 60 days after Intervenor first learned that there were cracks discovered in the shield building. It is less clear that the contention was filed more than 60 days after the extent of the cracking was first known or the cause of the cracking was understood by FENOC, the NRC, or Intervenor.

From the myriad of dates bandied about by the parties, it is apparent to this Board that there were fast-emerging developments following the initial discovery of the cracks. The issuance of the FENOC letter to its investors and the wording of the letter clearly were insufficient to alert members of the public as to the significance of the cracking. In fact, the full scope of the nature and severity of the cracks did not become known until the study and testing of those cracks were conducted, which was sometime after the initial discovery of the cracking. It thus is difficult to peg the exact date when Intervenor would have had enough information to prepare their contention.

That being said, we find the analysis advanced by the NRC Staff on the issue of timeliness helpful. Adopting the NRC Staff's pragmatic application of section 2.309(c) standards the Board concludes that even assuming the contention does not meet the strict 60-day deadline in our ISO, the contention would meet the nontimely requirements of section 2.309(c). The contention was submitted in a reasonable time frame from when facts solely in the Applicant's possession became known to the NRC and interested members of the public. Intervenor found themselves in a position in which they had to assemble bits and pieces of information that became publicly available in the weeks following the first discovery of the cracking. Although the cracks were discovered on October 10, 2011, the extent of the cracking, the cause of the cracking, and the options for addressing the cracks were not known until weeks later. Because our ISO requires that Intervenor file a new contention within 60 days of when the information on which it is based first becomes known, we certainly cannot fault the Intervenor

⁹⁷ *Id.* at 17-18.

⁹⁸ *Id.* at 18-20.

⁹⁹ *Id.* at 20-22. FENOC argues that Intervenor's reference to future documents, such as the Draft Supplemental Environmental Impact Statement (DEIS), does not cure the untimeliness of the Motion to Admit. *See id.* at 20-21 (quoting Motion to Admit at 8-9) (asserting that the DEIS "for Davis-Besse has not yet been issued (although issuance may be imminent). Hence[,] by bringing this contention now, Intervenor are avoiding the procedural peril of sitting-and-waiting while in possession of information that should be included and analyzed in the NEPA document in this proceeding.").

for their filing on January 10, 2012, that was based on a December 7, 2011 press release by Congressman Dennis Kucinich, the Staff's December 27, 2011 Request for Additional Information, and the January 5, 2011 public meeting. Using any of these dates, the Motion was filed within 60 days of the information becoming available pursuant to section 2.309(f)(2)(iii).¹⁰⁰

Intervenors also argue that the information in these sources is new and materially different from information previously available; thus, satisfying section 2.309(f)(2)(i) and (ii).¹⁰¹ We agree and therefore find that Intervenors' contention filed on January 10, 2012, is not time-barred for consideration in this proceeding. It is simply not reasonable to expect an intervenor to craft a contention that meets the high standards in section 2.309(f)(1) on the mere announcement by a licensee that cracks were discovered during a scheduled outage. In this case, the contention was filed promptly after the January 5, 2012 NRC/FENOC public meeting during which it became clear that cracking was not limited to architecturally "decorative" elements of the building, as was originally believed. This is well within the 60 days required by our ISO.¹⁰² The timing of the filing of this contention thus meets the requirement of 10 C.F.R. § 2.309(f)(2). Moreover, even if it were to be considered nontimely and putting aside that Intervenors did not seek leave from the presiding officer, they have met the requirements of 10 C.F.R. § 2.309(f)(2)(i)-(iii).¹⁰³

B. Admissibility

Before we turn to the admissibility of Contention 5, we address Intervenors' five motions to supplement and/or amend Contention 5. After all, we cannot determine if a contention is admissible until we understand the scope of that contention.

1. Motions to Amend

As a preliminary matter, we note that none of Intervenors' motions to amend seeks to change the statement of the contention as originally proposed. These

¹⁰⁰ See Reply to Motion to Admit Answers at 6-7; *see also* Motion to Admit at 55.

¹⁰¹ See Motion to Admit at 55.

¹⁰² FENOC notes in its Answer to the First Motion to Amend that this Board has strictly interpreted timeliness requirements that are based on information availability. While that is correct, it is important to note that in this instance, the information necessary for a petitioner to form a contention was in the possession of the applicant and its consultants. For the purpose of determining timeliness, this is distinguishable from the situation where the actions of the moving party are based entirely on matters within that moving party's sole control. *See* FENOC's Answer to First Motion to Amend at 8 n.39.

¹⁰³ The revised rules no longer require leave from the presiding officer. *Compare* § 2.309(f)(2) (2012) *with* § 2.309(f)(2) (2013).

motions do not seek to admit new or amended versions of Contention 5. Rather, Intervenor's apparent intention in submitting these motions was simply to provide additional supporting factual information.¹⁰⁴

In addition, we reiterate that motions to amend a contention are subject to the requirements of 10 C.F.R. § 2.309(f)(2). Such motions must be based on *new* information that is *materially different* from information previously available.¹⁰⁵ In addition, such motions must be submitted in a timely fashion.¹⁰⁶

a. First Motion to Amend

In their first motion to amend, Intervenor's seek to supplement Contention 5 with two pieces of information: a press release from Congressman Dennis Kucinich entitled, "Why Won't FirstEnergy Tell the Truth About Davis-Besse?", and a January 31, 2012 Davis-Besse inspection report.¹⁰⁷

We deny this motion for multiple reasons. First, Intervenor's did not certify that they consulted with the other parties prior to submitting this motion. NRC regulations make clear that "[a] motion must be rejected if it does not include a certification by the attorney or representative of the moving party that the movant has made a sincere effort to contact other parties in the proceeding and resolve the issue(s) raised in the motion, and that the movant's efforts to resolve the issue(s) have been unsuccessful."¹⁰⁸ In addition, our ISO reiterated this requirement: "[M]otions will be summarily rejected if they do not include the certification specified in 10 C.F.R. § 2.323(b) that a sincere attempt to resolve the issues has been made."¹⁰⁹

While Intervenor's seemed to suggest at oral argument that the consultation and certification requirement is unnecessary,¹¹⁰ the value of that regulation is not an issue on which this Board may rule. And even if we could, it should be apparent from our reiteration of this requirement in our ISO that we consider it to have great value and desire that it be followed by the parties.

¹⁰⁴ A more efficient course might have been to present these "facts" at an evidentiary hearing rather than filing multiple motions to supplement the contention.

¹⁰⁵ 10 C.F.R. § 2.309(f)(2)(i), (ii).

¹⁰⁶ *Id.* § 2.309(f)(2)(iii).

¹⁰⁷ First Motion to Amend at 2-3.

¹⁰⁸ 10 C.F.R. § 2.323(b).

¹⁰⁹ ISO at 18.

¹¹⁰ *See* Tr. at 629 (Intervenor's counsel asked, rhetorically, "[A]fter we filed the initial January 10th motion, what would the genuine, substantive meaning of consultation really have been after that?"). While counsel may perceive that there is little likelihood that other parties to the proceeding will accede to the relief sought in the motion, that does not excuse him from making a good-faith attempt to reach a resolution before bringing the matter to the Board.

In addition, Intervenor's do not articulate how the information in these sources is new or materially different.¹¹¹ For example, as noted by both the NRC Staff and FENOC, Intervenor's cite to the January 31 inspection report that they previously referred to in their Reply to the Answers to the original Motion to Admit.¹¹²

Moreover, the February 8, 2012 Kucinich press release appears to contain information that Intervenor's already pled in their January 10, 2012 Motion to Admit. For instance, the February 8, 2012 press release speaks about the shield building cracks not only being "architectural" or "decorative" elements of the shield building wall.¹¹³ Intervenor's stated this same information in their Motion to Admit.¹¹⁴ Intervenor's cannot simply point to "documents merely summarizing earlier documents or compiling preexisting, publicly available information into a single source . . . [as doing so] . . . do[es] not render 'new' the summarized or compiled information."¹¹⁵

For these multiple reasons, Intervenor's' first motion to amend Contention 5 is DENIED.

b. Second Motion to Amend

Intervenor's state that their purpose in filing their second motion to amend is to "expos[e] discrepancies between FENOC's February 27, 2012 "Root Cause Analysis Report" and [FENOC's Aging Management Plan]."¹¹⁶ Once again, Intervenor's failed to provide the required certification that it had consulted in good faith with the other parties prior to filing this motion. For this reason alone, Intervenor's' second motion could be denied.

Intervenor's' second Motion to Amend highlights the differences between the February Root Cause Report and the Shield Building AMP.¹¹⁷ There is no showing as to the significance of any of the "differences" highlighted. Intervenor's' challenge to the AMP must consist of more than allegations that the AMP is deficient.¹¹⁸ Intervenor's must point to specific ways the AMP is inadequate or wrong.¹¹⁹ Indeed, at the time the second motion to amend was filed, Intervenor's

¹¹¹ See generally First Motion to Amend.

¹¹² See Intervenor's' Reply to Motion to Admit Answers at 3.

¹¹³ First Motion to Amend at 12.

¹¹⁴ Motion to Admit at 8.

¹¹⁵ *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 344 (2011).

¹¹⁶ Second Motion to Amend at 2.

¹¹⁷ See generally *id.*

¹¹⁸ See *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-10-9, 71 NRC 245, 270 (2010).

¹¹⁹ *Id.*

had the opportunity to timely connect their AMP deficiency arguments to the License Renewal Application. They did not do so. They have simply stated that the testing of the shield building under the AMP is too infrequent.¹²⁰ There is nothing in Intervenor’s pleadings as to what the inspection frequency should be or why the frequency selected by the Applicant is inadequate. In addition, Intervenor’s second motion to amend challenges issues that are outside the scope of the license renewal application process, such as the safety culture at Davis-Besse.¹²¹

For all these reasons, Intervenor’s second motion to amend Contention 5 is DENIED.

c. Third Motion to Amend

Intervenor’s claim that the purpose of their third motion to amend is to “address inconsistencies between the Revised Root Cause Analysis (‘RRCA’) and the Shield Building Monitoring AMP.”¹²² In this motion, Intervenor’s discuss eleven alleged discrepancies between the RRCA and the Shield Building AMP.

There are a number of problems with this motion. First, it is not based on new and materially different information, as required by 10 C.F.R. § 2.309(f)(2)(i) and (ii). While Intervenor’s motion highlights discrepancies between the RRCA and the Shield Building AMP, as explained above, Intervenor’s do not explain how the information contained within the RRCA is materially different than information previously available. Even where Intervenor’s cite to actual revisions to the Root Cause Report, they fail to indicate how that information is materially different from information previously available. Instead, Intervenor’s offer bare assertions that because words changed between the Root Cause Report and the Revised Root Cause Report, the changes are material. Bare assertions, such as these, are insufficient to support admission of a contention.¹²³

Second, it is simply not clear to us what purpose highlighting the inconsistencies between these two documents is meant to serve. Intervenor’s do not appear to challenge the contents of the Shield Building AMP, or otherwise state how the contents of this motion would support the admissibility of Contention 5.

Third, to the extent Intervenor’s are challenging the conclusions of the RRCA regarding the root cause of the cracking (and it is unclear to us whether they intend

¹²⁰ See Tr. at 541-42, 580.

¹²¹ See, e.g., Second Motion to Amend at 17, 18. The Commission has found that these types of “safety culture” arguments are outside the scope of license renewal because the arguments raise issues that are relevant to current plant operation. See *Northern States Power Co.* (Prairie Island Nuclear Generating Plants, Units 1 and 2), CLI-10-27, 72 NRC 481, 490-92 (2010); see also *Diablo Canyon*, CLI-11-11, 74 NRC at 435-37.

¹²² Third Motion to Amend at 3.

¹²³ See, e.g., *Diablo Canyon*, CLI-11-11, 74 NRC at 452 n.139.

to mount such a challenge), they have not demonstrated how such a challenge is material to the decision the NRC must make regarding FENOC's LRA.

Finally, Intervenor's do not identify why the Shield Building AMP is inadequate nor do Intervenor's explain how the purported inconsistencies alter the language of the proposed contention.¹²⁴ For these reasons, the third motion to amend Contention 5 is DENIED.

d. Fourth Motion to Amend

Intervenor's state that the purpose of the fourth motion to amend is to demonstrate inconsistencies between FENOC's February 2012 Root Cause Report and the findings of an April 20, 2012 report, "Root Cause Assessment: Davis-Besse Shield Building Laminar Cracking, Vol. 1" (Revised PII Report)¹²⁵ by FENOC's consultant, Performance Improvement International (PII).¹²⁶ The fourth motion highlights twenty-seven alleged discrepancies, consisting of revisions made to the PII Report. Intervenor's argue that the revisions made to the PII Report were "quite significant."¹²⁷

We also find that Intervenor's' fourth Motion to Amend fails for multiple reasons. First, Intervenor's do not demonstrate how any of the documents cited to in this motion are both new *and* materially different from information previously available. While it is clear that the PII Report is "new," Intervenor's do not demonstrate how the information contained within that report is new and materially different. Intervenor's merely point to differences (or "itemize the divergences")¹²⁸ between the Root Cause Report and the Revised PII Report, but do not make any effort to explain how those differences are *material*.

Once again, Intervenor's do not demonstrate how highlighting discrepancies between two documents amounts to a material dispute with FENOC's LRA. Intervenor's seem to suggest that PII's responses to certain questions from the NRC were inadequate, and that the NRC's questions themselves demonstrate the inadequacy of the Shield Building Monitoring AMP.¹²⁹ However, these claims amount to mere speculation — the fact that the NRC posed questions to PII does not demonstrate that either the RRCA or the AMP is flawed. Asking questions and seeking additional information is an essential part of the NRC's licensing

¹²⁴ See Third Motion to Amend.

¹²⁵ Available at ADAMS Accession No. ML12138A037.

¹²⁶ Fourth Motion to Amend at 2.

¹²⁷ *Id.* at 3.

¹²⁸ *Id.* at 2.

¹²⁹ *Id.* at 37.

process, and it is clear that such questioning does not automatically give rise to an admissible contention.¹³⁰

The fourth motion to admit also contains claims challenging Davis-Besse's current operations and its "Safety Culture." These issues are beyond the scope of this relicensing proceeding.

For these reasons, the fourth motion to amend Contention 5 is DENIED.

e. Fifth Motion to Amend

Intervenors' fifth motion is based on documents from Appendix B of NRC's June 12, 2012 response to Intervenors' January 26, 2012 Freedom of Information Act (FOIA) request.¹³¹ In an almost 90-page section titled "Issues of Fact and Inconsistencies," Intervenors discuss forty-three documents disclosed through their FOIA request and assert that the FOIA documents contain new and materially different information that support their proposed Contention 5.¹³²

The FOIA documents range from NRC's questions for FENOC¹³³ to presentation slides.¹³⁴ For example, several of the documents that Intervenors refer to are internal e-mails between NRC employees regarding the Davis-Besse restart in December 2011.¹³⁵ Intervenors argue that these internal e-mails demonstrate that the NRC had concerns about the December 2, 2011 restart and the results of the root-cause analysis done by FENOC and PII.¹³⁶

This motion likewise is flawed. Intervenors do not demonstrate how the information contained in this motion is new and materially different from information previously available, as required by 10 C.F.R. § 2.309(f)(2)(i) and (ii). While some of this information may be "new," Intervenors fail to show that it is materially different from information previously available. In other words, Intervenors do not establish that the information is different *in a material way*. For example, Intervenors point to the existence of internal disagreement amongst members of the NRC Staff at some point during the investigation into the shield

¹³⁰ See, e.g., *Oconee*, CLI-99-11, 49 NRC at 336 ("To satisfy the Commission's contention rule, petitioners must do more than rest on mere existence of [Requests for Additional Information] as a basis for their contention.").

¹³¹ Fifth Motion to Amend at 1.

¹³² See *id.* at 5-91.

¹³³ See, e.g., *id.* at 14-16 ("Document B/10 [11/07/11: Davis Besse Shield Building Issue NRC Technical Reviewer Focus Questions. (1 Page)]").

¹³⁴ See, e.g., *id.* at 60-65 ("Document B/41 [12/06/11; Presentation Slides on Davis-Besse Shield Building Crack. (6 pages)]").

¹³⁵ See *id.* at 12-14, 39-41. As a note, Intervenors referred to these same e-mails in their Fourth Motion to Amend. See Fourth Motion to Amend at 21-24, 36.

¹³⁶ See Fifth Motion to Amend at 12-14, 39-41. Intervenors asserted these same arguments in their Fourth Motion to Amend. See Fourth Motion to Amend at 21-24, 36.

building cracking as proof that the shield building is more damaged than the NRC is letting on.¹³⁷ Such an argument is plainly speculative, and moreover, Intervenor's do not demonstrate that such internal communication is *material* to NRC's ultimate licensing decision.

For failure to demonstrate that it is based on new and materially different information, Intervenor's fifth motion to amend Contention 5 is DENIED.

2. Analysis of Admissibility of Contention 5

As noted above, we have found that Contention 5 itself was filed in a timely manner.¹³⁸ Therefore, for Contention 5 to be admissible, it must satisfy the requirements of 10 C.F.R. § 2.309(f)(1) enumerated above.¹³⁹

Because we have denied all of Intervenor's five motions to amend or supplement, we review Contention 5 as it appears in Intervenor's initial Motion to Admit. It reads as follows:

Intervenor's contend that FirstEnergy's recently-discovered, extensive cracking of unknown origin in the Davis-Besse shield building/secondary reactor radiological containment structure is an aging-related feature of the plant, the condition of which precludes safe operation of the atomic reactor beyond 2017 for any period of time, let alone the proposed 20-year license period.¹⁴⁰

A close analysis of Intervenor's proposed contention shows it is comprised of three central concerns:

- (1) There is extensive cracking of unknown origin in the shield building structure,
- (2) The cracking is an aging-related feature of the plant,¹⁴¹ and
- (3) This condition precludes safe operation.

These three elements of the contention have been addressed by FENOC and the NRC Staff. Regarding Point 1, FENOC has conducted numerous tests to determine the origin and the extent of the cracks. Specifically, based on a

¹³⁷ See Fifth Motion to Amend at 13-14.

¹³⁸ See *supra* p. 600.

¹³⁹ See *supra* pp. 591-92.

¹⁴⁰ Motion to Admit at 11.

¹⁴¹ Intervenor's contention seems to imply that there is no plan to deal with the alleged age-related cracking. This is because the contention was lodged before FENOC filed its shield building aging management plan. As noted, *see supra* note 72, the wording of the proposed contention has not been changed in any of the subsequent motions to amend or supplement.

Root Cause Report, a Revised Root Cause Report, and a report by PII, FENOC concluded that a 1978 blizzard was the root cause of the cracking. This root-cause investigation was conducted to determine “how,” “when,” and “why” the concrete laminar cracking occurred in the shield building wall.¹⁴² FENOC concludes that:

the laminar cracking occurred due to the combination of three factors: the design configuration of the architectural shoulders; high moisture intrusion into the Shield Building concrete followed by a severe temperature drop; and, lack of moisture prevention on the exterior of the building. The root cause of the Shield Building laminar cracks was attributed to the design specification for construction of the Shield Building, which did not specify the application of an external sealant [for protection] from moisture. The design configuration of the architectural shoulders coupled with a rare combination of severe environmental factors associated with the blizzard of 1978 caused the laminar cracking. The design configuration did not include an external protective sealant on the Shield Building.¹⁴³

Further, the NRC Staff has independently conducted a number of detailed inspections regarding the cracking.¹⁴⁴ The NRC’s June 21, 2012 Inspection Report found that FENOC’s Root Cause Report established a sufficient basis for the causes of the shield building laminar cracking.¹⁴⁵

The record in this proceeding thus contains extensive studies about the extent and origins of the cracking. For their part, Intervenor’s state they do not agree with FENOC’s studies, but have neither proffered supporting facts or expert opinion to demonstrate that FENOC’s conclusion is incorrect nor provided an alternative explanation for the cracking.

Regarding Point 2, even though FENOC concludes the cracking is not age-related,¹⁴⁶ its LRA has been amended to include (1) a discussion of the shield building cracking and (2) a new AMP specific to monitoring the shield building cracking. The Shield Building Monitoring AMP provides specific details on the inspections, tests, and monitoring that will be performed. The Shield Building Monitoring AMP states FENOC will “periodically inspect the structure to confirm that there are no changes in the nature of the identified laminar cracks.”¹⁴⁷ In terms of testing, the Shield Building Monitoring AMP includes “inspections or testing to monitor the condition of the sealant or coating that is planned to be applied to the Shield Building . . . and that the current Davis-Besse procedures for the

¹⁴² Revised Root Causes Report at 8.

¹⁴³ RAI Response B.2.39-13, Attachment at 3 of 8.

¹⁴⁴ See May 7, 2012 NRC Inspection Report and June 21, 2012 NRC Inspection Report.

¹⁴⁵ See Letter from Steven A. Reynolds, Director, NRC Division of Reactor Safety, to Barry Allen, Site Vice President, FENOC (June 21, 2012) at 1 (ADAMS Accession No. ML12173A023).

¹⁴⁶ Tr. at 449.

¹⁴⁷ FENOC’s April 5, 2012 Submittal, at 5, item 3 (citing RAI Request #4) for more information).

evaluation of structures . . . [are] being revised to incorporate a section specifically for the long term monitoring of the Shield Building laminar cracks.”¹⁴⁸ The Shield Building Monitoring AMP also provides specific details on the inspections, tests, and monitoring that will be performed.

Given these circumstances, Intervenor must point to the specific ways in which the Shield Building Monitoring AMP is wrong or inadequate to raise a genuine dispute with FENOC’s LRA.¹⁴⁹ This they have failed to do. Intervenor has provided *no* support for their argument that the cracking (1) is aging-related, and (2) prevents safe operation of the plant. These claims amount to bare assertions, which the Commission has made clear “are insufficient to support a contention.”¹⁵⁰ We do not intend to imply that Intervenor must prove their case at this stage, as the Commission has made clear that petitioners bear no such burden.¹⁵¹ However, a petitioner “‘must present sufficient information to show a genuine dispute’ and reasonably ‘indicating that a further inquiry is appropriate.’”¹⁵²

Finally, regarding Point 3, Intervenor claim that the cracking precludes safe operation. This allegation is unsupported. Intervenor has articulated a vague and generic concern that the cracking in the Davis-Besse Shield Building will create some sort of safety and/or environmental issues over the course of the relicensing term,¹⁵³ but they have not “connected the dots,” as it were, and articulated a dispute with FENOC’s renewal application.¹⁵⁴ Further, by this claim Intervenor seem to advance a current safety issue. Indeed, much of the material submitted by Intervenor challenges the NRC’s decision to restart the Davis-Besse plant in

¹⁴⁸ FENOC’s April 5, 2012 Submittal at 6.

¹⁴⁹ *Shearon Harris*, CLI-10-9, 71 NRC at 270.

¹⁵⁰ *Diablo Canyon*, CLI-11-11, 74 NRC at 452 n.139.

¹⁵¹ *Yankee Nuclear*, CLI-96-7, 43 NRC at 249.

¹⁵² *Id.* (citations omitted).

¹⁵³ Intervenor are concerned not only about the license renewal term, but about ongoing facility operation up through the time the extended term of operation would begin under the renewed license which seemingly implies the entire contention is related to a current licensing issue and thus outside the scope of license renewal. *See* Motion to Admit at 25-26.

¹⁵⁴ For instance, although Intervenor raise numerous challenges to FENOC’s “safety culture,” Motion to Admit at 17, 18, the Commission has made clear that such issues are outside the scope of license renewal and inadmissible, *see Prairie Island*, CLI-10-27, 72 NRC at 491 (stating that “broad-based issues akin to safety culture such as operational history, quality assurance, quality control, management competence, and human factors . . . [are] beyond the bounds of a license renewal proceeding”). And pure speculation clearly forms the basis for Intervenor’s assertion that “there is a likelihood that the risks presented by the current cracks will only increase in the next few years,” as well as their claim that a planned 2014 steam generator replacement at the facility, as well as an additional steam generator replacement after that, supports a finding of increased risk. Motion to Admit at 11, 13. As the Commission has made apparent, speculation cannot be the basis for an admissible contention. *See, e.g., Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 169 (2011).

January 2012. This decision is totally unrelated to the operation of Davis-Besse during the license renewal term, which would begin in April 2017, if FENOC's operating license for Davis-Besse is renewed. Current safety issues are beyond the scope of a license renewal proceeding.¹⁵⁵

While we hold that Contention 5, as originally proposed, is inadmissible, we note that the NRC Staff initially proposed a revised version of Contention 5 that it deemed admissible.¹⁵⁶ The NRC Staff proposed that Contention 5 be narrowed and admitted as follows:

Is the Structures AMP adequate to address any aging effects for the shield building that are related to the cracks identified by FENOC during the October 10, 2011 reactor head replacement and subject to a root cause evaluation to be provided by FENOC on February 28, 2012 such that the shield building would be unable to perform its intended functions of 1) protecting the steel containment from environmental effects, including wind, tornado, and external missiles, 2) providing biological shielding, 3) providing controlled release to the annulus during an accident, and 4) providing a means for collection and filtration of fission product leakage from the Containment Vessel following a hypothetical accident?¹⁵⁷

The NRC Staff claimed that this reformulated contention would be a "contention of omission," as it "identifies FENOC's failure to describe how the Structures AMP will account for the shield building cracks during the period of extended operation."¹⁵⁸ However, after FENOC submitted its Shield Building Monitoring AMP, the NRC Staff argued that Contention 5, as it had revised it, had been mooted.¹⁵⁹ Because "the LRA now includes a discussion of the recently identified shield building cracking and an AMP to address any possible aging effects associated with the cracking," the NRC Staff argued that the omission on which their proposed version of Contention 5 was based had been cured.¹⁶⁰

We agree with the NRC Staff on both accounts. First, we agree that although Contention 5 as originally proposed, was (and still is) largely inadmissible for the reasons discussed above, it nonetheless initially contained an admissible contention of omission challenging FENOC's failure to provide a plan to monitor and/or address the shield building cracking in its LRA. We will discuss why the remainder of Contention 5 is inadmissible below. Second, we agree that FENOC's

¹⁵⁵ *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 8-10 (2001).

¹⁵⁶ See NRC Staff Answer at 16.

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ See NRC Staff's Answer to Second Motion to Amend at 21.

¹⁶⁰ *Id.* at 22.

submittal of a Shield Building Monitoring AMP mooted this small admissible portion of Contention 5.

The contention, as reformulated by the NRC Staff, met the admissibility requirements of 10 C.F.R. § 2.309(f)(1). It contained a “specific statement of the issue of law or fact”¹⁶¹ — namely, that FENOC’s LRA failed to account for the shield building cracking. Intervenor’s discussion of the history of the cracking and the LRA’s failure to address that cracking was sufficient to constitute a “brief explanation of the basis of the contention.”¹⁶² The reformulated contention was within the scope of the proceeding,¹⁶³ was “material to the findings the NRC must make,”¹⁶⁴ and raised a “genuine dispute . . . on a material issue of law or fact”¹⁶⁵ because it raised an aging-related challenge to the LRA regarding the performance of a structure within the scope of license renewal.¹⁶⁶ Finally, while Intervenor’s did not provide much factual support throughout their motion, they did demonstrate that the cracks do indeed exist, and that FENOC had not provided a plan to address any aging-related effects of these cracks during the relicensing period. This, we believe, was sufficient to satisfy the requirement that Intervenor’s “provide a concise statement of the alleged facts or expert opinions which support the requestor’s/petitioner’s position.”¹⁶⁷

Therefore, Contention 5, as modified by the NRC Staff, would have been admissible. However, as the NRC Staff argued, this contention of omission was mooted when FENOC addressed these concerns in its Shield Building Monitoring AMP. The Commission has stated that “where a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by the applicant . . . the contention is moot.”¹⁶⁸ While the matter of the contention’s admissibility was pending before us FENOC provided the exact information that Contention 5 claimed was missing — that is, a discussion of how FENOC will address the shield building cracking throughout the relicensing term. Intervenor’s had, but did not avail themselves of, the opportunity to present a material challenge to the adequacy of the AMP. Therefore, because Contention 5, as proposed by the NRC Staff, is now moot, there is no admissible contention.

We now turn to the balance of miscellaneous issues raised by Contention 5 as pled by Intervenor’s. These pieces of Contention 5 are inadmissible for a

¹⁶¹ 10 C.F.R. § 2.309(f)(1)(i).

¹⁶² *Id.* § 2.309(f)(1)(ii).

¹⁶³ *Id.* § 2.309(f)(1)(iii).

¹⁶⁴ *Id.* § 2.309(f)(1)(iv).

¹⁶⁵ *Id.* § 2.309(f)(1)(vi).

¹⁶⁶ *See id.* § 54.4.

¹⁶⁷ *Id.* § 2.309(f)(1)(v).

¹⁶⁸ *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 383 (2002).

number of reasons. First, large portions of the contention are simply outside the scope of license renewal.¹⁶⁹ For example, Intervenor raise numerous challenges to FENOC's "safety culture."¹⁷⁰ The Commission has made clear that such issues are outside the scope of license renewal and inadmissible.¹⁷¹

Second, Contention 5 is based, in large part, on pure speculation. For example, Intervenor state that "there is a likelihood that the risks presented by the current cracks will only increase in the next few years."¹⁷² Intervenor note that Davis-Besse will undergo a steam generator replacement in 2014, and argue that this fact supports their claim regarding increased risk.¹⁷³ Intervenor provide no support for their argument that the 2014 steam generator replacement will increase the risk of cracking, and as such, their argument is mere speculation. In addition, Intervenor state that "it is conceivable that FENOC very well may need to replace its steam generators yet again after 2014 . . . risking further contributions to the cracking."¹⁷⁴ Whether FENOC will need to perform another steam generator replacement after 2014 is mere speculation, on top of the mere speculation that such a procedure might contribute to the cracking. The Commission has made abundantly clear that contentions based on pure speculation are not admissible.¹⁷⁵

IV. CONCLUSION AND ORDER

For the foregoing reasons, Intervenor's motion to admit Contention 5 and the five subsequent motions to amend and/or supplement Contention 5 are DENIED.¹⁷⁶

¹⁶⁹ See 10 C.F.R. § 2.309(f)(1)(iii).

¹⁷⁰ See Motion to Admit at 17-18.

¹⁷¹ See, e.g., *Prairie Island*, CLI-10-27, 72 NRC at 491 (stating that "broad-based issues akin to safety culture — such as operational history, quality assurance, quality control, management competence, and human factors — [are] beyond the bounds of a license renewal proceeding").

¹⁷² Motion to Admit at 11.

¹⁷³ *Id.*

¹⁷⁴ *Id.* at 13 (emphasis in original).

¹⁷⁵ See, e.g., *Callaway*, CLI-11-5, 74 NRC at 169.

¹⁷⁶ Although our summary disposition decision this date regarding Intervenor's Contention 4 resolves all admitted contentions in this proceeding, see LBP-12-26, 76 NRC at 581 n.124, and this ruling is dispositive of the proposed Contention 5 and the subsequent five motions to amend and/or supplement Contention 5, this proceeding remains unconcluded at this juncture because another matter is still pending before the Board. On July 9, 2012, Intervenor filed with the Board a motion to admit a new environmental contention that challenges the failure of FENOC's Environmental Report to address the environmental impacts of spent fuel pool leakage and fires, as well as the environmental impacts that may occur if a spent fuel repository does not become available. See Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste

(Continued)

While this Order is not subject to appeal to the Commission as a matter of right at this time, Intervenor may petition the Commission for interlocutory review pursuant to 10 C.F.R. § 2.341(f)(2).

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

William J. Froehlich, Chairman
ADMINISTRATIVE JUDGE

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE

Dr. William E. Kastenber
ADMINISTRATIVE JUDGE

Rockville, Maryland
December 28, 2012

at Davis-Besse Nuclear Power Station (July 9, 2012) [hereinafter New Contention Motion]. The New Contention Motion is based on the United States Court of Appeals for the District of Columbia Circuit's decision in *State of New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012) which invalidated the NRC's Waste Confidence Decision Update (75 Fed. Reg. 81,037 (Dec. 23, 2010)) and the NRC's final rule regarding Consideration of Environmental Impacts of Spent Fuel After Cessation of Reactor Operation (75 Fed. Reg. 81,032 (Dec. 23, 2010)). *New York v. NRC* vacated the generic findings in 10 C.F.R. § 51.23(a) regarding the safety and environmental impacts of spent fuel storage. *See* New Contention Motion at 2.

On August 7, 2012, the Commission issued CLI-12-16, wherein it found, "[I]n view of the special circumstances of this case, as an exercise of our inherent supervisory authority over adjudications, we direct that these [Waste Confidence] contentions — and any related contentions that may be filed in the near term — be held in abeyance pending our further order." The Commission noted that "should we determine at a future time that case-specific challenges are appropriate for consideration, our normal procedural rules will apply." In an August 8, 2012 Order we held any participant or Board activity concerning this new contention in abeyance pending further Commission directive. *See* Order (Suspending Procedural Date Related to Proposed Waste Confidence Decision) (Aug. 8, 2012) (unpublished).

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- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), LBP-06-11, 63 NRC 391, 396 n.3 (2006)
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- Anderson v. Liberty Lobby*, 477 U.S. 242, 255 (1986)
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- Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 143, 155 (1991)
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- Associations Working for Aurora's Residential Environment v. Colorado Department of Transportation*, 153 F.3d 1122, 1127 n.4 (10th Cir. 1998)
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- Auer v. Robbins*, 519 U.S. 452, 461 (1997)
courts give controlling weight to an agency's interpretation of its own regulation unless it is plainly erroneous or inconsistent with the regulation; LBP-12-19, 76 NRC 196 n.65 (2012)
- Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.*, 462 U.S. 87, 97-98 (1983)
NEPA requires agencies to take a hard look at environmental consequences prior to taking major actions; LBP-12-17, 76 NRC 82 n.50 (2012)
- Baltimore Gas & Electric Co. v. Natural Resources Defense Council*, 462 U.S. 87, 98 (1983)
NRC policy statement is not a sufficient vehicle to preclude consideration of severe accident mitigation design alternatives, and NRC must take the requisite hard look at them, giving them the careful consideration and disclosure required by the National Environmental Policy Act; CLI-12-19, 76 NRC 380-81 (2012)
- Battelle Memorial Institute Columbus Operations* (Columbus, Ohio), DD-94-11, 40 NRC 359 (1994)
the record before the board falls far short of rebutting the presumption that a petition for license modification, suspension, or revocation is a meaningful avenue for seeking administrative relief; LBP-12-14, 76 NRC 10 (2012)
- Bellotti v. NRC*, 725 F.2d 1380, 1381 (D.C. Cir. 1983), *aff'g, sub nom., Boston Edison Co.* (Pilgrim Nuclear Power Station), CLI-82-16, 16 NRC 44 (1982)
NRC has authority to define the scope of its proceedings, which, in enforcement proceedings, is to permit challenges solely on whether an order should be sustained; LBP-12-14, 76 NRC 5 n.21 (2012)
- Bellotti v. NRC*, 725 F.2d 1380, 1382-83 (D.C. Cir. 1983), *aff'g, sub nom., Boston Edison Co.* (Pilgrim Nuclear Power Station), CLI-82-16, 16 NRC 44 (1982)
petitioners denied a hearing for raising an issue outside the scope of a proceeding could still raise the issue through a petition for enforcement under 10 C.F.R. 2.206; LBP-12-14, 76 NRC 5 n.21 (2012)
- Bellotti v. NRC*, 725 F.2d 1380, 1383 (D.C. Cir. 1983), *aff'g, sub nom., Boston Edison Co.* (Pilgrim Nuclear Power Station), CLI-82-16, 16 NRC 44 (1982)
petition seeking additional enforcement measures beyond those prescribed by the order was properly denied; LBP-12-14, 76 NRC 5 (2012)
- Bowles v. Seminole Rock & Sand Co.*, 325 U.S. 410, 414 (1945)
courts give controlling weight to an agency's interpretation of its own regulation unless it is plainly erroneous or inconsistent with the regulation; LBP-12-19, 76 NRC 196 n.65 (2012)
- Cabinet Mountains Wilderness/Scotchman's Peak Grizzly Bears v. Peterson*, 685 F.2d 678, 682-83 (D.C. Cir. 1982)
Council on Environmental Quality Guidance does not change or substitute for any law, regulation, or other legally binding requirement and is not legally enforceable, and some courts have declined to defer to it; LBP-12-23, 76 NRC 467 (2012)

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- Caldwell-Baker Co. v. Southern Illinois Railcar Co.*, 225 F. Supp. 2d 1243, 1251-52 (D. Kan. 2002)
where extraneous writing is incorporated for a specific purpose, the writing will be incorporated only to the extent of the reference and for the specific purpose intended, and the reference must be clear and unequivocal; LBP-12-24, 76 NRC 515 n.57 (2012)
- California Wilderness Coalition v. U.S. Department of Energy*, 631 F.3d 1072, 1105-06 (9th Cir. 2011)
deficiencies in NRC Staff's analysis of a combination alternative is not harmless error; LBP-12-17, 76 NRC 119 (2012)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915 n.15 (2009)
although the Commission has never explicitly endorsed using this presumption in an license renewal proceeding, it did cite favorably, in the context of a COL hearing, to a licensing board's application of the presumption in a reactor life extension case; LBP-12-15, 76 NRC 24 n.1 (2012)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915-16 (2009)
in reactor proceedings, the Commission applies a proximity presumption whereby an individual's or organization's location within 50 miles of a reactor is sufficient to demonstrate the requisite threat of injury; LBP-12-24, 76 NRC 508 n.19 (2012)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 920 (2009)
NRC Staff review procedures used to evaluate applications for issuance or transfer of control of a production or utilization facility license in light of the prohibitions in Atomic Energy Act § 103d and 104d and in 10 C.F.R. 50.38 against foreign ownership or control are described; LBP-12-19, 76 NRC 192 (2012)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63, 66-67 (2012)
NRC will not issue final licenses dependent upon the Waste Confidence Rule until the court's remand is appropriately addressed; LBP-12-21, 76 NRC 242 (2012)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63, 67 (2012)
NRC will not issue licenses dependent upon the Waste Confidence Decision or the Temporary Storage Rule until the court's remand is appropriately addressed; CLI-12-17, 76 NRC 212 (2012)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63, 68-69 (2012)
as an exercise of its inherent supervisory authority over adjudications, the Commission directed that waste confidence contentions and any related contentions that may be filed in the near term be held in abeyance pending further order; LBP-12-24, 76 NRC 506, 510 (2012)
- Calvert Cliffs Coordinating Committee, Inc. v. AEC*, 449 F.2d 1109, 1112 (D.C. Cir. 1971)
although NEPA's requirements are procedural, federal agencies are held to a strict standard of compliance with the act's requirements; LBP-12-18, 76 NRC 159 (2012)
- Calvert Cliffs Coordinating Committee, Inc. v. AEC*, 449 F.2d 1109, 1118 (D.C. Cir. 1971)
after a licensing board in an uncontested proceeding determines that Staff's NEPA review is adequate, it must then independently consider the final balance among conflicting factors that is struck in the Staff's recommendation; LBP-12-21, 76 NRC 236 (2012)
National Environmental Policy Act requires that agencies consider environmental impacts of their actions to the fullest extent possible; LBP-12-21, 76 NRC 235-36 (2012)
- Carahsoft Technology Corp. v. United States*, 86 Fed. Cl. 325, 350 (2009)
for a contract to incorporate the terms of extrinsic material by reference, it must explicitly, or at least precisely, identify the written material being incorporated and must clearly communicate that the purpose of the reference is to incorporate the referenced material into the contract; LBP-12-24, 76 NRC 515 n.60 (2012)
- Carolina Environmental Study Group v. United States*, 510 F.2d 796, 801 (D.C. Cir. 1975)
NEPA requires that alternatives be considered as they exist and are likely to exist, not merely as they exist at the present time; LBP-12-17, 76 NRC 115 (2012)

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CASES

- Center for Biological Diversity v. U.S. Bureau of Land Management*, 698 F.3d 1101 (9th Cir. 2012)
Biological Opinion and its accompanying Incidental Take Statement issued by the U.S. Fish and Wildlife Service were arbitrary and capricious because they were based in part on a conservation plan that was not enforceable under the Endangered Species Act; LBP-12-23, 76 NRC 468-69 (2012)
- Center for Special Needs Trust Administration, Inc., v. Olson*, 676 F.3d 688, 698 (8th Cir. 2012)
estoppel claimant must prove a false representation by the government, that the government had the intent to induce the plaintiff to act on the misrepresentation, plaintiff's lack of knowledge or inability to obtain the true facts, and plaintiff's reliance on the misrepresentation to his detriment; LBP-12-16, 76 NRC 51 n.33 (2012)
- Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984)
NRC has discretion in specifying the level of foreign ownership that would constitute a violation of the Atomic Energy Act; LBP-12-19, 76 NRC 196 (2012)
- Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195 (D.C. Cir.), *cert. denied*, 502 U.S. 994 (1991)
NRC Staff's environmental impact statement need only discuss those alternatives that will bring about the ends of the proposed action; LBP-12-15, 76 NRC 38 n.8 (2012)
- Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 209 (D.C. Cir. 1991) (Buckley, J., dissenting)
NEPA requires agencies to exercise a degree of skepticism in dealing with self-serving statements from the prime beneficiary of a project and to look at the general goal of the project, rather than only those alternatives preferred by the applicant; LBP-12-17, 76 NRC 114 (2012)
- Citizens for Safe Power, Inc. v. NRC*, 524 F.2d 1291, 1294 n.5 (D.C. Cir. 1975)
environmental impact statements are effectively amended through the adjudicatory process; LBP-12-17, 76 NRC 83 (2012)
- Citizens' Committee to Save Our Canyons v. U.S. Forest Service*, 297 F.3d 1012, 1030 (10th Cir. 2002)
agencies are not permitted to define the objectives of a proposed action so narrowly as to preclude a reasonable consideration of alternatives; LBP-12-17, 76 NRC 114 (2012)
- City of Davis v. Coleman*, 521 F.2d 661, 667 (9th Cir. 1975)
compliance with NEPA is a primary duty of every federal agency, and fulfillment of this responsibility should not depend on vigilance and limited resources of environmental plaintiffs; LBP-12-18, 76 NRC 166 (2012)
- City of Grapevine v. Department of Transportation*, 17 F.3d 1502, 1506 (D.C. Cir. 1994)
although an agency's alternatives analysis should reflect the applicant's goals, the underlying goal should not be purposefully narrowed to predetermine the outcome; LBP-12-17, 76 NRC 114 (2012)
- City of Las Vegas v. Federal Aviation Administration*, 570 F.3d 1109, 1115 (9th Cir. 2009)
agencies are responsible for taking a hard look at the project's effect on safety as well as the environment; LBP-12-18, 76 NRC 160-61 (2012)
impact of a proposed action on public safety is an issue that must be considered under the National Environmental Policy Act as well as the Atomic Energy Act; LBP-12-18, 76 NRC 138 (2012)
- City of New York v. U.S. Department of Transportation*, 715 F.2d 732, 742 (2d Cir. 1983)
project goals determine the alternatives that are considered reasonable; LBP-12-17, 76 NRC 113 (2012)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), LBP-95-17, 42 NRC 137 (1995), *rev'd and vacated*, CLI-96-13, 44 NRC 315 (1996)
board is directed to consider whether a confirmatory action letter issued to licensee constitutes a de facto license amendment that would be subject to a hearing opportunity under AEA § 189a, and, if so, whether the petition meets standing and contention admissibility requirements; CLI-12-20, 76 NRC 441 (2012)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-443, 6 NRC 741, 753-54 (1977)
summary disposition proponent bears the burden of establishing that no facts remain in dispute, even if the motion is unopposed; LBP-12-26, 76 NRC 564 (2012)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-443, 6 NRC 741, 754 (1977)
no defense to an insufficient showing for summary disposition is required; LBP-12-19, 76 NRC 190 (2012); LBP-12-23, 76 NRC 450 (2012)

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- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-802, 21 NRC 490, 492-93 (1985)
 quality assurance programs establish measures to ensure that conditions adverse to quality are promptly identified and corrected; LBP-12-23, 76 NRC 476 (2012)
- Commonwealth Edison Co.* (Byron Nuclear Power Station, Units 1 and 2), ALAB-770, 19 NRC 1163, 1169 (1984)
 licensing board was not justified in rendering a final judgment in the face of unfolding developments having a deciding bearing and conceivably crucial effect on the issue that shaped that judgment; LBP-12-19, 76 NRC 203 (2012)
- Commonwealth Edison Co.* (Dresden Nuclear Power Station, Unit 1), CLI-81-25, 14 NRC 616, 624 (1981)
 scope of any hearing should include the proposed license amendments, and any health, safety, or environmental issues fairly raised by them; LBP-12-25, 76 NRC 552 (2012)
- Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 348 (2009)
 licensing boards should not consider premature contentions; LBP-12-19, 76 NRC 199 (2012)
- Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 348-51 (2009)
 contention alleging that an Indian tribe had not been consulted concerning cultural resources, in violation of the National Historic Preservation Act, was premature because NRC Staff, not applicant, has the duty to consult with the tribe under the Act, and Staff had not completed its review process; LBP-12-19, 76 NRC 199 (2012); LBP-12-23, 76 NRC 484-85 (2012)
- Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 552 (2009)
 boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-12-18, 76 NRC 145 n.76 (2012)
- Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 553 (2009)
 if petitioner neglects to provide the requisite support for its contentions, it is not within the board's power to make assumptions or draw inferences that favor petitioner, nor may the board supply information that is lacking; LBP-12-15, 76 NRC 26 (2012); LBP-12-18, 76 NRC 182 (2012); LBP-12-27, 76 NRC 595 (2012)
- Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 557 (2009)
 any contention that fails to directly controvert the application or that mistakenly asserts the application does not address a relevant issue will be dismissed; LBP-12-15, 76 NRC 27 (2012); LBP-12-27, 76 NRC 595 (2012)
- Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 566 (2009)
 burden of fulfilling the National Historic Preservation Act's consultation requirements rests exclusively with the NRC, not with the applicant; LBP-12-23, 76 NRC 486 (2012)
- Davis v. Mineta*, 302 F.3d 1104, 1125 (10th Cir. 2002)
 agency's reliance on mitigation in making a finding of no significant impact is justified if the proposed mitigation is more than a possibility in that it is imposed by statute or regulation or has been so integrated into the initial proposal that it is impossible to define the proposal without mitigation; LBP-12-23, 76 NRC 467 (2012)
 Court of Appeals disagreed with the district court's conclusion that the increase in noise levels would not be a significant impact because the agency's environmental assessment made no firm commitment to any noise mitigation measures; LBP-12-23, 76 NRC 469 n.152 (2012)
- Department of Transportation v. Public Citizen*, 54 U.S. 752, 767 (2004)
 NEPA requires a reasonably close causal relationship between the environmental effect and the alleged cause; LBP-12-21, 76 NRC 241 (2012)
- Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 263, *aff'd*, CLI-09-22, 70 NRC 932 (2009)
 applicant's environmental report need only discuss those alternatives that will bring about the ends of the proposed action; LBP-12-15, 76 NRC 38 n.8 (2012)
- Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-12-12, 75 NRC 742, 764-65 (2012)
 applicant is not required to explain in its environmental report every aspect of the process it must pursue in the course of obtaining a federal permit, license, or approval; LBP-12-15, 76 NRC 35 n.6 (2012)

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- Detroit Edison Co.* (Fermi Power Plant Independent Spent Fuel Storage Installation), CLI-10-3, 71 NRC 49, 50 (2010)
petition challenging an immediately effective enforcement order asking that licensee take certain physical security measures in addition to those already required by NRC regulations, to protect the spent fuel it planned to store at its power plant site, was rejected; LBP-12-14, 76 NRC 6-7 (2012)
- Detroit Edison Co.* (Fermi Power Plant Independent Spent Fuel Storage Installation), CLI-10-3, 71 NRC 49, 52-53 (2010)
NRC rejected the argument that an enforcement order regarding addition of physical security measures should be rescinded because it could have negative effects by creating a false sense of security by emphasizing the formation of human security workforce over the substance of putting into place physical barriers and important technologies to protect the plant itself; LBP-12-14, 76 NRC 7 (2012)
- Detroit Edison Co.* (Fermi Power Plant Independent Spent Fuel Storage Installation), LBP-09-20, 70 NRC 565, 568 (2009)
physical security measures developed by NRC in the wake of the September 11 terrorist attacks were deemed necessary to protect the public health and safety in the current threat environment and were intended 'to strengthen licensees' capabilities and readiness to respond to a potential attack on a nuclear facility; LBP-12-14, 76 NRC 7 n.31 (2012)
- Dickow v. United States*, 740 F. Supp. 2d 231, 239 (D. Mass. 2010)
affirmative misconduct means an affirmative misrepresentation or affirmative concealment of a material fact by the government, although it does not require that the government intends to mislead a party; LBP-12-16, 76 NRC 51 n.33 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 213 (2003)
rules on contention admissibility are strict by design; LBP-12-25, 76 NRC 545 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-18, 58 NRC 433, 434 (2003)
reconsideration motions should not simply reargue matters already considered but rejected; CLI-12-17, 76 NRC 210 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-02-22, 56 NRC 213, 227-28 (2002)
reopening a proceeding with respect to a specific issue would not have the effect of reopening the proceeding for adjudication on unrelated matters once a record is closed; CLI-12-17, 76 NRC 212-13 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-08-17, 68 NRC 231, 233 (2008)
rules on contention admissibility are strict by design; LBP-12-25, 76 NRC 545 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 125-26 (2009)
good cause for the failure to file on time is afforded the most weight in balancing the eight late-filing factors of 10 C.F.R. 2.309(c)(i)-(viii); LBP-12-27, 76 NRC 593-94 & n.57 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349 (2001)
contention challenging removal of details from licensee's Technical Specifications to a licensee-controlled document was rejected; LBP-12-25, 76 NRC 548 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 351-52 (2001)
NRC's original rule governing technical specifications, 10 C.F.R. § 50.36, was promulgated in 1968 and lacked well-defined criteria as to what requirements need to be a technical specification and what provisions need not be in the license; LBP-12-25, 76 NRC 550 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 352 (2001)
every license to operate a nuclear power reactor must contain a list of technical specifications necessary for adequate protection of public health and safety; LBP-12-25, 76 NRC 549 (2012)

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- NRC has authority to determine, and to prescribe by rule or regulation, what additional information should be included in technical specifications to ensure public health and safety; LBP-12-25, 76 NRC 549-50 (2012)
- NRC revised 10 C.F.R. 50.36 in 1995 and established clearer criteria as to what constitutes a technical specification that must be in the license; LBP-12-25, 76 NRC 550 (2012)
- technical specifications must include information on the amount, kind, and source of special nuclear material, the place of use, and the particular characteristics of the facility; LBP-12-25, 76 NRC 549 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 355 (2001)
- license amendment to eliminate numerous detailed procedures for monitoring routine radioactive releases from the technical specifications and transfer them to a licensee-controlled document would allow licensee to make future changes to the radiation monitoring procedures without going through another license amendment; LBP-12-25, 76 NRC 550 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001)
- rules on contention admissibility are strict by design; LBP-12-25, 76 NRC 545 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 359 (2001)
- petitioners' reliance on loss of future opportunities to challenge by adjudicatory intervention licensee-initiated changes in the low-level effluent monitoring details fell short of an admissible contention; LBP-12-25, 76 NRC 550 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 359-60 (2001)
- petitioner must explain, with specificity, particular safety or legal reasons why moving a requirement from the license into a licensee-controlled document would be improper; LBP-12-25, 76 NRC 551 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 360 (2001)
- almost every item originally contained in technical specifications has some conceivable connection to safety, but this general premise is insufficient, by itself, as a ground for intervention; LBP-12-25, 76 NRC 550-51 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 361 (2001)
- contentions must include references to the specific portions of the application that petitioner disputes and the supporting reasons for each dispute; LBP-12-25, 76 NRC 551 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-02-1, 55 NRC 1, 2 (2002)
- reconsideration motions should be based on an elaboration of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification; CLI-12-17, 76 NRC 209-10 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 636 (2004)
- failure to comply with any of the contention pleading requirements of 10 C.F.R. 2.309(f)(1)(i)-(vi) is grounds for not admitting a contention; LBP-12-25, 76 NRC 544 (2012)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 559-60 (2005)
- four-factor test for showing of special circumstances demonstrating that application of a rule would not serve the purpose for which it was adopted is outlined; CLI-12-19, 76 NRC 387 n.55 (2012); LBP-12-24, 76 NRC 539 n.8 (2012)
- Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), CLI-07-27, 66 NRC 215, 222 n.21 (2007)
- Council on Environmental Quality guidance does not bind NRC, but NRC gives it substantial deference; LBP-12-17, 76 NRC 82 n.57 (2012)

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- Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-07-9, 65 NRC 539 (2007), *permit issuance authorized*, CLI-07-27, 66 NRC 215 (2007)
guidance on the role of licensing boards in mandatory proceedings is provided; LBP-12-21, 76 NRC 233-34 (2012)
- Dubinsky v. Mermart, LLC*, 595 F.3d 812, 818 (8th Cir. 2010)
absence of any reference to “cumulative impacts” in a document incorporated by reference negates any intention to incorporate any discussion of cumulative impacts from these prior documents into an environmental report, consistent with the maxim of *expressio unius est exclusio alterius*, meaning that the expression of one thing is to the exclusion of another; LBP-12-24, 76 NRC 515-16 (2012)
- Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 74 (2004)
boards lack authority to direct NRC Staff’s regulatory reviews; LBP-12-19, 76 NRC 193 n.41 (2012)
- Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), LBP-04-12, 59 NRC 388, 391 (2004)
information offered in evidence, even if not specifically stated in the original contention and bases, may be relevant if it falls within the envelope, reach, or focus of the contention when read with the original bases offered for it; LBP-12-17, 76 NRC 85 (2012)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 2 (2002)
NRC generally reviews severe accident mitigation alternatives using a cost-benefit analysis, and SAMAs that are not cost-beneficial need not be implemented by licensee; LBP-12-18, 76 NRC 152 (2012)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 7 (2002)
although a contention might have been more detailed or otherwise better supported, petitioners have done enough to raise a question about the adequacy of the probability figures used in applicant’s SAMA analysis, namely, whether they should have incorporated or otherwise acknowledged information from a Sandia study; LBP-12-18, 76 NRC 165 (2012)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 9-10 (2002)
licensing boards must admit an adequately supported contention alleging that the agency’s NEPA analysis of severe accident mitigation alternatives is deficient; LBP-12-18, 76 NRC 164 (2012)
petitioner or intervenor need not prove that the analysis of mitigation is deficient, it being sufficient if the board finds that a sufficient genuine dispute existed concerning the alleged deficiency;
LBP-12-18, 76 NRC 165 (2012)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 11 (2002)
every conceivable mitigation alternative does not require a detailed analysis in the final environmental impact statement; LBP-12-18, 76 NRC 164 (2012)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002)
license renewal applications must contain any significant new information relevant to environmental impacts of which applicant is aware, and new information generally may be challenged in individual adjudications; CLI-12-19, 76 NRC 385 n.51 (2012)
NRC opinions have long referred back to the bases set forth in support of the contention when an issue arises over the scope of an admitted contention; LBP-12-17, 76 NRC 85 (2012); LBP-12-23, 76 NRC 463 (2012)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 383 (2002)
where a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by applicant, the contention is moot; LBP-12-27, 76 NRC 610 (2012)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 383 n.44 (2002)
boards may construe an admitted contention contesting the environmental report as a challenge to a subsequently issued draft or final environmental impact statement without the need for intervenors to file a new or amended contention; LBP-12-23, 76 NRC 471 n.159 (2012)

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- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999)
to trigger a full adjudicatory hearing, petitioners must be able to proffer at least some minimal factual and legal foundation in support of their contentions; LBP-12-27, 76 NRC 595 (2012)
- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334-35 (1999)
rules on contention admissibility are strict by design; LBP-12-25, 76 NRC 545 (2012)
- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 336 (1999)
asking questions and seeking additional information is an essential part of the NRC's licensing process, and such questioning does not automatically give rise to an admissible contention; LBP-12-27, 76 NRC 605 n.130 (2012)
- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 345 (1999)
boards should not accept in individual license proceedings contentions that are, or are about to become, the subject of rulemaking by the Commission; LBP-12-24, 76 NRC 510 (2012)
- Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985)
all proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and directive referring the proceeding to the licensing board; LBP-12-15, 76 NRC 25 (2012); LBP-12-18, 76 NRC 157 (2012)
contentions must be within the scope of the proceeding as defined by the Commission in its initial Notice and Order referring the proceeding to the licensing board; LBP-12-27, 76 NRC 594 (2012)
- Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1048 (1983)
by participating in NRC proceedings, intervenors accept the obligation of uncovering relevant, publicly available information; CLI-12-21, 76 NRC 499 (2012)
- Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1049 (1983)
NEPA imposes a nondiscretionary duty on NRC to amend an environmental impact statement if new and significant information comes to light; LBP-12-18, 76 NRC 157 (2012)
NRC Staff, not the applicant, bears the ultimate burden of establishing compliance with NEPA; LBP-12-17, 76 NRC 80 (2012)
- Ecology Action v. AEC*, 492 F.2d 998, 1001-02 (2d Cir. 1974)
environmental impact statements are effectively amended through the adjudicatory process; LBP-12-17, 76 NRC 83 (2012)
- EnergySolutions, LLC* (Radioactive Waste Import/Export Licenses), CLI-11-3, 73 NRC 613, 621 (2011)
boards look to judicial concepts of standing and determine whether petitioner is threatened with a concrete injury and the injury is fairly traceable to the licensing action and capable of being redressed by a favorable decision; LBP-12-24, 76 NRC 507-08 (2012)
- Entergy Nuclear Generation Co. v. Department of Environmental Protection*, 459 Mass. 319, 330; 944 N.E.2d 1027 (Mass. 2011)
another permitting regime for discharges does not foreclose the department from developing compatible methods of regulating water intakes at cooling water intake structures; LBP-12-16, 76 NRC 54 (2012)
in areas with a designated use as aquatic habitat, cooling water intake structures hinder the attainment of water quality standards; LBP-12-16, 76 NRC 54 n.49 (2012)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297 (2010)
licensing boards or presiding officers should not conduct a trial on affidavits; LBP-12-23, 76 NRC 478 (2012)
when considering a motion for summary disposition, the function of the board is not to weigh the evidence and determine the truth of the matter but to determine whether there is a genuine issue for hearing; LBP-12-23, 76 NRC 480 (2012)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297-98 (2010)
if reasonable minds could differ as to the import of the evidence, summary disposition is not appropriate; LBP-12-23, 76 NRC 478 (2012)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 309 (2010)
licensing boards may not stretch the scope of admitted contentions beyond their reasonably inferred bounds, but may consider issues that, although not expressly stated, can reasonably be inferred from the arguments presented; LBP-12-17, 76 NRC 85 (2012)

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- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 316 (2010)
because the generic EIS provides a severe accident impacts analysis that envelopes potential impacts at all existing plants, the environmental impacts of severe accidents during the license renewal term already have been addressed generically in bounding fashion; LBP-12-18, 76 NRC 142 n.68 (2012)
common practice in an environmental impact statement is to use bounding evaluations when more exact calculations cannot be performed or are not necessary; LBP-12-18, 76 NRC 142 n.68 (2012)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-1, 75 NRC 39, 41-43 (2012)
Category 2 issues focus on severe accident mitigation, to further reduce severe accident risk (probability or consequences); CLI-12-19, 76 NRC 381 n.20 (2012)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-1, 75 NRC 39, 57-58 (2012)
unless a contention, submitted with adequate factual, documentary, or expert support, raises a potentially significant deficiency in the severe accident mitigation alternatives analysis, a SAMA-related dispute will not be material to the licensing decision and is not appropriate for litigation in NRC proceedings; LBP-12-26, 76 NRC 565 (2012)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-6, 75 NRC 352, 371 (2012)
any contention that fails to directly controvert the application or that mistakenly asserts the application does not address a relevant issue will be dismissed; LBP-12-15, 76 NRC 27 (2012)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC 479, 487 (2012)
NEPA severe accident mitigation alternatives analysis need not reflect the most conservative, or worst-case, analysis; LBP-12-26, 76 NRC 573 n.73 (2012)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-15, 75 NRC 704, 725 (2012)
NEPA is not intended to encompass every possible impact, and does not encompass potential losses due to individuals' perception of a risk; LBP-12-24, 76 NRC 523 n.100 (2012)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-08-22, 68 NRC 590, 601 (2008)
challenge to the adequacy of the acceptance criteria or any other component of the current licensing basis is not within the scope of the license renewal proceeding; LBP-12-24, 76 NRC 525 n.117 (2012)
- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-11-14, 74 NRC 801, 813 (2011)
NEPA requires a hard look at severe accident mitigation measures; LBP-12-26, 76 NRC 573 n.72 (2012)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 20 (2007)
any contention on a Category 1 issue amounts to a challenge to the regulation barring challenges to generic environmental findings; CLI-12-19, 76 NRC 384 n.39 (2012)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 20-21 (2007)
petitioners, not just parties, may request a rule waiver in NRC adjudicatory proceedings; CLI-12-19, 76 NRC 387 n.55 (2012)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 21 (2007)
adjudicating Category 1 issues site by site based merely on a claim of new and significant information, would defeat the purpose of resolving generic issues in a GEIS; CLI-12-19, 76 NRC 384 (2012)
"new and significant information" requirement does not override, for purposes of litigating the issues in an adjudicatory proceeding, the exclusion of Category 1 issues in section 51.53(c)(3)(i) from site-specific review; CLI-12-19, 76 NRC 384 (2012)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 377 (2007)
licensing boards do not have jurisdiction to determine whether other government entities have properly followed their regulations or procedures; LBP-12-16, 76 NRC 59 n.74 (2012)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 385-86 (2007)
Congress has severely limited the scope of NRC's inquiry into Clean Water Act §316(a) determinations; LBP-12-16, 76 NRC 53 n.43 (2012)

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- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 342 n.43 (2011)
NRC generally considers approximately 30-60 days as the limit for timely filings based on new information; CLI-12-21, 76 NRC 499 n.50 (2012)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 344 (2011)
intervenors cannot simply point to documents merely summarizing earlier documents or compiling preexisting, publicly available information into a single source as doing so does not render “new” the summarized or compiled information; LBP-12-27, 76 NRC 602 (2012)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-05-32, 62 NRC 813, 821 n.21 (2005)
if a contention satisfies the timeliness requirement of 10 C.F.R. 2.309(f)(2)(iii), then, by definition, it is not subject to 10 C.F.R. 2.309(c) which specifically applies to nontimely filings; LBP-12-18, 76 NRC 138-39 (2012)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-5, 63 NRC 116, 122 (2006)
regardless of the level of the dispute, at the summary disposition stage, it is not proper for a board to choose which expert has the better of the argument; LBP-12-23, 76 NRC 478 (2012)
when presented with conflicting expert opinions, licensing boards should be mindful that summary disposition is rarely proper; LBP-12-23, 76 NRC 478 (2012)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-14, 63 NRC 568, 573-74 & n.14 (2006)
if a contention satisfies the timeliness requirement of 10 C.F.R. 2.309(f)(2)(iii), then, by definition, it is not subject to 10 C.F.R. 2.309(c) which specifically applies to nontimely filings; LBP-12-18, 76 NRC 138-39 (2012)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-07-15, 66 NRC 261, 266 n.11 (2007)
unless a deadline has been specified in the scheduling order for the proceeding, the determination of timeliness is subject to a reasonableness standard that depends on the facts and circumstances in the case; LBP-12-27, 76 NRC 597 n.80 (2012)
- Environmental Law & Policy Center v. NRC*, 470 F.3d 676, 679 (7th Cir. 2006)
“baseload power” is defined as power generating energy intended to continuously produce electricity at or near full capacity, with high availability; LBP-12-15, 76 NRC 37 (2012)
- Essex County Preservation Association v. Campbell*, 536 F.2d 956, 960-61 (1st Cir. 1976)
mitigation must be discussed in sufficient detail in an environmental impact statement to ensure that environmental consequences have been fairly evaluated; LBP-12-18, 76 NRC 159 (2012)
- Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-06-20, 64 NRC 15, 21-22 (2006)
mandatory hearing board must narrow its inquiry to topics or sections in NRC Staff documents that it deems most important and should concentrate on portions of the documents that do not on their face adequately explain the logic, underlying facts, and applicable regulations and guidance; LBP-12-21, 76 NRC 244 (2012)
no purpose is served for NRC Staff to produce copies of every document used in its review when the board cannot possibly read through every one, let alone scrutinize them; LBP-12-21, 76 NRC 244 (2012)
no purpose is served for NRC Staff to produce volumes of documents and information supporting facts and conclusions that are of small importance and are beyond dispute; LBP-12-21, 76 NRC 244 (2012)
- Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), LBP-06-28, 64 NRC 460 (2006),
permit issuance authorized, CLI-07-12, 65 NRC 203 (2007)
guidance on the role of licensing boards in mandatory proceedings is provided; LBP-12-21, 76 NRC 233-34 (2012)
- Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), LBP-12-8, 75 NRC 539 (2012)
to the extent that applicant proposes modifications to the facility in response to a request for information, NEPA also requires consideration of effectiveness and relative costs of a range of alternatives for satisfying the NRC’s concerns; LBP-12-15, 76 NRC 32 (2012)

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- Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003)
neither speculation nor conclusory assertions, even by an expert, alleging that a matter fails to satisfy the AEA or NEPA will suffice to allow admission of a proffered contention; LBP-12-15, 76 NRC 26 (2012); LBP-12-27, 76 NRC 595 (2012)
- Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 204-05 (2003)
simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support the admission of the contention; LBP-12-15, 76 NRC 26-27 (2012); LBP-12-27, 76 NRC 595 (2012)
- FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 397 (2012)
NRC Staff is required to issue a final environmental impact statement that thoroughly and objectively evaluates reasonable alternatives to the proposed action; LBP-12-17, 76 NRC 113 (2012)
- FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 401-02 (2012)
contention seeking full impacts generation alternative analysis of wind, either alone or in combination with solar and storage, is inadmissible because it fails to adequately demonstrate the capacity to produce baseload power; LBP-12-15, 76 NRC 38 (2012)
- FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 402 (2012)
discussion necessary to support a NEPA alternatives contention in a reactor license renewal proceeding is compared with that for a Part 52 combined license proceeding; LBP-12-15, 76 NRC 38 (2012)
- FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 404, 405 (2012)
petitioner who fails to provide sufficient factual or expert support for the claims in its contention in contravention of section 2.309(f)(1)(v) also may have failed to show a genuine dispute with the application as required under section 2.309(f)(1)(vi); LBP-12-15, 76 NRC 27 (2012)
- FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 416 (2012)
NRC's strict contention rule is designed to avoid resource-intensive hearings where petitioners have not provided sufficient support for their technical claims, and do not demonstrate a potential to meaningfully participate and inform a hearing; LBP-12-27, 76 NRC 592 (2012)
- Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2; Turkey Point Nuclear Generating Plant, Units 3 and 4), DD-97-20, 46 NRC 96 (1997)
the record before the board falls far short of rebutting the presumption that a petition for license modification, suspension, or revocation is a meaningful avenue for seeking administrative relief; LBP-12-14, 76 NRC 11 (2012)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 329 (2000)
all proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and directive referring the proceeding to the licensing board; LBP-12-15, 76 NRC 25 (2012); LBP-12-27, 76 NRC 594 (2012)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 8-10 (2001)
current safety issues are beyond the scope of a license renewal proceeding; LBP-12-27, 76 NRC 609 (2012)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 9 (2001)
it is not necessary or appropriate to throw open the full gamut of provisions in a facility's current licensing basis to reanalysis during the license renewal review, because the current licensing basis is effectively addressed and maintained by ongoing agency oversight, review, and enforcement; LBP-12-24, 76 NRC 525 (2012)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 20 (2001)
rule waiver is required to litigate any new and significant information relating to a Category 1 issue; CLI-12-19, 76 NRC 384 (2012)

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- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 21-23 (2001)
 petitioners, not just parties, may request a rule waiver in NRC adjudicatory proceedings; CLI-12-19, 76 NRC 387 n.55 (2012)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 22-23 (2001)
 Category 1 issues in section 51.53(c)(3)(i) are excluded from site-specific review absent a waiver of the rule; CLI-12-19, 76 NRC 384 n.41 (2012)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 150, *aff'd on other grounds*, CLI-01-17, 54 NRC 3, 26 n.20 (2001)
 in power reactor license renewal proceedings, standing associated with causation is deemed fulfilled if a member of the organization that is seeking representational standing resides or has significant contacts in an area within a 50-mile radius of the facility; LBP-12-15, 76 NRC 24 n.1 (2012)
- Forest Guardians v. U.S. Forest Service*, 495 F.3d 1162, 1172 (10th Cir. 2007)
 federal agencies must consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives; LBP-12-17, 76 NRC 81 (2012)
 NEPA requires federal agencies to pause before committing resources to a project and consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives; LBP-12-18, 76 NRC 159 (2012)
- Friends of Clearwater v. Dombeck*, 222 F.3d 552, 555, 559 (9th Cir. 2000)
 the Forest Service prepared a supplemental information report, which is a formal instrument for documenting whether new information is sufficiently significant to trigger the need for a SEIS and several other analyses that specifically addressed the significance of the new information; LBP-12-18, 76 NRC 173 (2012)
- Friends of Clearwater v. Dombeck*, 222 F.3d 552, 557-58 (9th Cir. 2000)
 agency that has prepared an EIS cannot simply rest on the original document but must be alert to new information that may alter the results of its original environmental analysis, and continue to take a hard look at the environmental effects of its planned action, even after a proposal has received initial approval; LBP-12-18, 76 NRC 166 (2012)
- Friends of Clearwater v. Dombeck*, 222 F.3d 552, 559 (9th Cir. 2000)
 compliance with NEPA is a primary duty of every federal agency, and fulfillment of this responsibility should not depend on vigilance and limited resources of environmental plaintiffs; LBP-12-18, 76 NRC 166 (2012)
 Forest Service's failure to timely evaluate need to supplement the original EIS in light of new information violated NEPA; LBP-12-18, 76 NRC 179-80 (2012)
- Friends of Clearwater v. Dombeck*, 222 F.3d 552, 561 (9th Cir. 2000)
 the Forest Service's requisite hard look at newly designated sensitive species and its determination that an SEIS was not required was not arbitrary and capricious; LBP-12-18, 76 NRC 173 (2012)
- Friends of Southeast's Future v. Morrison*, 153 F.3d 1059, 1065 (9th Cir. 1998)
 existence of a reasonable but unexamined alternative renders an environmental impact statement inadequate; LBP-12-17, 76 NRC 83 (2012)
- Geders v. United States*, 425 U.S. 80, 87 (1976)
 courts exclude witnesses prior to their testimony to discourage or expose outright fabrication and restrain the natural tendency of witnesses to tailor their testimony to that of earlier witnesses; LBP-12-21, 76 NRC 249 (2012)
- General Public Utilities Nuclear Corp.* (Oyster Creek Nuclear Generating Station), LBP-97-1, 45 NRC 7, 12-13 (1997)
 summary disposition is an appropriate vehicle to resolve purely legal disputes; LBP-12-26, 76 NRC 574 (2012)
- Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 118 (1995)
 contention admissibility rules impose on petitioner the burden of going forward with a sufficient factual basis, but they do not shift the ultimate burden of proof from applicant to petitioner, nor do the rules require petitioner to prove its case at the contention stage; LBP-12-18, 76 NRC 163-64 (2012)

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- for factual disputes, petitioner need not proffer facts in formal affidavit or evidentiary form, sufficient to withstand a summary disposition motion; LBP-12-18, 76 NRC 163-64 (2012)
- petitioner must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate; LBP-12-18, 76 NRC 163-64 (2012)
- Gersman v. Group Health Association, Inc.*, 975 F. 2d 886, 890 (D.C. Cir. 1992)
- it would be impermissible to construe the prohibition of foreign ownership so as to make it redundant or otherwise deprive it of operative effect; LBP-12-19, 76 NRC 196 n.69 (2012)
- Graham v. Securities and Exchange Commission*, 222 F.3d 994, 1007 (D.C. Cir. 2000)
- elements of a showing of estoppel against the government are described; LBP-12-16, 76 NRC 51 (2012)
- Greenpeace Action v. Franklin*, 14 F.3d 1324, 1332 (9th Cir. 1992)
- agency's reliance on mitigation in making a finding of no significant impact is justified if the proposed mitigation constitutes an adequate buffer against the negative impacts that result from the authorized activity to render such impacts so minor as to not warrant an environmental impact statement; LBP-12-23, 76 NRC 467 (2012)
- Guerini Stone Co. v. P. J. Carlin Construction Co.*, 240 U.S. 264, 277 (1916)
- reference by the contracting parties to an extraneous writing for a particular purpose makes it a part of their agreement only for the purpose specified; LBP-12-24, 76 NRC 515 n.60 (2012)
- Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 51 (1994)
- contention admissibility rules impose on petitioner the burden of going forward with a sufficient factual basis, but they do not shift the ultimate burden of proof from applicant to petitioner, nor do the rules require petitioner to prove its case at the contention stage; LBP-12-18, 76 NRC 163-64 (2012)
- for factual disputes, petitioner need not proffer facts in formal affidavit or evidentiary form, sufficient to withstand a summary disposition motion; LBP-12-18, 76 NRC 163-64 (2012)
- petitioner must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate; LBP-12-18, 76 NRC 163-64 (2012)
- Gulf States Utilities Co.* (River Bend Station, Unit 1), LBP-95-10, 41 NRC 460, 471 (1995)
- intervenor may question whether the draft environmental impact statement includes a sufficient justification for its reliance upon future actions of a state agency; LBP-12-23, 76 NRC 464-65 (2012)
- Heckler v. Community Health Services of Crawford County, Inc.*, 467 U.S. 51, 59 (1984)
- estoppel claims must rely on its adversary's conduct in such a manner as to change his position for the worse, and that reliance must have been reasonable in that the party claiming the estoppel did not know nor should it have known that its adversary's conduct was misleading; LBP-12-16, 76 NRC 51 (2012)
- estoppel is an equitable doctrine invoked to avoid injustice in particular cases; LBP-12-16, 76 NRC 51 (2012)
- Heckler v. Community Health Services of Crawford County, Inc.*, 467 U.S. 51, 60 (1984)
- elements of a showing of estoppel against the government are described; LBP-12-16, 76 NRC 51 (2012)
- the government may not be estopped on the same terms as any other litigant; LBP-12-16, 76 NRC 51 (2012)
- Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-629, 13 NRC 75, 78 (1981)
- if summary disposition movant meets its burden, opponent must set forth specific facts showing that there is a genuine issue and may not rely on mere allegations or denials; LBP-12-19, 76 NRC 190-91 (2012)
- Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 443 (4th Cir. 1996)
- NEPA's has twin goals of forcing agencies to take a hard look at the environmental consequences of a proposed project, and, making relevant analyses openly available, to permit the public a role in the agency's decisionmaking process; LBP-12-18, 76 NRC 179 (2012)
- NEPA's primary goals include fostering informed public participation in the decisionmaking process; LBP-12-17, 76 NRC 120-21 (2012)

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- Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119, 120 (1998)
whether non-NRC permits are required is the responsibility of bodies that issue such permits; LBP-12-16, 76 NRC 59 (2012)
- Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 14 (1999)
supplementing an environmental impact statement is not necessary unless new information presents a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; LBP-12-18, 76 NRC 141-42, 162, 167 (2012)
- Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-00-12, 52 NRC 1, 5 (2000)
boards will reopen the record only when new evidence raises an exceptionally grave issue calling into question the safety of the licensed activity; CLI-12-21, 76 NRC 500 (2012); LBP-12-16, 76 NRC 58 n.72 (2012)
- Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 52 (2001)
to reopen a record, petitioners must reveal a seriously different picture of the environmental impact of a proposed project; LBP-12-16, 76 NRC 57 (2012)
- Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 55 (2001)
NRC Staff's environmental impact statement need only discuss those alternatives that will bring about the ends of the proposed action; LBP-12-15, 76 NRC 38 n.8 (2012)
- Indiana & Michigan Electric Co. v. Federal Power Commission*, 502 F.2d 336, 339 (D.C. Cir. 1974)
intervenor must make a showing for admission of a NEPA contention sufficient to require reasonable minds to inquire further; LBP-12-18, 76 NRC 165-66 (2012)
- International Union v. Clark*, 2006 WL 2598046, at 12 (D.D.C. Sept. 11, 2006)
elements of a showing of estoppel against the government are described; LBP-12-16, 76 NRC 51 (2012)
- International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252 (2001)
organization seeking standing as a party must show either a discrete injury to its own institutional interests or authorization to represent an individual who would have standing in his or her own right; LBP-12-24, 76 NRC 508 (2012)
- Kungys v. United States*, 485 U.S. 759, 778 (1988)
no provision of a statute should be construed to be entirely redundant; LBP-12-19, 76 NRC 196 (2012)
- Laguna Greenbelt, Inc. v. U.S. Department of Transportation*, 42 F.3d 517, 528 (9th Cir. 1994)
NEPA does not require a fully developed plan that will mitigate all environmental harm before an agency can act, only that mitigation be discussed in sufficient detail to ensure that environmental consequences have been fully evaluated; LBP-12-23, 76 NRC 458 (2012)
- Limerick Ecology Action v. NRC*, 869 F.2d 719 (3d Cir. 1989)
NEPA regulations require consideration of severe mitigation alternatives in its EISs and supplements thereto at the operating license stage; LBP-12-15, 76 NRC 29 n.3 (2012)
- Limerick Ecology Action v. NRC*, 869 F.2d 719, 727, 741 (3d Cir. 1989)
SAMDas should not be considered in the agency's NEPA reviews for individual facilities, but must be given careful consideration in the Limerick EIS; LBP-12-18, 76 NRC 173 n.221 (2012)
- Limerick Ecology Action v. NRC*, 869 F.2d 719, 728 (3d Cir. 1989)
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- Limerick Ecology Action v. NRC*, 869 F.2d 719, 729-30 (3d Cir. 1989)
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- Limerick Ecology Action v. NRC*, 869 F.2d 719, 730 (3d Cir. 1989)
NRC must consider the alternatives available for reducing or avoiding adverse environmental and other effects; LBP-12-18, 76 NRC 175-76 (2012)
- Limerick Ecology Action v. NRC*, 869 F.2d 719, 730-31 (3d Cir. 1989)
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- NRC cannot look to the sufficiency of safety standards enacted under the Atomic Energy Act to avoid its NEPA obligations; LBP-12-18, 76 NRC 175 n.238 (2012)
- Limerick Ecology Action v. NRC*, 869 F.2d 719, 736-37, 739, 741 (3d Cir. 1989)
NRC policy statement is not a sufficient vehicle to preclude consideration of severe accident mitigation design alternatives, and NRC must take the requisite hard look at them, giving them the careful consideration and disclosure required by the National Environmental Policy Act; CLI-12-19, 76 NRC 380-81 (2012)
- Limerick Ecology Action v. NRC*, 869 F.2d 719, 737 (3d Cir. 1989)
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- Limerick Ecology Action v. NRC*, 869 F.2d 719, 739 (3d Cir. 1989)
absent a valid regulation limiting NRC's NEPA obligations, the consideration of alternative severe accident mitigation measures may not be excluded from the agency's NEPA reviews; LBP-12-18, 76 NRC 173-74 (2012)
- Limerick Ecology Action v. NRC*, 869 F.2d 719, 739-41 (3d Cir. 1989)
NRC's obligation to evaluate mitigation in an EIS for a new nuclear reactor license includes evaluating measures to mitigate the impact of severe accidents on public health and safety; LBP-12-18, 76 NRC 161 (2012)
- Limerick Ecology Action v. NRC*, 869 F.2d 719, 741 (3d Cir. 1989)
alternatives to mitigate the impacts of severe accidents must be given careful consideration in EISs supporting NRC licensing decisions; LBP-12-18, 76 NRC 172 (2012)
- Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973)
NEPA's "hard look" requirement is tempered by a rule of reason; LBP-12-17, 76 NRC 82 (2012)
rule of reason under NEPA means that an agency must only consider reasonably foreseeable impacts in its environmental impact statement, and need not address those that are remote and speculative or inconsequentially small; LBP-12-17, 76 NRC 82 (2012)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-92-7, 35 NRC 93 (1992)
this decision may be relied upon as precedent for licensing of a uranium enrichment facility; LBP-12-21, 76 NRC 233 (2012)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 294 (1997)
this decision may be relied upon as precedent for licensing of a uranium enrichment facility; LBP-12-21, 76 NRC 233 (2012)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 296-97 (1997)
enrichment facilities are to be licensed pursuant to Atomic Energy Act §§ 53 and 63, 42 U.S.C. §§ 2073, 2093; LBP-12-21, 76 NRC 232-33 & n.73 (2012)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77 (1998)
this decision may be relied upon as precedent for licensing of a uranium enrichment facility; LBP-12-21, 76 NRC 233 (2012)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 84 (1998)
boards may construe an admitted contention contesting the environmental report as a challenge to a subsequently issued draft or final environmental impact statement without the need for intervenors to file a new or amended contention; LBP-12-23, 76 NRC 470-71 (2012)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87 (1998)
NEPA's has twin goals of forcing agencies to take a hard look at the environmental consequences of a proposed project, and, making relevant analyses openly available, to permit the public a role in the agency's decisionmaking process; LBP-12-18, 76 NRC 179 (2012)
NEPA's primary goals include fostering informed public participation in the decisionmaking process; LBP-12-17, 76 NRC 120-21 (2012)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998)
NEPA imposes procedural restraints on agencies, which require them to take a hard look at the environmental impacts of a proposed action and the reasonable alternatives to that action; LBP-12-17, 76 NRC 81-82 (2012)

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- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 88 (1998)
NEPA ensures that agencies will not act on incomplete information, only to regret its decision after it is too late to correct; LBP-12-17, 76 NRC 82 (2012)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 89 (1998)
adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of the final environmental impact statement; LBP-12-17, 76 NRC 83 (2012)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 104 (1998)
environmental impact statements are to include a detailed statement by the responsible official on alternatives to the proposed action; LBP-12-17, 76 NRC 82 (2012)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 338-39 (1996)
environmental contentions ultimately challenge NRC's compliance with NEPA, but applicant is free to support positions set forth in the environmental impact statement that are under challenge;
LBP-12-17, 76 NRC 81 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-5, 61 NRC 22, 34 (2005)
low-level radioactive waste traditionally has been defined by what it is not; LBP-12-21, 76 NRC 243 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-5, 61 NRC 22, 34-35 (2005)
depleted uranium and the other waste generated by uranium enrichment facilities are not spent fuel, transuranic waste, or 11e(2) byproduct material or specific kinds of wastes such as irradiated fuel and the liquid and solid wastes resulting from the processing of irradiated fuel, and thus are classified as low-level waste; LBP-12-21, 76 NRC 243 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-5, 61 NRC 22, 36 (2005)
this decision may be relied upon as precedent for licensing of a uranium enrichment facility;
LBP-12-21, 76 NRC 233 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-17, 62 NRC 5 (2005)
this decision may be relied upon as precedent for licensing of a uranium enrichment facility;
LBP-12-21, 76 NRC 233 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-17, 62 NRC 5, 34 (2005)
giving appropriate deference to NRC Staff technical expertise, boards are to probe the logic and evidence supporting NRC Staff findings and decide whether those findings are sufficient to support license issuance; LBP-12-21, 76 NRC 235 (2012)
licensing boards conducting mandatory hearings on uncontested issues are expected to take an independent hard look at NRC Staff safety and environmental findings but are not to replicate NRC Staff work; LBP-12-21, 76 NRC 224 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-17, 62 NRC 5, 39 (2005)
licensing boards conducting mandatory hearings on uncontested issues should conduct a simple sufficiency review of uncontested issues, not a de novo review; LBP-12-21, 76 NRC 224, 235 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-17, 62 NRC 5, 39-40 (2005)
licensing board role in a mandatory hearing on uranium enrichment licensing is to examine the sufficiency of NRC Staff's findings and to confirm that those findings have reasonable support in logic and fact; LBP-12-21, 76 NRC 236 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-17, 62 NRC 5, 41 (2005)
licensing boards have an important but limited role in mandatory proceedings; LBP-12-21, 76 NRC 224 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-17, 62 NRC 5, 42-43 (2005)
Atomic Energy Act does not prescribe a specific structure for the mandatory hearing requirement, and the Commission has granted licensing boards considerable flexibility to select the most appropriate approach in the circumstances of each individual case; LBP-12-21, 76 NRC 243 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-17, 62 NRC 5, 44 (2005)
licensing boards are to ensure that the demands of NEPA and NRC regulations are met through independent environmental judgments by the boards; LBP-12-21, 76 NRC 236 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-17, 62 NRC 5, 45 (2005)
in reaching independent judgment on NEPA baseline issues, licensing board role is not to second-guess underlying technical or factual findings by the NRC Staff unless the board finds Staff

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- review to be incomplete or Staff findings to be insufficiently explained in the record; LBP-12-21, 76 NRC 236 n.88 (2012)
- licensing board's NEPA review must not be so intrusive or detailed as to involve the board in independent basic research or a duplication of the analysis previously performed by the Staff; LBP-12-21, 76 NRC 236 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005)
- NEPA also does not call for certainty or precision, but an estimate of anticipated (not unduly speculative) impacts; LBP-12-18, 76 NRC 142 n.68 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-28, 62 NRC 721, 724 (2005)
- nuclear nonproliferation issues span a host of factors far removed from and far afield from the NRC's decision whether to license a uranium enrichment facility; LBP-12-21, 76 NRC 241 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-28, 62 NRC 721, 724-25 (2005)
- the Commission has determined that there is no relationship between NRC licensing actions and terrorism; LBP-12-21, 76 NRC 241 (2012)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), LBP-06-8, 63 NRC 241, 258-59 (2006)
- NEPA's "hard look" requirement is tempered by a rule of reason; LBP-12-17, 76 NRC 82 (2012)
- Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 388 (2012)
- Fukushima contention that petitioners did not relate to any unique characteristics of the particular site at issue was akin to the generic type of NEPA review that the Commission declared premature; LBP-12-18, 76 NRC 141 (2012)
- Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 388, 389, 390 (2012)
- reference to Fukushima Task Force Report recommendations alone, without facts or expert opinion that explain their significance for the unique characteristics of the sites or reactors that are the subject of the petitions, does not provide sufficient support for the common contention; LBP-12-18, 76 NRC 139 (2012)
- Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 388-89 (2012)
- any contention that falls outside the specified scope of the proceeding must be rejected; LBP-12-15, 76 NRC 26 (2012)
- Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 389 (2012)
- as tangible Fukushima lessons emerge, Fukushima-related contentions in individual adjudications may become more plausible, except insofar as the NRC is taking generic steps to address them; LBP-12-18, 76 NRC 139, 145 (2012)
- Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 390 & n.43 (2012)
- petitioner who fails to provide sufficient factual or expert support for the claims in its contention in contravention of section 2.309(f)(1)(v) also may have failed to show a genuine dispute with the application as required under section 2.309(f)(1)(vi); LBP-12-15, 76 NRC 27 (2012)
- Mackey v. Lanier Collection Agency*, 486 U.S. 825, 837 (1988)
- court is hesitant to adopt an interpretation of a congressional enactment that renders superfluous another portion of that same law; LBP-12-19, 76 NRC 196 n.68 (2012)
- Maine Yankee Atomic Power Co.* (Maine Yankee Atomic Power Station), CLI-04-5, 59 NRC 52, 58 (2004)
- if petitioner could avoid the Commission's limitation on the scope of an enforcement order simply by characterizing its petition as opposing the order unless additional measures are granted, the Commission would never be able to limit its proceedings; LBP-12-14, 76 NRC 6 (2012)
- Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 370 (1989)
- subject of postdecision supplemental environmental impact statements is not expressly addressed in NEPA; LBP-12-18, 76 NRC 161 (2012)
- Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 370-71 (1989)
- to reopen a record, petitioners must reveal a seriously different picture of the environmental impact of a proposed project; LBP-12-16, 76 NRC 57 (2012)

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- Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989)
federal agencies must consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives; LBP-12-17, 76 NRC 81 (2012)
NEPA ensures that agencies will not act on incomplete information, only to regret its decision after it is too late to correct; LBP-12-17, 76 NRC 82 (2012)
NEPA requires federal agencies to pause before committing resources to a project and consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives; LBP-12-18, 76 NRC 159 (2012)
- Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 373 (1989)
agencies need not supplement an EIS every time new information comes to light after the EIS is finalized because it would render agency decisionmaking intractable; LBP-12-18, 76 NRC 162 (2012)
supplementing an environmental impact statement is not necessary unless new information presents a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; LBP-12-18, 76 NRC 141-42 (2012)
- Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 373-74 (1989)
agency that has prepared an EIS cannot simply rest on the original document but must be alert to new information that may alter the results of its original environmental analysis, and continue to take a hard look at the environmental effects of its planned action, even after a proposal has received initial approval; LBP-12-18, 76 NRC 166 (2012)
- Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989)
if after preparation of the EIS, the agency is presented with new information or changed circumstances and there remains major federal action to occur, and if the new information is sufficient to show that the remaining action will affect the quality of the human environment in a significant manner or to a significant extent not already considered, a supplemental EIS must be prepared; LBP-12-18, 76 NRC 161-62 (2012)
- Massachusetts v. United States*, 522 F.3d 115, 129 (1st Cir. 2008)
there are places in NRC rules where “party” is used not as a term of art, but rather as a substitute for “participant”; CLI-12-19, 76 NRC 387 n.55 (2012)
- Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 772, 775 (1983)
agencies are responsible for taking a hard look at the project’s effect on safety as well as the environment; LBP-12-18, 76 NRC 160-61 (2012)
impact of a proposed action on public safety is an issue that must be considered under National Environmental Policy Act as well as the Atomic Energy Act; LBP-12-18, 76 NRC 138 (2012)
- Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 774 (1983)
relationship between the uranium enrichment facility’s product and production of high-level waste is too attenuated to show the requirement of a reasonably close causal relationship required by NEPA; LBP-12-21, 76 NRC 243 (2012)
- Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 775-79 (1983)
petitioner’s assertion that continued operation of an independent spent fuel storage installation causes fear and anxiety among its members is not a valid claim under NEPA; LBP-12-24, 76 NRC 523 (2012)
- Midwest Independent Transmission System Operator, Inc.*, 97 FERC ¶61,326 (2001)
Federal Energy Regulatory Commission approved the first privately owned, federally regulated regional transmission organization in the nation; LBP-12-15, 76 NRC 39 n.10 (2012)
- Midwest Independent Transmission System Operator, Inc.*, 108 FERC ¶61,163 (2004)
the regional transmission organization provides transmission service under the terms and conditions of a single open access transmission tariff; LBP-12-15, 76 NRC 39 n.10 (2012)
- Midwest Independent Transmission System Operator, Inc.*, 122 FERC ¶61,283, ¶57 (2008)
regional transmission organization status was granted to provide open access to an electricity transmission system to all member utilities in 15 Midwestern states and one Canadian province; LBP-12-15, 76 NRC 39 n.10 (2012)
- Midwest ISO Transmission Owners v. FERC*, 373 F.3d 1361, 1365 (D.C. Cir. 2004)
member transmission providers are owners of transmission facilities, with the regional transmission organization exercising functional control over those facilities, calculating available transmission

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- capability, and receiving, approving, and scheduling transmission service; LBP-12-15, 76 NRC 39 n.10 (2012)
- Mississippi Power and Light Co.* (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 426 (1973)
- petitioner is not required to set forth all its evidence or to prove its contentions at the admissibility stage; LBP-12-17, 76 NRC 85 (2012)
- Mississippi River Basin Alliance v. Westphal*, 230 F.3d 170, 176-77 (5th Cir. 2000)
- mitigation must be discussed in sufficient detail in an environmental impact statement to ensure that environmental consequences have been fairly evaluated; LBP-12-18, 76 NRC 159 (2012)
- Mississippi River Basin Alliance v. Westphal*, 230 F.3d 170, 177 (5th Cir. 2000)
- environmental impact statements must include a reasonably complete discussion of possible mitigation measures; LBP-12-18, 76 NRC 159 n.153 (2012)
- Montclair Township v. Ramsdell*, 107 U.S. 147, 152 (1883)
- courts must give effect, if possible, to every clause and word of a statute to avoid any construction that implies that the legislature was ignorant of the meaning of the language it employed; LBP-12-19, 76 NRC 196 n.66 (2012)
- Morris Communications, Inc. v. Federal Communications Commission*, 566 F.3d 184, 191 (D.C. Cir. 2009)
- elements of a showing of estoppel against the government are described; LBP-12-16, 76 NRC 51 (2012)
- National Audubon Society v. Hoffman*, 132 F.3d 7, 17 (2d Cir. 1997)
- there is no assurance of a mitigation measure efficacy where the government conducted no study of its likely effects, proposed no monitoring to determine how effective the proposed mitigation would be, and did not consider alternatives in the event the measure fails; LBP-12-23, 76 NRC 469 n.152 (2012)
- National Park Hospitality Association v. Department of the Interior*, 538 U.S. 803, 808 (2003)
- in determining whether an issue is ripe for judicial decision, a court must evaluate fitness of the issues for judicial decision and hardship to the parties of withholding court consideration; LBP-12-19, 76 NRC 199 (2012)
- Natural Resources Defense Council, Inc. v. Callaway*, 524 F.2d 79, 93-94 (2d Cir. 1975)
- role of the final environmental impact statement is to expose the reasoning and data of the agency proposing the action to scrutiny by the public and by other branches of the government; LBP-12-18, 76 NRC 179 (2012)
- Natural Resources Defense Council, Inc. v. Environmental Protection Agency*, 643 F.3d 311 (D.C. Cir. 2011)
- guidance documents do not have the force of law, but the Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility has benefited from extensive consideration within the agency, with which the Commission has never expressed disagreement; LBP-12-21, 76 NRC 237 (2012)
- Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 834, 837 (D.C. Cir. 1972)
- NRC Staff is required to issue a final environmental impact statement that thoroughly and objectively evaluates reasonable alternatives to the proposed action; LBP-12-17, 76 NRC 113 (2012)
- Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 834, 837-38 (D.C. Cir. 1972)
- remote and speculative alternatives need not be addressed in a final environmental impact statement, but NEPA requires NRC Staff to consider reasonable alternatives that are likely to be available within the time frame of the proposed action; LBP-12-17, 76 NRC 115 (2012)
- Natural Resources Defense Council, Inc. v. U.S. Forest Service*, 421 F.3d 797, 810-12 (9th Cir. 2005)
- inaccurate, incomplete, or misleading information in an environmental impact statement concerning the comparison of alternatives is itself sufficient to render the EIS unlawful and to compel its revision; LBP-12-17, 76 NRC 120 (2012)
- New England Coalition on Nuclear Pollution v. NRC*, 582 F.2d 87, 93-94 (1st Cir. 1978)
- environmental impact statements are effectively amended through the adjudicatory process; LBP-12-17, 76 NRC 83 (2012)

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- New Mexico ex rel. Richardson v. Bureau of Land Management*, 565 F.3d 683, 703 (10th Cir. 2009)
NEPA requires federal agencies to pause before committing resources to a project and consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives; LBP-12-17, 76 NRC 81 (2012); LBP-12-18, 76 NRC 159 (2012)
- New Mexico ex rel. Richardson v. Bureau of Land Management*, 565 F.3d 683, 708 (10th Cir. 2009)
public comment periods are beneficial only to the extent the public has meaningful information on which to comment; LBP-12-17, 76 NRC 122 (2012)
without substantive, comparative environmental impact information regarding other possible courses of action, the ability of an environmental impact statement to inform agency deliberation and facilitate public involvement would be greatly degraded; LBP-12-17, 76 NRC 122 (2012)
- New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012)
contention concerning need under NEPA to include a discussion of the environmental impacts of spent fuel pool leakage, SFP fires, and the lack of a spent fuel repository is held in abeyance; LBP-12-26, 76 NRC 581 n.124 (2012)
contentions based on the Waste Confidence Decision and Temporary Storage Rule are being held in abeyance; LBP-12-24, 76 NRC 506 (2012)
NRC violated the National Environmental Policy Act in issuing its 2010 update to the Waste Confidence Decision and accompanying Temporary Storage Rule; CLI-12-16, 76 NRC 66 (2012)
- New York v. NRC*, 681 F.3d 471, 478 (D.C. Cir. 2012)
in light of the dim prospects for moving forward with a geologic repository in the contemporary political environment, NRC must consider the environmental effects of storing waste in spent fuel pools or casks for extended periods; LBP-12-24, 76 NRC 509 n.22 (2012)
- New York v. NRC*, 681 F.3d 471, 480 (D.C. Cir. 2012)
comprehensive generic analysis may be used to evaluate onsite risks that are essentially common to all plants, as long as NRC provides the opportunity for concerned parties to raise site-specific differences at the time of a specific site's licensing; LBP-12-18, 76 NRC 177 (2012)
NRC's longstanding practice of considering environmental issues through general rulemaking in appropriate circumstances has been endorsed by higher courts; LBP-12-18, 76 NRC 177 (2012)
- New York v. NRC*, 681 F.3d 471, 480-81 (D.C. Cir. 2012)
whether the NEPA analysis is generic or site-by-site, it must be thorough and comprehensive; LBP-12-18, 76 NRC 178 (2012)
- New York v. NRC*, 681 F.3d 471, 481 (D.C. Cir. 2012)
merely pointing to a government compliance program is insufficient to demonstrate compliance with NEPA's requirement that agencies take a hard look at the environmental consequences of their proposed actions; LBP-12-23, 76 NRC 468 (2012)
- New York v. NRC*, 681 F.3d 471, 483 (D.C. Cir. 2012)
NRC's current rule concerning the storage and disposal of high-level waste was remanded to the Commission to generate either a generic analysis that is forward looking and has enough breadth to support the Commission's conclusions or site-specific environmental impact statements in all relevant proceedings; LBP-12-21, 76 NRC 242 (2012)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 307 (2012)
Commission generally defers to board contention admissibility rulings in the absence of an error of law or abuse of discretion; CLI-12-19, 76 NRC 379-80 (2012)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 323-24 (2012)
contention proposing alternative inputs or methodologies for severe accident mitigation alternatives analysis must present some factual or expert basis for why the proposed changes in the analysis are warranted; LBP-12-26, 76 NRC 565 (2012)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 332 (2012)
it is not sufficient to incorporate by reference large portions of material where doing so would force one to sift through it in search of asserted factual support that is not otherwise specified; LBP-12-24, 76 NRC 515, 535 (2012)

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- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 338-43 (2012), *petition for review filed sub nom. Beyond Nuclear v. NRC*, No. 12-1561 (1st Cir. May 7, 2012)
for an electrical generation alternative to qualify for in-depth review, the alternative must be able to provide 1190 MWe of baseload power during the license renewal term; LBP-12-15, 76 NRC 38 (2012)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 339 (2012)
final environmental impact statements need not discuss remote and speculative alternatives, but must consider only alternatives that bring about the ends of the proposed project; LBP-12-17, 76 NRC 113 (2012)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 339 n.223 (2012), *petition for review filed sub nom. Beyond Nuclear v. NRC*, No. 12-1561 (1st Cir. May 7, 2012)
“baseload power” is defined as power generating energy intended to continuously produce electricity at or near full capacity, with high availability; LBP-12-15, 76 NRC 37 (2012)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 341 (2012), *petition for review filed sub nom. Beyond Nuclear v. NRC*, No. 12-1561 (1st Cir. May 7, 2012)
environmental reports for license renewal must address environmental impacts of the proposed action and compare those impacts to the impacts of alternative actions, but need only consider those alternatives that are reasonable; LBP-12-15, 76 NRC 36-37 (2012)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 342 (2012), *petition for review filed sub nom. Beyond Nuclear v. NRC*, No. 12-1561 (1st Cir. May 7, 2012)
discussion necessary to support a NEPA alternatives contention in a reactor license renewal proceeding is compared with that for a Part 52 combined license proceeding; LBP-12-15, 76 NRC 39 n.10 (2012)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 342 & n.245 (2012), *petition for review filed sub nom. Beyond Nuclear v. NRC*, No. 12-1561 (1st Cir. May 7, 2012)
demonstration that an alternative energy technology, although not commercially viable at the time of the application, is under development for large-scale use and is likely to be available during the period of extended operation has not been made; LBP-12-15, 76 NRC 39 n.10 (2012)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 342-44 (2012), *petition for review filed sub nom. Beyond Nuclear v. NRC*, No. 12-1561 (1st Cir. May 7, 2012)
any contention that fails to directly controvert the application or that mistakenly asserts the application does not address a relevant issue will be dismissed; LBP-12-15, 76 NRC 27 (2012)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), LBP-11-2, 73 NRC 28, 41 n.54 (2011)
boards have an independent obligation to determine whether petitioners meet the threshold criterion for intervention even if their standing is uncontested; LBP-12-24, 76 NRC 507 (2012)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), LBP-11-2, 73 NRC 28, 51 (2011)
NEPA requires that alternatives be considered as they exist and are likely to exist, not merely as they exist at the present time; LBP-12-17, 76 NRC 115 (2012)
- Northern States Power Co.* (Prairie Island Nuclear Generating Plants, Units 1 and 2), CLI-10-27, 72 NRC 481, 490-92 (2010)
safety culture arguments are outside the scope of license renewal because they raise issues that are relevant to current plant operation; LBP-12-27, 76 NRC 603 (2012)
- Northern States Power Co.* (Prairie Island Nuclear Generating Plants, Units 1 and 2), CLI-10-27, 72 NRC 481, 491 (2010)
broad-based issues akin to safety culture such as operational history, quality assurance, quality control, management competence, and human factors are beyond the bounds of a license renewal proceeding; LBP-12-27, 76 NRC 608, 611 n.171 n.154 (2012)
- Northrop Grumman Information Technology, Inc. v. United States*, 535 F.3d 1339, 1345 (Fed. Cir. 2008)
language used to incorporate extrinsic material by reference must explicitly, or at least precisely, identify the written material being incorporated; LBP-12-24, 76 NRC 515 n.60 (2012)
- Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), CLI-11-6, 74 NRC 203, 208-09 (2011)
adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of the final environmental impact statement; LBP-12-17, 76 NRC 83 (2012)

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- Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), CLI-11-6, 74 NRC 203, 209 (2011)
both the content of the draft environmental impact statement and the additional material submitted by the parties form part of the adjudicatory record; LBP-12-23, 76 NRC 453 (2012)
- Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), LBP-11-7, 73 NRC 254, 263 (2011)
when presented with conflicting expert opinions, licensing boards should be mindful that summary disposition is rarely proper; LBP-12-23, 76 NRC 478 (2012)
- Nuclear Management Co., LLC* (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 329 (2006)
parties may not raise new arguments that are outside the scope of their contentions, but may legitimately amplify arguments presented in support of the contention in order to fairly respond to arguments raised by the opposing party; LBP-12-23, 76 NRC 463 (2012)
- Ohio Valley Environmental Coalition v. Hurst*, 604 F. Supp. 2d 860, 888 (S.D. W. Va. 2009)
agency's reliance on mitigation in making a finding of no significant impact is justified if the proposed mitigation constitutes an adequate buffer against the negative impacts that result from the authorized activity to render such impacts so minor as to not warrant an environmental impact statement; LBP-12-23, 76 NRC 467 (2012)
agency's reliance on mitigation in making a finding of no significant impact must be justified; LBP-12-23, 76 NRC 467 (2012)
proposed mitigation measures are sufficient if they are supported by sufficient evidence, such as studies conducted by the agency, or are adequately policed; LBP-12-23, 76 NRC 467-48 (2012)
when conducting a NEPA-required environmental review, an agency may consider the ameliorative effects of mitigation in determining the environmental impacts of an activity; LBP-12-23, 76 NRC 467 (2012)
- Ohio Valley Environmental Coalition v. Hurst*, 604 F. Supp. 2d 860, 888, 890 (S.D. W. Va. 2009)
agency's reliance on mitigation in making a finding of no significant impact is justified if it is impossible to define the proposal without mitigation; LBP-12-23, 76 NRC 469 (2012)
- One Beacon Insurance Co. v. Crowley Marine Services, Inc.*, 648 F.3d 258, 268 (5th Cir. 2011)
notice of incorporated terms is reasonable where, under the particular facts of the case, a reasonably prudent person should have seen them; LBP-12-24, 76 NRC 515 n.57 (2012)
- O'Reilly v. U.S. Army Corps of Engineers*, 477 F.3d 225, 231 (5th Cir. 2007)
when conducting a NEPA-required environmental review, an agency may consider the ameliorative effects of mitigation in determining the environmental impacts of an activity; LBP-12-23, 76 NRC 467 (2012)
- Pa'ina Hawaii, LLC*, CLI-10-18, 72 NRC 56, 82 (2010)
primary obligation of satisfying the requirements of NEPA rests on the agency; LBP-12-18, 76 NRC 166 (2012)
- Pa'ina Hawaii, LLC*, CLI-10-18, 72 NRC 56, 93 (2010)
public comment will be afforded in advance on any generic waste confidence document that NRC issues on remand, be it a fresh rule, a policy statement, an environmental assessment, or an environmental impact statement; CLI-12-16, 76 NRC 67 (2012)
- Pa'ina Hawaii, LLC*, LBP-06-12, 63 NRC 403, 414 (2006)
contention that challenges the legal sufficiency of the final environmental impact statement is within the scope of the proceeding; LBP-12-18, 76 NRC 157 (2012)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-763, 19 NRC 571, 576 (1984)
effect of a pattern of quality assurance violations is not necessarily to show that particular safety-related information is false, but to erode confidence that NRC can reasonably have in, and create substantial uncertainty about the quality of, work that is tainted by the alleged QA violations; LBP-12-23, 76 NRC 479 (2012)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 435-36 (2011)
any contention that falls outside the specified scope of the proceeding must be rejected; LBP-12-15, 76 NRC 25-26 (2012); LBP-12-27, 76 NRC 594 (2012)

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- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 435-37 (2011)
safety culture arguments are outside the scope of license renewal because they raise issues that are relevant to current plant operation; LBP-12-27, 76 NRC 603 (2012)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 444-45 (2011)
petitioners, not just parties, may request a rule waiver in NRC adjudicatory proceedings; CLI-12-19, 76 NRC 387 n.55 (2012)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 452 n.139 (2011)
bare assertions are insufficient to support admission of a contention; LBP-12-27, 76 NRC 603, 608 (2012)
neither speculation nor conclusory assertions, even by an expert, alleging that a matter fails to satisfy the AEA or NEPA will suffice to allow admission of a proffered contention; LBP-12-15, 76 NRC 26 (2012)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-12-13, 75 NRC 681, 686 n.30 (2012)
by participating in NRC proceedings, intervenors accept the obligation of uncovering relevant, publicly available information; CLI-12-21, 76 NRC 499 (2012)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-12-13, 75 NRC 681, 687 n.32 (2012)
NRC Staff was asked to review generically an applicant's duty to supplement or correct its environmental report; CLI-12-19, 76 NRC 386 n.54 (2012)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), DD-90-3, 31 NRC 595 (1990)
the record before the board falls far short of rebutting the presumption that a petition for license modification, suspension, or revocation is a meaningful avenue for seeking administrative relief; LBP-12-14, 76 NRC 10 (2012)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-12-13, 75 NRC 784, 786-87 (2012)
applicant had no legal duty to update its environmental report to encompass matters that occurred after that report was filed with the agency; LBP-12-15, 76 NRC 43 (2012)
- Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, 68 NRC 509, 526 (2008), *petition for review denied on other grounds, San Luis Obispo Mothers for Peace v. NRC*, 635 F.3d 1109 (9th Cir. 2011)
NRC Staff's final environmental impact statement, in conjunction with the adjudicatory record, becomes the relevant record of decision for the environmental portion of the proceeding; LBP-12-17, 76 NRC 83 (2012)
- Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 439-41 (2002), *petition for review denied*, CLI-03-12, 58 NRC 185, 191 (2003)
materiality requirement for contention admission often dictates that any contention alleging deficiencies or errors in an application also indicate some significant link between the claimed deficiency and either the health and safety of the public or the environment; LBP-12-15, 76 NRC 26 (2012); LBP-12-27, 76 NRC 594 (2012)
- PaineWebber, Inc. v. Bybyk*, 81 F.3d 1193, 1201 (2d Cir.1996)
paper to be incorporated into a written instrument by reference must be so referred to and described in the instrument that the paper may be identified beyond all reasonable doubt; LBP-12-24, 76 NRC 515 n.60 (2012)
- Parravano v. Babbitt*, 70 F.3d 539, 546 (9th Cir. 1995)
the federal trust responsibility to Indian tribes extends not just to the Interior Department, but attaches to the federal government as a whole; LBP-12-24, 76 NRC 520 n.79 (2012)
the federal trust responsibility to Indian tribes rests solely with the federal government and cannot be discharged by applicants; LBP-12-24, 76 NRC 519-20 (2012)

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- Pennsylvania Power & Light Co.* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-79-6, 9 NRC 291, 295-96 (1979)
boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-12-18, 76 NRC 145 n.76 (2012)
- Philadelphia Electric Co.* (Fulton Generating Station, Units 1 and 2), ALAB-657, 14 NRC 967, 978-79 (1981)
when a motion to withdraw an application is unopposed and the withdrawal causes no apparent harm to the public or any party, it is appropriate to grant the motion without prejudice or imposition of additional terms; LBP-12-20, 76 NRC 216 (2012)
- Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 705-07 (1985)
adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of the final environmental impact statement; LBP-12-17, 76 NRC 83 (2012)
- Phillips v. Cohen*, 400 F.3d 388, 399 (6th Cir. 2005)
when presented with conflicting expert opinions, licensing boards should be mindful that summary disposition is rarely proper; LBP-12-23, 76 NRC 478 (2012)
- Poller v. Columbia Broadcasting System, Inc.*, 368 U.S. 464, 467 (1962)
summary judgment should be granted only where the truth is clear; LBP-12-23, 76 NRC 450, 466 (2012)
- Poller v. Columbia Broadcasting Systems, Inc.*, 368 U.S. 464, 473 (1962)
boards must view the record in the light most favorable to the summary disposition opponent; LBP-12-19, 76 NRC 190 (2012)
- Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6 (1979)
contentions that fall outside the specified scope of the proceeding are inadmissible; LBP-12-18, 76 NRC 157 (2012)
- Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85 (1974)
licensing boards should not accept in individual license proceedings contentions which are or are about to become the subject of general rulemaking by the Commission; CLI-12-16, 76 NRC 67 n.9 (2012)
to the extent that NRC takes action with respect to waste confidence on a case-by-case basis, litigants can challenge such site-specific agency actions in the adjudicatory process; CLI-12-16, 76 NRC 67 (2012)
- Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 89 (1974)
boards should not accept in individual license proceedings contentions that are, or are about to become, the subject of rulemaking by the Commission; LBP-12-24, 76 NRC 510 (2012)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-98-13, 48 NRC 26, 30-31 (1998)
organization seeking standing as a party must show either a discrete injury to its own institutional interests or authorization to represent an individual who would have standing in his or her own right; LBP-12-24, 76 NRC 508 (2012)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-13, 52 NRC 23, 34-35 (2000)
when contentions in contested hearings are purportedly resolved by license conditions, the Commission has stated that such conditions must be drawn very precisely; LBP-12-21, 76 NRC 240 n.122 (2012)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-20, 56 NRC 147, 154 (2002)
significant, high, and adverse disparate impacts are necessary to form a valid environmental justice contention; LBP-12-24, 76 NRC 522 (2012)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 146 (2004)
considering alternatives under NEPA, agencies should take into account the needs and goals of the parties involved in the application; LBP-12-17, 76 NRC 113-14 (2012)

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- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-05-19, 62 NRC 403, 409 (2005)
lateness is a sufficient ground on which to deny a motion for reconsideration; CLI-12-17, 76 NRC 209 n.7 (2012)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-05-19, 62 NRC 403, 410 (2005)
reconsideration motions should be based on an elaboration of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification; CLI-12-17, 76 NRC 209-10 (2012)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 179-80 (1998), *aff'd as to other matters*, CLI-98-13, 48 NRC 26 (1998)
subject matter of contentions must impact the grant or denial of a pending license application; LBP-12-18, 76 NRC 158 (2012)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-99-32, 50 NRC 155, 158 (1999)
summary disposition movant bears the initial burden of demonstrating that no genuine issue as to any material fact exists and that it is entitled to judgment as a matter of law; LBP-12-23, 76 NRC 450, 466 (2012)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-23, 54 NRC 163, 172 n.3 (2001)
boards may construe an admitted contention contesting the environmental report as a challenge to a subsequently issued draft or final environmental impact statement without the need for intervenors to file a new or amended contention; LBP-12-23, 76 NRC 471 n.159 (2012)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-30, 54 NRC 231, 235 (2001)
if summary disposition proponent meets its burden, opponent must counter each adequately supported material fact with its own statement of material facts in dispute and supporting documentation and cannot rely on mere allegations or denials, or the facts in controversy will be deemed admitted; LBP-12-23, 76 NRC 450 (2012)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 509 (2001)
summary disposition is not a tool for trying to convince a licensing board to decide, on written submissions, genuine issues of material fact that warrant resolution at a hearing; LBP-12-23, 76 NRC 480 (2012)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 510 (2001)
regardless of the level of the dispute, at the summary disposition stage, it is not proper for a board to choose which expert has the better of the argument; LBP-12-23, 76 NRC 478 (2012)
- Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-10-9, 71 NRC 245, 252 (2010)
petitions for reconsideration may not be filed except upon leave of the adjudicatory body that rendered the decision and that procedural deficiency is reason enough to deny the request; CLI-12-17, 76 NRC 209 n.7 (2012)
- Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-10-9, 71 NRC 245, 270 (2010)
intervenors must point to the specific ways in which the shield building monitoring aging management plan is wrong or inadequate to raise a genuine dispute with applicant's license renewal application; LBP-12-27, 76 NRC 608 (2012)
intervenors' challenge to the aging management plan must consist of more than allegations that the AMP is deficient, but rather must point to specific ways the AMP is inadequate or wrong; LBP-12-27, 76 NRC 602 (2012)
- Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-10-20, 72 NRC 571 (2010)
if a board grants summary disposition of a foreign ownership contention, it could terminate the proceeding or move ahead with a pending environmental contention; LBP-12-19, 76 NRC 194 (2012)

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- Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-1, 73 NRC 19, 26 (2011)
migration tenet helps to expedite hearings by obviating the need to file and litigate the same contention up to three times and applies when the information contained in a subsequently released document is sufficiently similar to the information contained in the original document upon which the original contention was filed; LBP-12-23, 76 NRC 471 (2012)
under the migration tenet, boards may construe an admitted contention contesting the environmental report as a challenge to a subsequently issued draft or final environmental impact statement without the need for intervenors to file a new or amended contention; LBP-12-23, 76 NRC 471 (2012)
- Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-31, 74 NRC 643, 648 (2011)
boards apply a two-part test in determining whether to grant summary disposition; LBP-12-26, 76 NRC 564 (2012)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-471, 7 NRC 477, 489 n.8 (1978)), *rev'd on other grounds*, CLI-97-15, 46 NRC 294 (1997)
environmental contentions ultimately challenge NRC's compliance with NEPA, but applicant is free to support positions set forth in the environmental impact statement that are under challenge; LBP-12-17, 76 NRC 81 (2012)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-92-8, 35 NRC 145, 154 (1992)
to avoid summary disposition, intervenors must present contrary evidence so significantly probative that it creates a material factual issue; LBP-12-19, 76 NRC 191 n.29 (2012)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-89-28, 30 NRC 271 (1989), *aff'd*, ALAB-940, 32 NRC 225 (1990)
board is directed to consider whether a confirmatory action letter issued to licensee constitutes a de facto license amendment that would be subject to a hearing opportunity under AEA § 189a, and, if so, whether the petition meets the standing and contention admissibility requirements; CLI-12-20, 76 NRC 441 (2012)
- Puerto Rico Electric Power Authority* (North Coast Nuclear Plant, Unit 1), ALAB-662, 14 NRC 1125, 1133 (1981)
when a motion to withdraw an application is unopposed and the withdrawal causes no apparent harm to the public or any party, it is appropriate to grant the motion without prejudice or imposition of additional terms; LBP-12-20, 76 NRC 216 (2012)
- Reno v. Catholic Social Services, Inc.*, 509 U.S. 43, 57 n.18 (1993)
ripeness doctrine is drawn both from Article III limitations on judicial power and from prudential reasons for refusing to exercise jurisdiction; LBP-12-19, 76 NRC 198 (2012)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)
environmental impact statements cannot fulfill their role of providing a springboard for public comment if they fail to evaluate significant issues such as measures that the agency's experts recommend to mitigate the consequences of a severe accident; LBP-12-18, 76 NRC 179 (2012)
goals of NEPA are to ensure that agency decisionmakers will have detailed information concerning significant environmental impacts of proposed projects when they make their decisions and to guarantee that such information will be available to the larger audience that may also play a role in the decisionmaking process; LBP-12-17, 76 NRC 81 (2012)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349-50 (1989)
NEPA has twin goals of forcing agencies to take a hard look at the environmental consequences of a proposed project, and, making relevant analyses openly available, to permit the public a role in the agency's decisionmaking process; LBP-12-18, 76 NRC 179 (2012)
NEPA's primary goals include fostering informed public participation in the decisionmaking process; LBP-12-17, 76 NRC 120-21 (2012)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349-52 (1989)
NEPA's intent is that the FEIS should provide the public with detailed information concerning significant environmental impacts of the proposed federal action and alternatives available to mitigate those impacts; LBP-12-18, 76 NRC 179 (2012)

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- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)
if the adverse environmental impacts of a proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs; LBP-12-18, 76 NRC 158 (2012)
NEPA does not mandate particular results, but simply prescribes the necessary process; LBP-12-17, 76 NRC 81 n.49 (2012); LBP-12-18, 76 NRC 158 (2012)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351 (1989)
discussion of steps that can be taken to mitigate adverse environmental consequences plays an important role in the environmental analysis under NEPA; LBP-12-18, 76 NRC 134 (2012)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351-52 (1989)
environmental impact statements must discuss any adverse environmental effects that cannot be avoided should the proposal be implemented and must provide a reasonably complete discussion of possible mitigation measures; LBP-12-23, 76 NRC 486 n.259 (2012)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989)
by identifying new accident mitigation measures that are not evaluated in the FEIS, recommending that those measures be considered in pending COL reviews, and explaining why those measures are necessary for protection of public health and safety, the Fukushima Task Force Report provides sufficient support for intervenors' argument that the FEIS fails to include a sufficient discussion of steps that can be taken to mitigate adverse environmental consequences; LBP-12-18, 76 NRC 164 (2012)
CEQ regulations require that agencies discuss possible mitigation measures in defining the scope of the EIS, in discussing alternatives to the proposed action and consequences of that action, and in explaining its ultimate decision; LBP-12-18, 76 NRC 160 (2012)
environmental impact statements must include a reasonably complete discussion of possible mitigation measures; LBP-12-18, 76 NRC 159 (2012)
implicit in NEPA's demand that an agency prepare a detailed environmental impact statement is an understanding that the EIS will discuss the extent to which adverse effects can be avoided; LBP-12-18, 76 NRC 160 (2012)
mitigation must be discussed in sufficient detail in an environmental impact statement to ensure that environmental consequences have been fairly evaluated; LBP-12-18, 76 NRC 159 (2012)
NEPA requires that agencies provide a reasonably complete discussion of possible severe accident mitigation measures; LBP-12-18, 76 NRC 134 (2012)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 355-56 (1989)
Council on Environmental Quality regulations receive substantial deference from federal courts; LBP-12-17, 76 NRC 82 n.57 (2012)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 359 (1989)
courts give controlling weight to an agency's interpretation of its own regulation unless it is plainly erroneous or inconsistent with the regulation; LBP-12-19, 76 NRC 196 n.65 (2012)
- San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016 (9th Cir. 2006)
NRC is required to analyze potential terrorist attacks as part of its NEPA review with regard to facilities located in the Ninth Circuit; LBP-12-21, 76 NRC 241 n.128 (2012)
- Seminole Nation v. United States*, 316 U.S. 286, 296-97 (1942)
federal government owes a trust responsibility to Indian tribes; LBP-12-24, 76 NRC 519 (2012)
- Sequoyah Fuels Corp. (Gore, Oklahoma)*, LBP-03-24, 58 NRC 383 (2003), *aff'd*, CLI-04-2, 59 NRC 5 (2004)
hearing requests were dismissed as untimely and referred to the Executive Director for Operations for consideration under section 2.206; CLI-12-20, 76 NRC 440 n.13 (2012)
- Shaw AREVA MOX Services, LLC* (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 210 n.95 (2007)
if a contention satisfies the timeliness requirement of 10 C.F.R. 2.309(f)(2)(iii), then, by definition, it is not subject to 10 C.F.R. 2.309(c) which specifically applies to nontimely filings; LBP-12-18, 76 NRC 138 (2012)

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- Shaw AREVA MOX Services, LLC* (Mixed Oxide Fuel Fabrication Facility), LBP-08-11, 67 NRC 460, 482 (2008)
boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-12-18, 76 NRC 145 n.76 (2012)
- Shaw AREVA MOX Services, LLC* (Mixed Oxide Fuel Fabrication Facility), LBP-12-2, 75 NRC 159 (2012)
boards have closed their hearings even when they were concerned with less sensitive (i.e., nonpublic but unclassified) types of information; LBP-12-21, 76 NRC 249 (2012)
- Sierra Club v. Froehke*, 816 F.2d 205, 210 (5th Cir. 1987)
supplementing an environmental impact statement is not necessary unless new information presents a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; LBP-12-18, 76 NRC 141-42 (2012)
- Sierra Club v. Sigler*, 695 F.2d 957, 979 (5th Cir. 1983)
there can be no “hard look” at the costs and benefits of a proposed action unless all costs are disclosed; LBP-12-18, 76 NRC 136 n.47 (2012)
- Sierra Club v. U.S. Army Corps of Engineers*, 464 F. Supp. 2d 1171, 1224 (M.D. Fla. 2006), *aff’d*, 508 F.3d 1332 (11th Cir. 2007)
agency’s reliance on mitigation in making a finding of no significant impact must be justified; LBP-12-23, 76 NRC 467 (2012)
when conducting a NEPA-required environmental review, an agency may consider the ameliorative effects of mitigation in determining the environmental impacts of an activity; LBP-12-23, 76 NRC 467 (2012)
- Sierra Club v. U.S. Army Corps of Engineers*, 464 F. Supp. 2d 1171, 1225 (M.D. Fla. 2006), *aff’d*, 508 F.3d 1332 (11th Cir. 2007)
agency’s reliance on mitigation in making a finding of no significant impact is justified if the proposed mitigation is more than a possibility in that it is imposed by statute or regulation or has been so integrated into the initial proposal that it is impossible to define the proposal without mitigation; LBP-12-23, 76 NRC 467 (2012)
- Silva v. Lynn*, 482 F.2d 1282, 1286-67 (1st Cir. 1973)
role of the final environmental impact statement is to expose the reasoning and data of the agency proposing the action to scrutiny by the public and by other branches of the government; LBP-12-18, 76 NRC 179 (2012)
- Simmons v. U.S. Army Corps of Engineers*, 120 F.3d 664, 669 (7th Cir. 1997)
blindly adopting applicant’s statement of the purpose of the action is a losing position because it does not allow for the full consideration of alternatives required by NEPA; LBP-12-17, 76 NRC 114 (2012)
NEPA requires agencies to exercise a degree of skepticism in dealing with self-serving statements from the prime beneficiary of a project and to look at the general goal of the project, rather than only those alternatives preferred by the applicant; LBP-12-17, 76 NRC 114 (2012)
- Slockish v. U.S. Federal Highway Administration*, 682 F. Supp. 2d 1178, 1193 (D. Or. 2010)
National Historic Preservation Act and its implementing regulations do not require that the agency implement any mitigation measures, let alone that those measures meet a certain standard of protection for historic properties; LBP-12-23, 76 NRC 489 n.289 (2012)
- Society for Animal Rights, Inc. v. Schlesinger*, 512 F.2d 915, 917-18 (D.C. Cir. 1975)
mitigation must be discussed in sufficient detail in an environmental impact statement to ensure that environmental consequences have been fairly evaluated; LBP-12-18, 76 NRC 159 (2012)
- South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 7 & n.33 (2010)
failure to comply with any of the six pleading requirements of 10 C.F.R. 2.309(f)(1) is grounds for dismissal of a contention; LBP-12-15, 76 NRC 25 (2012); LBP-12-27, 76 NRC 592 (2012)
- South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-21, 72 NRC 197, 200 (2010)
NRC’s position is that it need not compare the costs of alternatives to a proposed action if its FEIS does not identify an environmentally preferable alternative; LBP-12-18, 76 NRC 182 (2012)

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- Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-268, 1 NRC 383, 399 (1975)
 NRC Staff is but one of the parties to a licensing proceeding, and the positions that it may take are in no way binding upon the licensing board; LBP-12-23, 76 NRC 479 (2012)
- Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-717, 17 NRC 346, 365 n.32 (1983)
 Federal Rules of Evidence are not directly applicable to NRC proceedings, but NRC adjudicatory boards often look to those rules for guidance; LBP-12-21, 76 NRC 248 n.171 (2012)
- Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-09-19, 70 NRC 433 (2009), *Commission review declined*, Memorandum from Annette L. Vietti-Cook, NRC Secretary, to Board and Parties (Jan. 4, 2010)
 guidance on the role of licensing boards in mandatory proceedings is provided; LBP-12-21, 76 NRC 233-34 (2012)
- Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 218 & n.8 (2011)
 both the reopening and contention admissibility criteria require that new contentions be timely presented, generally within 30 days of the availability of the information on which the contention is based; CLI-12-21, 76 NRC 496 (2012)
- Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), LBP-10-1, 71 NRC 165, 177 n.3 (2010)
 boards have an independent obligation to determine whether petitioners meet the threshold criterion for intervention even if their standing is uncontested; LBP-12-24, 76 NRC 507 (2012)
- State of Alaska v. Andrus*, 580 F.2d 465, 474 (D.C. Cir. 1978), *vacated in part as moot sub nom. Western Oil & Gas Association v. Alaska*, 439 U.S. 922 (1978)
 Council on Environmental Quality guidance does not bind NRC, but NRC gives it substantial deference; LBP-12-17, 76 NRC 82-83 (2012)
- State of Alaska v. Andrus*, 580 F.2d 465, 475 (D.C. Cir. 1978)
 role of the final environmental impact statement is to expose the reasoning and data of the agency proposing the action to scrutiny by the public and by other branches of the government; LBP-12-18, 76 NRC 179 (2012)
- Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 19, 22 (1998)
 NRC proceedings would be incapable of attaining finality if contentions that could have been raised at the outset could be added later at will, regardless of the stage of the proceeding; CLI-12-21, 76 NRC 499 n.53 (2012)
- Strata Energy, Inc.* (Ross In Situ Uranium Recovery Project), LBP-12-3, 75 NRC 164, 201-02 & n.33 (2012), *aff'd as to standing ruling*, CLI-12-12, 75 NRC 603 (2012)
 scope of the term "impact" includes cumulative impacts; LBP-12-24, 76 NRC 513 (2012)
- Strycker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223, 227 (1980)
 NEPA does not require agencies to elevate environmental concerns over other appropriate considerations; LBP-12-17, 76 NRC 81 n.49 (2012); LBP-12-18, 76 NRC 158 (2012)
- System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-07-1, 65 NRC 27 (2007), *permit issuance authorized*, CLI-07-14, 65 NRC 216 (2007)
 guidance on the role of licensing boards in mandatory proceedings is provided; LBP-12-21, 76 NRC 233-34 (2012)
- Tennessee Valley Authority* (Yellow Creek Nuclear Plant, Units 1 and 2), ALAB-515, 8 NRC 702, 707 (1978)
 absence of any reference to "cumulative impacts" in a document incorporated by reference negates any intention to incorporate any discussion of cumulative impacts from these prior documents into an environmental report, consistent with the maxim of *expressio unius est exclusio alterius*, i.e., the expression of one thing is to the exclusion of another; LBP-12-24, 76 NRC 515-16 (2012)
- Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-88-12, 28 NRC 605, 609 (1988)
 burden is on intervenors to demonstrate that a balancing of the factors of 10 C.F.R. 2.309(c)(i)-(viii) weighs in favor of granting a late-filed petition; LBP-12-27, 76 NRC 594 (2012)

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- 10 C.F.R. 2.206
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- 10 C.F.R. 2.206(a), (b), (c)
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- 10 C.F.R. 2.309(a)
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- 10 C.F.R. 2.309(c)
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- 10 C.F.R. 2.309(c)(1)(i)-(viii)
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- 10 C.F.R. 2.309(c)(2)
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- 10 C.F.R. 2.309(d)(1)
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- 10 C.F.R. 2.309(d)(1)(i)-(iv)
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- 10 C.F.R. 2.309(f)(1)(i)-(vi)
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- 10 C.F.R. 2.309(f)(1)(iv)
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- 10 C.F.R. 2.309(f)(1)(v)
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- 10 C.F.R. 2.309(f)(1)(vi)
intervenor need not prove their case on the merits, but need only allege some facts or expert opinion that support their position and demonstrate a genuine dispute with the sufficiency of the FEIS; LBP-12-18, 76 NRC 163 (2012)
properly formulated contentions must focus on the license application in question, challenging either specific portions of, or alleged omissions from, the application (including the safety analysis report/technical report and the ER) so as to establish that a genuine dispute exists with the applicant on a material issue of law or fact; LBP-12-15, 76 NRC 27 (2012); LBP-12-27, 76 NRC 595 (2012)
to be admissible a contention must provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact, including references to specific portions of the application that petitioner disputes; LBP-12-24, 76 NRC 537 (2012)
to the extent that intervenors' proposed contention is based on asserted deficiencies in NRC Staff's process for soliciting public participation pursuant to the National Historic Preservation Act, the contention fails to demonstrate a genuine dispute on a material issue of fact or law; LBP-12-23, 76 NRC 486 (2012)
- 10 C.F.R. 2.309(f)(2)
intervenor are not only permitted but are required to file their contentions in response to the license application, rather than await a fully formalized administrative decision; LBP-12-19, 76 NRC 198 (2012)
motions to amend a contention must be based on new information that is materially different from information previously available and must be submitted in a timely fashion; LBP-12-27, 76 NRC 601 (2012)
new contentions filed after the initial filing may only be admitted upon a showing that the information upon which they are based was not previously available and is materially different than information previously available and they have been submitted in a timely fashion based on the availability of the subsequent information; LBP-12-18, 76 NRC 136-37 (2012)
new contentions submitted within 30 days of the occurrence of the triggering the event are timely; LBP-12-18, 76 NRC 137 (2012)
untimeliness constitutes sufficient grounds on its own for denying the motion to reopen and thus the board need not consider other subsections under sections 2.326 and 2.309; LBP-12-16, 76 NRC 49 (2012)
when determining whether a new contention is timely for purposes of reopening a record, the Commission looks to whether the information on which it is based was previously available or whether it is materially different from what was previously available, and whether it has been submitted in a timely fashion based on the information's availability; CLI-12-21, 76 NRC 498 (2012)

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- 10 C.F.R. 2.309(f)(2)(i)-(iii)
contentions submitted after the initial filing period for receipt of petitions to intervene must be based on information not previously available and materially different than information previously available and must be submitted in a timely fashion based on availability of the new information; LBP-12-27, 76 NRC 592-93 (2012)
revised rules no longer require leave to file from the presiding officer; LBP-12-27, 76 NRC 600 n.103 (2012)
- 10 C.F.R. 2.309(f)(2)(iii)
contention or amendment or supplement to a contention is considered timely if filed within 60 days of the date when the material information on which it is based first becomes available to the moving party through service, publication, or any other means; LBP-12-27, 76 NRC 593 (2012)
proposed new or amended contentions shall be deemed timely if filed within 30 days of the date when the new and material information on which it is based first becomes available; LBP-12-23, 76 NRC 484 (2012)
- 10 C.F.R. 2.311
review of a board's dismissal of some contentions would normally await the end of the case; CLI-12-19, 76 NRC 388 (2012)
- 10 C.F.R. 2.311(d)(1)
appeal as of right on the question whether a hearing request should have been wholly denied is allowed; CLI-12-19, 76 NRC 379 (2012)
- 10 C.F.R. 2.318(a)
presiding officer's jurisdiction terminates when the time period for the Commission to direct certification expires, when the Commission renders a final decision, and when the presiding officer withdraws from the case upon disqualifying himself; CLI-12-17, 76 NRC 210 n.11 (2012)
this regulation does not provide an exhaustive list of every situation where board jurisdiction lapses; CLI-12-17, 76 NRC 210 (2012)
- 10 C.F.R. 2.319(d)
strict rules of evidence do not apply to written submissions; LBP-12-21, 76 NRC 248 n.171 (2012)
- 10 C.F.R. 2.323(a)
if applicants believe that their actions render a contention moot, then they should promptly filed a motion for summary disposition; LBP-12-19, 76 NRC 202 n.103 (2012)
motions must be filed no later than 10 days after the occurrence or circumstance from which the motion arises; LBP-12-26, 76 NRC 566 (2012)
- 10 C.F.R. 2.323(b)
motions must be rejected if they do not include a certification by the attorney or representative of the moving party that movant has made a sincere effort to contact other parties in the proceeding and resolve the issue(s) raised in the motion, and that movant's efforts to resolve the issue(s) have been unsuccessful; LBP-12-27, 76 NRC 601 (2012)
- 10 C.F.R. 2.323(e)
motion for reconsideration is denied for failure to meet the high standard of this section; LBP-12-26, 76 NRC 563 (2012)
petition for review is treated as a petition for reconsideration; CLI-12-17, 76 NRC 209 (2012)
reconsideration motions may not be filed except upon leave of the adjudicatory body that rendered the decision and that procedural deficiency is reason enough to deny the request; CLI-12-17, 76 NRC 209 n.7 (2012)
reconsideration motions must be filed within 10 days of the action for which reconsideration is requested; CLI-12-17, 76 NRC 209 n.7 (2012)
- 10 C.F.R. 2.325
applicant in a licensing proceeding bears the burden of proof by a preponderance of the evidence on safety issues that it is entitled to the applied-for license; LBP-12-17, 76 NRC 80 n.40 (2012)
summary disposition movant bears the initial burden of demonstrating that no genuine issue as to any material fact exists and that it is entitled to judgment as a matter of law; LBP-12-23, 76 NRC 450 (2012)

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- 10 C.F.R. 2.326
combined license cannot be issued until the foreign ownership issue is properly corrected and then applicants may motion to reopen the record; LBP-12-19, 76 NRC 187 (2012)
motions to reopen to admit a new contention must meet all requirements of this section as well as sections 2.309(c) and 2.309(f)(2); LBP-12-16, 76 NRC 47-48 (2012)
- 10 C.F.R. 2.326(a)(1)
motions to reopen a closed record must be timely; CLI-12-21, 76 NRC 498 (2012)
untimeliness constitutes sufficient grounds on its own for denying the motion to reopen and thus the board need not consider other subsections under sections 2.326 and 2.309; LBP-12-16, 76 NRC 49 (2012)
untimely motions to reopen that present an exceptionally grave issue may be admitted at the board's discretion; LBP-12-16, 76 NRC 57 (2012)
- 10 C.F.R. 2.326(a)(3)
to reopen a closed proceeding, intervenors must file a motion demonstrating, among other things, that a materially different result would be or would have been likely had the newly proffered evidence been considered initially; LBP-12-19, 76 NRC 204 n.112 (2012)
- 10 C.F.R. 2.328
board determined that the oral portion of the proceeding should be closed to the public to allow for the free-ranging and thorough examination of witnesses and to ensure the effective safeguard and prevention from disclosure of restricted data; LBP-12-21, 76 NRC 231 (2012)
- 10 C.F.R. 2.329(b)(1), 2.332(c)(1)
one fundamental purpose of the prehearing conference and the scheduling order is expediting the disposition of the proceeding; LBP-12-19, 76 NRC 200 (2012)
- 10 C.F.R. 2.335(a)
contentions challenging existing NRC safety regulations are barred from consideration in adjudicatory proceedings; LBP-12-18, 76 NRC 158 (2012)
no NRC rule or regulation is subject to attack in any adjudicatory proceeding; CLI-12-19, 76 NRC 380 (2012); LBP-12-24, 76 NRC 530 (2012)
- 10 C.F.R. 2.335(a)-(d)
procedure for obtaining a rule waiver is set out; CLI-12-19, 76 NRC 380 (2012)
- 10 C.F.R. 2.335(b)
showing of special circumstances demonstrating that application of the rule would not serve the purpose for which it was adopted is required for rule waiver; CLI-12-19, 76 NRC 387 (2012); LBP-12-24, 76 NRC 539 (2012)
- 10 C.F.R. 2.335(b)-(d)
Commission remands license renewal proceeding to the board for the limited purpose of considering a rule waiver petition; CLI-12-19, 76 NRC 378 (2012)
- 10 C.F.R. 2.337(a)
only relevant, material, and reliable evidence that is not unduly repetitious will be admitted; LBP-12-21, 76 NRC 248 n.171 (2012)
- 10 C.F.R. 2.341
review of a board's dismissal of some contentions would normally await the end of the case; CLI-12-19, 76 NRC 388 (2012)
- 10 C.F.R. 2.341(b)(1)
petitions for review must be filed within 15 days; CLI-12-17, 76 NRC 209 n.7 (2012)
- 10 C.F.R. 2.341(b)(4)(i)-(v)
petition for review will be granted at the Commission's discretion, giving due weight to the existence of a substantial question with respect to one or more of the considerations of this section; CLI-12-21, 76 NRC 494 (2012)
- 10 C.F.R. 2.341(d)
petition for review is treated as a petition for reconsideration; CLI-12-17, 76 NRC 209 (2012)
- 10 C.F.R. 2.341(f)(2)
Commission may at its discretion grant a party's request for interlocutory review of a board decision; CLI-12-18, 76 NRC 373 (2012)

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- discretionary interlocutory review is granted only where the party demonstrates that the issue for which it seeks review threatens it with immediate and serious irreparable impact which, as a practical matter, could not be alleviated through an appeal following the presiding officer's final decision or affects the basic structure of the proceeding in a pervasive or unusual manner; CLI-12-18, 76 NRC 373 (2012)
- 10 C.F.R. 2.345
petition for review is treated as a petition for reconsideration; CLI-12-17, 76 NRC 209 (2012)
- 10 C.F.R. 2.345(a)(1)
reconsideration motions must be filed within 10 days of the action for which reconsideration is requested; CLI-12-17, 76 NRC 209 n.7 (2012)
- 10 C.F.R. 2.345(b)
if leave to file a motion for reconsideration is granted, the motion must demonstrate a compelling circumstance, such as the existence of a clear and material error in a decision, which could not have reasonably been anticipated, which renders the decision invalid; CLI-12-17, 76 NRC 209 (2012)
- 10 C.F.R. 2.710(a)
all material facts set forth by summary disposition movant will be considered to be admitted unless controverted by the opposing party; LBP-12-26, 76 NRC 564 (2012)
if summary disposition proponent meets its burden, opponent must counter each adequately supported material fact with its own statement of material facts in dispute and supporting documentation and cannot rely on mere allegations or denials, or the facts in controversy will be deemed admitted; LBP-12-23, 76 NRC 450 (2012)
- 10 C.F.R. 2.710(b)
if no answer to a summary disposition motion is filed, the decision sought, if appropriate, must be rendered; LBP-12-26, 76 NRC 564 (2012)
- 10 C.F.R. 2.710(d)(2)
even where no factual dispute exists, summary disposition may only be granted if movant is entitled to judgment as a matter of law; LBP-12-26, 76 NRC 573 (2012)
summary disposition movant bears the initial burden of demonstrating that no genuine issue as to any material fact exists and that it is entitled to judgment as a matter of law; LBP-12-23, 76 NRC 466 (2012)
summary disposition shall be granted if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that movant is entitled to a decision as a matter of law; LBP-12-19, 76 NRC 190 (2012); LBP-12-23, 76 NRC 450 (2012); LBP-12-26, 76 NRC 564, 573, 574 (2012)
- 10 C.F.R. 2.802
to the extent petitioner seeks to have applicant implement safety measures in addition to those ordered, its recourse is to petition for rulemaking or for license modification, suspension, or revocation; LBP-12-14, 76 NRC 7 n.36 (2012)
- 10 C.F.R. 2.802(a)
any interested person may petition the Commission to issue, amend, or rescind any regulation; CLI-12-19, 76 NRC 387 n.56 (2012)
- 10 C.F.R. 2.900-2.913
board determined that the oral portion of the proceeding should be closed to the public to allow for the free-ranging and thorough examination of witnesses and to ensure the effective safeguard and prevention from disclosure of restricted data; LBP-12-21, 76 NRC 231 (2012)
- 10 C.F.R. Part 2, Subpart L
complexity and number of issues in a proceeding do not per se lead ineluctably to the conclusion that cross-examination is necessary to ensure a fair and adequate hearing; CLI-12-18, 76 NRC 375 (2012)
- 10 C.F.R. 2.1205
licensing boards in Subpart L proceedings must apply the summary disposition standard for Subpart G proceedings found in 10 C.F.R. 2.710; LBP-12-23, 76 NRC 450 (2012)
- 10 C.F.R. 2.1205(c)
licensing boards are directed to apply the same standards for granting or denying summary disposition as would be applied in Subpart G proceedings, as set forth in 10 C.F.R. 2.710; LBP-12-19, 76 NRC 190 n.120 (2012)

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- summary disposition shall be granted if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-12-26, 76 NRC 564 (2012)
- 10 C.F.R. 2.1207
written prefiled testimony and exhibits are typically submitted well in advance of the evidentiary hearing, and in most common types of hearings, licensing boards themselves, not the parties, orally examine the witnesses; LBP-12-21, 76 NRC 248 n.171 (2012)
- 10 C.F.R. 2.1207(a)
where parties have provided prefiled direct testimony in Subpart L cases and submitted a list of confidential proposed questions for the board to ask the witnesses, the need for cross-examination by parties should be a rare circumstance, except where questions of witness credibility, motive, or intent are at issue; CLI-12-18, 76 NRC 375-76 (2012)
- 10 C.F.R. 20.1101
uranium enrichment facility applicant's commitment to monitoring and the corrective action program provides reasonable assurance that public health and safety will be protected and applicant has a program in compliance with the regulations; LBP-12-21, 76 NRC 336 (2012)
- 10 C.F.R. 20.1302(a)
uranium enrichment facility licensee must survey radiation levels in unrestricted and controlled areas and radioactive materials in effluents released to unrestricted and controlled areas to demonstrate compliance with the dose limits for individual members of the public in section 20.1301; LBP-12-21, 76 NRC 366 (2012)
- 10 C.F.R. 20.1501(a)
uranium enrichment facility licensee's radiological surveys must be as necessary and reasonable for compliance, and must include magnitude and extent of radiation levels, concentrations or quantities of radioactive material, and potential radiological hazards; LBP-12-21, 76 NRC 366 (2012)
- 10 C.F.R. 30.32(a)
license application for byproduct material may incorporate information contained in previous applications, statements, or reports filed with the Commission, provided that the reference is clear and specific; LBP-12-24, 76 NRC 517 n.69 (2012)
- 10 C.F.R. 40.31(a)
license for source material may incorporate information contained in previous applications, statements, or reports filed with the Commission, provided that the reference is clear and specific; LBP-12-24, 76 NRC 518 n.69 (2012)
- 10 C.F.R. 40.41(g)
NRC is required to verify through inspection that the facility has been constructed in accordance with the requirements of the license; LBP-12-21, 76 NRC 259-60 (2012)
- 10 C.F.R. 50.2
design bases are information that identifies specific functions to be performed by a structure, system, or component of a facility; LBP-12-24, 76 NRC 538 (2012)
production and utilization facilities are defined; LBP-12-19, 76 NRC 191 n.31 (2012)
- 10 C.F.R. 50.30(d)
operating license application may incorporate any pertinent info submitted with application for construction permit; LBP-12-24, 76 NRC 518 n.69 (2012)
- 10 C.F.R. 50.36
NRC revised this rule in 1995 and established clearer criteria as to what constitutes a technical specification that must be in the license; LBP-12-25, 76 NRC 550 (2012)
technical specifications are those technical requirements that are incorporated in an NRC license; LBP-12-25, 76 NRC 549 n.21 (2012)
- 10 C.F.R. 50.38
any person who is a citizen, national, or agent of a foreign country, or any corporation, or other entity that NRC knows or has reason to believe is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, shall be ineligible to apply for and obtain a license; LBP-12-19, 76 NRC 191 (2012)

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- applicants are ineligible to obtain a license because they fail to meet the requirements of the AEA and NRC regulations regarding foreign ownership; LBP-12-22, 76 NRC 443 (2012)
- combined license will not be issued where applicants are 100% owned by a foreign corporation, which is 85% owned by the French government, and the foreign corporation has the power to exercise ownership, control, or domination over applicants, and the Negation Action Plan submitted by applicants does not negate this situation; LBP-12-19, 76 NRC 188 (2012)
- connection of the three prohibitions on foreign ownership with the conjunction “or” rather than “and” shows that a license may not be granted if *any* of the three prohibitions is violated; LBP-12-19, 76 NRC 195-96 (2012)
- foreign-owned, -controlled, or -dominated entity is ineligible to apply for, let alone obtain, a combined license; LBP-12-19, 76 NRC 201 (2012)
- 10 C.F.R. 50.48(b)
unapproved operator manual actions represent potential noncompliances; DD-12-3, 76 NRC 423 (2012)
- 10 C.F.R. 50.54(hh)
extensive damage mitigation guidelines are intended to guide onsite emergency actions and they include guidance and strategies intended to maintain or restore core cooling and containment and spent fuel pool cooling capabilities under the circumstances associated with the loss of large areas of the plant due to fire or explosion; LBP-12-18, 76 NRC 150 (2012)
- 10 C.F.R. 50.59
degree to which this section applies is controlled not by how a modification is labeled but by whether the substance of the change brings that revision within the confines of this section; LBP-12-25, 76 NRC 552 n.23 (2012)
- except where the Commission determines that a discretionary hearing is warranted, section 2.206 provides the means to challenge licensee actions under this section; CLI-12-20, 76 NRC 439 n.10 (2012)
- 10 C.F.R. 50.59(c)(1)
circumstances under which licensee may make changes to its facility and procedures as described in its updated FSAR and conduct tests or experiments not otherwise described in the UFSAR without obtaining a license amendment are discussed; CLI-12-20, 76 NRC 438-39 n.5 (2012)
- 10 C.F.R. 50.59(c)(1)(i)
technical specifications are those technical requirements that are incorporated in an NRC license; LBP-12-25, 76 NRC 549 n.21 (2012)
- 10 C.F.R. 50.63
each nuclear power plant must be able to cool the reactor core and maintain containment integrity in the event of a station blackout of a specified duration; LBP-12-18, 76 NRC 168-69 (2012)
- revision of this section to expand the coping capability to include cooling the spent fuel, preventing a loss-of-coolant accident, and preventing containment failure would be a significant benefit; LBP-12-18, 76 NRC 147, 169 (2012)
- 10 C.F.R. 50.63(c)(ii) & (iii)
station blackout is a beyond-design-basis event and therefore regulations requiring emergency operating procedures do not apply, and so operators would follow a set of procedures required by this section; LBP-12-18, 76 NRC 150 (2012)
- 10 C.F.R. 50.90
circumstances under which licensee may make changes to its facility and procedures as described in its updated FSAR and conduct tests or experiments not otherwise described in the UFSAR without obtaining a license amendment are discussed; CLI-12-20, 76 NRC 438-39 n.5 (2012)
- 10 C.F.R. 50.109(a)(3)
NRC may impose new requirements defined as “backfitting” on previously licensed power reactors only if it finds that there is a substantial increase in the overall protection of public health and safety or the common defense and security and the direct and indirect costs of implementation for that facility are justified in view of this increased protection; LBP-12-18, 76 NRC 154 n.124 (2012)
- 10 C.F.R. 50.109(a)(4)(ii)
the Commission relied on the exception to the Backfit Rule that applies when regulatory action is necessary to ensure that the facility provides adequate protection to the health and safety of the public; LBP-12-18, 76 NRC 154 n.124 (2012)

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- 10 C.F.R. Part 50, App. B
license applicant may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, or any part thereof, but applicant retains responsibility for the quality assurance program; LBP-12-23, 76 NRC 476 (2012)
- 10 C.F.R. Part 50, App. R, § II
objectives of licensee's fire protection program to extend the concept of defense-in-depth to fire protection are discussed; DD-12-3, 76 NRC 421 (2012)
- 10 C.F.R. Part 50, App. R, § III.F
fire detection systems shall be automatic and capable of operating with or without offsite power; DD-12-3, 76 NRC 422 (2012)
NRC Staff will disposition violations as part of its ongoing reactor oversight process, and evidentiary hearings before NRC at the request of third parties are not a part of this process; DD-12-3, 76 NRC 425 (2012)
- 10 C.F.R. Part 50, App. R, § III.G
licensee cited for violations for use of unapproved operator manual actions to mitigate safe shutdown equipment malfunctions caused by a fire-induced single spurious actuation in lieu of protecting the equipment; DD-12-3, 76 NRC 424 (2012)
NRC Staff will disposition violations as part of its ongoing reactor oversight process, and evidentiary hearings before NRC at the request of third parties are not a part of this process; DD-12-3, 76 NRC 425 (2012)
plants licensed to operate before January 1, 1979, must meet fire safety regulations; DD-12-3, 76 NRC 420 (2012)
unapproved operator manual actions represent potential noncompliances; DD-12-3, 76 NRC 423 (2012)
underlying purpose of this regulation is to ensure that the ability to achieve and maintain safe shutdown is preserved following a fire event; DD-12-3, 76 NRC 421 (2012)
- 10 C.F.R. Part 50, App. R, § III.G.2
means to ensure that a redundant train of safe-shutdown cables and equipment is free of fire damage in instances in which redundant trains are located in the same fire area outside of primary containment are described; DD-12-3, 76 NRC 421 (2012)
use of operator manual actions in lieu of the protection methods specified in this regulation is not consistent with the regulations and plants need regulatory approval for each specific OMA proposed; DD-12-3, 76 NRC 421 (2012)
- 10 C.F.R. Part 51
qualitative benefits and costs in the cost-benefit analysis for the uranium enrichment facility are estimated to be small, moderate, or large, using the same general definitions found in the regulations of this part; LBP-12-21, 76 NRC 306 (2012)
uranium enrichment facility applicant is required to prepare an environmental report; LBP-12-21, 76 NRC 291 (2012)
- 10 C.F.R. 51.14(b)
"cumulative impact" is defined as the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions; LBP-12-24, 76 NRC 511 (2012)
scope of the term "impact" includes cumulative impacts; LBP-12-24, 76 NRC 513 (2012)
- 10 C.F.R. 51.23(a)
ruling on petitions for waiver of application of the waste confidence rule in independent spent fuel storage installation license renewal proceeding is deferred and the contention held it in abeyance; LBP-12-24, 76 NRC 507 n.6 (2012)
spent nuclear fuel can be stored safely at licensed nuclear facilities until such time as a long-term geologic storage facility is constructed; LBP-12-24, 76 NRC 509 (2012)
- 10 C.F.R. 51.23(b)
license applicants were permitted to omit any discussion of any environmental impact of spent fuel storage in independent spent fuel storage installations for the period following the term of the initial ISFSI license in any environmental report, environmental impact statement, environmental assessment, or other analysis; LBP-12-24, 76 NRC 509 (2012)
waste confidence undergirds certain agency licensing decisions, in particular new reactor licensing and reactor license renewal; CLI-12-16, 76 NRC 66 (2012)

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- 10 C.F.R. 51.41
NRC Staff relies heavily on applicant's environmental report in preparing its final environmental impact statement; LBP-12-17, 76 NRC 81 (2012)
- 10 C.F.R. 51.45
applicant is not required to assess cumulative impacts in its environmental report, but NUREG-1748 requests that applicant discuss any past, present, or reasonably foreseeable future actions that could result in cumulative impacts when combined with the proposed action; LBP-12-24, 76 NRC 536 (2012)
applicant is not required to discuss the federal government's trust responsibility to Indian tribes in its environmental report; LBP-12-24, 76 NRC 520 (2012)
- 10 C.F.R. 51.45(b)(1)
applicant must discuss in its environmental report the impact of the proposed action on the environment; LBP-12-24, 76 NRC 513 (2012)
- 10 C.F.R. 51.45(c)
NRC Staff relies heavily on applicant's environmental report in preparing its final environmental impact statement; LBP-12-17, 76 NRC 81 (2012)
- 10 C.F.R. 51.45(d)
applicant is not required to explain in its environmental report every aspect of the process it must pursue in the course of obtaining a federal permit, license, or approval; LBP-12-15, 76 NRC 35 n.6 (2012)
implication that any agency prerequisite with which applicant must comply to operate a plant during an extended term constitutes an "approval" under this section would entail an unreasonably strained definition of "approval"; LBP-12-15, 76 NRC 34 (2012)
none of the post-Fukushima orders or information requests can be characterized as approvals that must be obtained in connection with renewal of an operating license; LBP-12-15, 76 NRC 34 (2012)
to consider any or all of NRC Staff documents as "approvals" by reason of the fact that they request information that will be used to assess compliance with agency requirements would impose an unintended reporting encumbrance; LBP-12-15, 76 NRC 34 n.5 (2012)
- 10 C.F.R. 51.49(e)
for a limited work authorization application for a site where a construction permit was issued but construction of the plant was never completed, the environmental report may incorporate the earlier environmental impact statement; LBP-12-24, 76 NRC 518 n.69 (2012)
- 10 C.F.R. 51.50(c)(2), (3)
environmental report for a combined license application may incorporate NRC's environmental assessment for a standard design certification or an underlying manufacturing license; LBP-12-24, 76 NRC 518 n.69 (2012)
- 10 C.F.R. 51.53(a)
environmental reports prepared under the provisions of this section may incorporate by reference any information contained in a prior environmental report or supplement thereto that relates to the production or utilization facility or site, or any information contained in a final environmental document previously prepared by the NRC Staff that relates to the production or utilization facility or site; LBP-12-24, 76 NRC 518 n.69 (2012)
- 10 C.F.R. 51.53(c)(2)
contention that the environmental report fails to satisfy this section because it does not include information about plans to modify the facility in response to post-Fukushima enforcement order is inadmissible; LBP-12-15, 76 NRC 28 (2012)
environmental reports for license renewal must address environmental impacts of the proposed action and compare those impacts to the impacts of alternative actions, but need only consider those alternatives that are reasonable; LBP-12-15, 76 NRC 36 (2012)
NRC Staff is required to issue a final environmental impact statement that thoroughly and objectively evaluates reasonable alternatives to the proposed action; LBP-12-17, 76 NRC 113 (2012)
to the extent that applicant proposes modifications to the facility in response to a request for information, NEPA also requires the consideration of the effectiveness and relative costs of a range of alternatives for satisfying the NRC's concerns; LBP-12-15, 76 NRC 32 (2012)
- 10 C.F.R. 51.53(c)(3)(i)
any contention on a Category 1 issue amounts to a challenge to the regulation barring challenges to generic environmental findings; CLI-12-19, 76 NRC 384 (2012)

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- license renewal applicant need not include analyses of the environmental impacts of Category 1 issues in its environmental report because NRC Staff incorporates the GEIS analysis of Category 1 issues as part of the overall cost-benefit balance in the supplemental environmental impact statement for license renewal; CLI-12-19, 76 NRC 381 n.18 (2012)
- 10 C.F.R. 51.53(c)(3)(ii)
for Category 2 environmental issues, NRC requires individual applicants to include a site-specific environmental analysis in their license renewal applications; CLI-12-19, 76 NRC 381 (2012)
- 10 C.F.R. 51.53(c)(3)(ii)(B)
license renewal applicants must submit documentation of their compliance with sections 316(a) and (b) of the Clean Water Act concerning thermal discharges; LBP-12-16, 76 NRC 53 (2012)
- 10 C.F.R. 51.53(c)(3)(ii)(L)
although NRC has found that severe accident risks are small for all U.S. licensed nuclear power plants, NRC Staff is required under NEPA to consider mitigation alternatives during its license renewal review; LBP-12-26, 76 NRC 569 (2012)
applicant's use of the MAAP code to generate fission product source terms for use in its severe accident mitigation alternatives analysis is reasonable under NEPA; LBP-12-26, 76 NRC 581 (2012)
license renewal applicant's environmental report must include a consideration of alternatives to mitigate severe accidents if NRC Staff has not previously considered them for applicant's plant in an environmental impact statement or related supplement or in an environmental assessment; CLI-12-19, 76 NRC 380, 382, 383 (2012)
severe accident mitigation alternatives analysis for relicensing must be performed by licensee and included in the license renewal application; LBP-12-26, 76 NRC 567 (2012)
severe accident mitigation alternatives analysis is a Category 2 issue; CLI-12-19, 76 NRC 381 (2012)
- 10 C.F.R. 51.53(c)(3)(iv)
license renewal applicants must include in their environmental reports any new and significant information of which they are aware; CLI-12-19, 76 NRC 382 (2012)
"new and significant information" requirement does not override, for purposes of litigating the issues in an adjudicatory proceeding, the exclusion of Category 1 issues in section 51.53(c)(3)(i) from site-specific review; CLI-12-19, 76 NRC 384 (2012)
- 10 C.F.R. 51.53(d)
post-operating license stage supplement to applicant's environmental report may incorporate by reference any information contained in applicant's construction permit stage environmental report; LBP-12-24, 76 NRC 518 n.69 (2012)
- 10 C.F.R. 51.60
applicant may incorporate material by reference that the applicant itself has previously submitted, not material prepared by NRC Staff; LBP-12-24, 76 NRC 518 n.69, 532-33 (2012)
- 10 C.F.R. 51.60(a)
for materials license amendment or renewal applications or other form of permission for which applicant has previously submitted an environmental report, the supplement to applicant's ER may be limited to incorporating by reference, updating, or supplementing the information previously submitted to reflect any significant environmental change, including any resulting from operational experience or a change in operations or proposed decommissioning activities; LBP-12-24, 76 NRC 518 n.69 (2012)
- 10 C.F.R. 51.62(a)
environmental report for application for land disposal of radioactive waste may incorporate by reference information contained in the application or in any previous application, statement, or report filed with the Commission provided that such references are clear and specific; LBP-12-24, 76 NRC 517-18 n.69 (2012)
- 10 C.F.R. 51.71(d)
draft environmental impact statements must include a preliminary analysis that considers and weighs alternatives available for reducing or avoiding adverse environmental effects; LBP-12-18, 76 NRC 160, 175-76 (2012)
NRC's obligation to evaluate new recommendations for enhanced accident mitigation does not depend upon whether intervenors have identified unique characteristics of the site or the proposed new reactor; LBP-12-18, 76 NRC 144 (2012)

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- 10 C.F.R. 51.71(d) n.3
compliance with the Clean Water Act does not negate the requirement for NRC to weigh all environmental effects of a proposed action; LBP-12-16, 76 NRC 57 (2012)
- 10 C.F.R. 51.73
public comment period is required for draft and supplemental environmental impact statements; CLI-12-16, 76 NRC 67 (2012)
- 10 C.F.R. 51.90
NRC Staff must prepare a final environmental impact statement in accordance with the requirements of section 51.71 for a draft environmental impact statement; LBP-12-18, 76 NRC 160 (2012)
- 10 C.F.R. 51.92(a)
NRC Staff must prepare supplemental environmental review documents when there are 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; LBP-12-18, 76 NRC 162 (2012)
- 10 C.F.R. 51.92(a)(2)
new information in the Fukushima Task Force Report is relevant to environmental concerns; LBP-12-18, 76 NRC 167 (2012)
supplementation of a final environmental impact statement is required if there are new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; LBP-12-18, 76 NRC 157, 166 (2012)
- 10 C.F.R. 51.95(c)(3)
if NRC Staff had in hand new information that could render invalid the original site-specific analysis, then such information should be identified and evaluated by Staff for its significance, consistent with NEPA requirements; CLI-12-19, 76 NRC 385-86 n.54 (2012)
- 10 C.F.R. 51.95(c)(4)
license renewal applicant need not include analyses of the environmental impacts of Category 1 issues in its environmental report because NRC Staff incorporates the GEIS analysis of Category 1 issues as part of the overall cost-benefit balance in the supplemental environmental impact statement for license renewal; CLI-12-19, 76 NRC 381 n.18 (2012)
- 10 C.F.R. 51.103(a)(4)
NRC's record of decision for the license must state whether the Commission has taken all practicable measures within its jurisdiction to avoid or minimize environmental harm from the alternative selected, and if not, to explain why those measures were not adopted; LBP-12-18, 76 NRC 161 (2012)
record of decision must also summarize any license conditions and monitoring programs adopted in connection with mitigation measures; LBP-12-18, 76 NRC 161 (2012)
- 10 C.F.R. 51.107(a)(3)
in a combined license proceeding, the Commission may require implementation of mitigation measures it deems necessary and appropriate by imposing conditions in the license; LBP-12-18, 76 NRC 161 (2012)
- 10 C.F.R. Part 51, Subpart A, App. A, § 5
alternatives analysis is the heart of the environmental impact statement; LBP-12-17, 76 NRC 82 (2012)
- 10 C.F.R. Part 51, Subpart A, App. B
Category 2 issues focus on severe accident mitigation, to further reduce severe accident risk (probability or consequences); CLI-12-19, 76 NRC 381 n.20 (2012)
severe accident mitigation alternatives analysis is a Category 2 issue; CLI-12-19, 76 NRC 381 (2012); LBP-12-15, 76 NRC 29 n.3 (2012)
- 10 C.F.R. Part 51, Subpart A, Appendix B, Table B-1
although NRC has found that severe accident risks are small for all U.S. licensed nuclear power plants, NRC Staff is required under NEPA to consider mitigation alternatives during its license renewal review; LBP-12-26, 76 NRC 569 (2012)
NRC has found, through its individual plant examination and individual plant examination for external events processes and other risk studies, that the severe accident risks are small for all U.S. licensed nuclear power plants; LBP-12-26, 76 NRC 568-69 (2012)
- 10 C.F.R. 52.75
any person except one excluded by section 50.38 may file an application for a combined license for a nuclear power facility; LBP-12-19, 76 NRC 191 (2012)

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- foreign-owned, -controlled, or -dominated entity is ineligible to apply for, let alone obtain, a combined license; LBP-12-19, 76 NRC 201 (2012)
- 10 C.F.R. 52.97(c)
in a combined license proceeding, the Commission may require implementation of mitigation measures it deems necessary and appropriate by imposing conditions in the license; LBP-12-18, 76 NRC 161 (2012)
- 10 C.F.R. 54.3(a)
current licensing basis for an independent spent fuel storage installation includes plant-specific design-basis information defined in 10 C.F.R. 50.2 as documented in the most recent final safety analysis report; LBP-12-24, 76 NRC 538 (2012)
- 10 C.F.R. 54.31(c)
if the renewed license is subsequently set aside on appeal, the previous operating license would be reinstated; LBP-12-16, 76 NRC 47 n.15 (2012)
- 10 C.F.R. 60.23
DOE may incorporate in its application for geologic repository information in previous reports filed with the Commission, provided that such references are clear and specific; LBP-12-24, 76 NRC 518 n.69 (2012)
- 10 C.F.R. 70.17(a)
NRC may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest; LBP-12-21, 76 NRC 240 n.118 (2012)
- 10 C.F.R. 70.21(c)
special nuclear material license applications may incorporate by reference information contained in previous applications, statements, or reports filed with the Commission if the references are clear and specific; LBP-12-24, 76 NRC 518 n.69 (2012)
- 10 C.F.R. 70.22(a)(2), (7)
uranium enrichment facility license applications must contain the place at which the activity is to be performed and the general plan for carrying out the activity as well as a description of equipment and facilities that will be used by applicant to protect health and minimize danger to life or property; LBP-12-21, 76 NRC 236-37 (2012)
- 10 C.F.R. 70.23a
NRC will hold a hearing under 10 C.F.R. Part 2, Subparts A, C, G, and I, on each application for issuance of a license for construction and operation of a uranium enrichment facility and will publish public notice of the hearing in the Federal Register at least 30 days before the hearing; LBP-12-21, 76 NRC 233 (2012)
- 10 C.F.R. 70.31(e)
no license to construct and operate a uranium enrichment facility may be issued until a hearing pursuant to 10 C.F.R. Part 2, Subparts A, C, G, and I, is completed and decision issued on the application; LBP-12-21, 76 NRC 233 (2012)
- 10 C.F.R. 70.32(k)
NRC is required to verify through inspection that the facility has been constructed in accordance with the requirements of the license; LBP-12-21, 76 NRC 259-60 (2012)
- 10 C.F.R. 70.59
uranium enrichment facility applicant must provide semiannual radiological release reports to NRC; LBP-12-21, 76 NRC 338-39 (2012)
uranium enrichment facility licensee must submit biannual reports to the NRC specifying the quantity of each of the principal radionuclides released to unrestricted areas in liquid and gaseous effluents during the previous 6 months of operation, and such other information as the Commission may require to estimate maximum potential annual radiation doses to the public resulting from effluent releases; LBP-12-21, 76 NRC 365 (2012)
- 10 C.F.R. 70.61
integrated safety analysis requirements for uranium enrichment facility licensing are detailed; LBP-12-21, 76 NRC 237 (2012)

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- 10 C.F.R. 70.61(a)
applicant is required to evaluate and reduce the risk of events that could have significant impacts on workers or the public; LBP-12-21, 76 NRC 265 (2012)
- 10 C.F.R. 70.61(b), (c)
high-consequence events are required to be highly unlikely and intermediate-consequence events to be unlikely; LBP-12-21, 76 NRC 265 (2012)
- 10 C.F.R. 70.62
integrated safety analysis requirements for uranium enrichment facility licensing are detailed; LBP-12-21, 76 NRC 237 (2012)
level of design is sufficient to develop a safety basis for the facility that includes analysis of accident sequences, identification of IROFS, implementation of management measures to ensure the IROFS are available and reliable when needed, application of defense-in-depth measures, and commitment to codes and standards to support ongoing design and construction; LBP-12-21, 76 NRC 254 (2012)
- 10 C.F.R. 70.62(c)
uranium enrichment facility applications must identify radiological and chemical hazards, facility hazards that could affect safety of licensed materials, potential accident sequences and their consequences and likelihood of occurrence, and each item relied on for safety; LBP-12-21, 76 NRC 237 (2012)
- 10 C.F.R. 70.62(c)(iv)
integrated safety analysis summary must assess potential accidents caused by credible external events and design the facility to protect against natural phenomena; LBP-12-21, 76 NRC 265 (2012)
- 10 C.F.R. 70.64(a)
design of new uranium enrichment facilities must provide for adequate protection against natural phenomena, fires and explosions, chemical risks produced from licensed material, facility conditions, and hazardous chemicals produced from licensed material; LBP-12-21, 76 NRC 237 (2012)
design of new uranium enrichment facilities must provide for emergency planning, continued operation of essential utility services, inspection, testing, and maintenance of items relied on for safety, and criticality control including adherence to the double contingency principle; LBP-12-21, 76 NRC 237 (2012)
- 10 C.F.R. 70.64(a)(2)
integrated safety analysis summary must assess potential accidents caused by credible external events and design the facility to protect against natural phenomena; LBP-12-21, 76 NRC 265 (2012)
- 10 C.F.R. 70.65(b)
integrated safety analysis summary must accompany the uranium enrichment facility license application and contain a general description of the site and the facility with emphasis on factors that could affect safety and description of each process analyzed in the ISA; LBP-12-21, 76 NRC 237 (2012)
- 10 C.F.R. 70.72
deviations from the original design must be evaluated against the criteria in this regulation to determine if a license amendment is required or if applicant could make the change without NRC approval; LBP-12-21, 76 NRC 259 (2012)
every change request is reviewed against the criteria in the license application and the criteria in this regulation to determine whether NRC approval is required prior to implementing the change; LBP-12-21, 76 NRC 254 (2012)
uranium enrichment facility licensee must submit an annual update of the integrated safety analysis summary; LBP-12-21, 76 NRC 345 (2012)
- 10 C.F.R. 70.72(a)
applicant must establish and maintain a configuration management system to evaluate, implement, and track changes to the site, structures, processes, systems, equipment, components, computer programs, and activities of personnel; LBP-12-21, 76 NRC 254 (2012)
- 10 C.F.R. 72.42(a)(2)
applications for renewal of an ISFSI license must describe the aging management plan for management of issues associated with aging that could adversely affect structures, systems, and components important to safety; LBP-12-24, 76 NRC 525 (2012)
- 10 C.F.R. 72.75
licensee determined that dry storage cask displacement and damage to the NUHOMS HD 32PTH caused by an earthquake exceeding the design basis were not reportable; DD-12-2, 76 NRC 401 (2012)

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- 10 C.F.R. 72.104(a)-(c)
ISFSI licensees must limit releases of radioactive materials to as low as is reasonably achievable, and establish operational limits to prevent doses to the public that exceed the limits of this section; LBP-12-24, 76 NRC 529 (2012)
- 10 C.F.R. 72.106(b)
loss of spent fuel confinement would produce a dose of 0.15 rem at the nearest site boundary, which is less than the 5-rem limit; LBP-12-24, 76 NRC 529 (2012)
- 10 C.F.R. 72.122(h)(1)
licensee must protect spent fuel cladding from degradation during storage or confine the fuel in such a way that degradation does not cause operational problems when removed from storage; LBP-12-24, 76 NRC 526-27 (2012)
- 10 C.F.R. 72.122(h)(4)
pressure monitoring system that functions to alert ISFSI operators of potential storage problems, specifically a leak of one of the seals, is intended to meet the requirements for monitoring of dry spent fuel storage; LBP-12-24, 76 NRC 523 (2012)
- 10 C.F.R. 72.122(l)
licensee must provide for ready retrieval of spent fuel from storage for further processing or disposal; LBP-12-24, 76 NRC 527 (2012)
- 10 C.F.R. 74.33(c)(5)
NRC Staff granted an exemption from applicable regulatory requirements subject to license conditions that require applicant to submit, for the Staff's prior review and approval, detailed analyses of such potentially credible diversion scenarios and the processes and management measures best suited to address them; LBP-12-21, 76 NRC 230 (2012)
- 10 C.F.R. Part 100, App. A, § V(a)(2)
following an earthquake exceeding the design basis, the plant must remain shut down until licensee demonstrates to NRC that no functional damage occurred to those features necessary for continued operation without undue risk to the health and safety of the public; DD-12-2, 76 NRC 408-09 (2012)
licensee is required to shut down a nuclear power plant when the vibratory ground motion exceeds that of the operating basis earthquake; DD-12-2, 76 NRC 395, 399 (2012)
- 36 C.F.R. 800.2(d)(2)
agency officials must, except where appropriate to protect confidentiality concerns of affected parties, provide the public with information about an undertaking and its effects on historic properties and seek public comment and input; LBP-12-23, 76 NRC 482-83 n.240 (2012)
- 36 C.F.R. 800.2(d)(3)
agencies shall plan for involving the public in the National Historic Preservation Act § 106 process but may use the agency's procedures for public involvement under NEPA if they provide adequate opportunities for public involvement; LBP-12-23, 76 NRC 481 (2012)
- 36 C.F.R. 800.3(e)
agencies shall plan for involving the public in the National Historic Preservation Act § 106 process but may use the agency's procedures for public involvement under NEPA if they provide adequate opportunities for public involvement; LBP-12-23, 76 NRC 481 (2012)
in consultation with the SHPO/THPO, the agency official shall plan for involving the public in the section 106 process; LBP-12-23, 76 NRC 483 n.240 (2012)
- 36 C.F.R. 800.3-800.6
procedures for an agency to follow in complying with National Historic Preservation Act § 106 are listed; LBP-12-23, 76 NRC 481 (2012)
- 36 C.F.R. 800.8
agencies are encouraged to coordinate the NHPA § 106 process with the agency's process for complying with NEPA; LBP-12-23, 76 NRC 481 (2012)
- 36 C.F.R. 800.8(c)
agency official may use the process and documentation required for the preparation of an EA/FONSI or an EIS/ROD to comply with National Historic Preservation Act § 106 in lieu of the procedures set forth in sections 800.3-800.6 if the agency official has notified in advance the SHPO/THPO and the Council that it intends to do so and the regulatory standards are met; LBP-12-23, 76 NRC 486 n.262 (2012)

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- 40 C.F.R. 1502.9(c)(1)(ii)
supplement to a draft or final EIS must be prepared if significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts arise; LBP-12-18, 76 NRC 161 (2012)
- 40 C.F.R. 1502.14
agencies must devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits; LBP-12-17, 76 NRC 82 (2012)
agencies must rigorously explore and objectively evaluate all reasonable alternatives and briefly discuss reasons for eliminating alternatives; LBP-12-17, 76 NRC 82 (2012)
Council on Environmental Quality guidance does not bind NRC, but NRC gives it substantial deference; LBP-12-17, 76 NRC 82-83 (2012)
Council on Environmental Quality regulations receive substantial deference from federal courts
- 40 C.F.R. 1502.14(a)
EPA requires federal agencies to rigorously explore and objectively evaluate all reasonable alternatives; LBP-12-17, 76 NRC 121 (2012)
- 40 C.F.R. 1505.2(c)
for agency decisions such as a combined license that are based on an environmental impact statement, a monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation; LBP-12-23, 76 NRC 462 (2012)
- 40 C.F.R. 1508.7
“cumulative impact” is defined as the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions; LBP-12-24, 76 NRC 511 (2012)
- 40 C.F.R. 1508.25(c)
scope of the term “impact” includes cumulative impacts; LBP-12-24, 76 NRC 513 (2012)
- 40 C.F.R. 1508.27
in determining whether a federal action would significantly affect the environment, the agency should consider the degree to which the proposed action affects public health and safety; LBP-12-18, 76 NRC 160-61 (2012)
- 322 Mass. Code Regs. § 6.17(3)
it shall be unlawful for any person to harvest, possess, or sell river herring in the Commonwealth or in the waters under the jurisdiction of the Commonwealth; LBP-12-16, 76 NRC 55-56 (2012)

LEGAL CITATIONS INDEX STATUTES

- Administrative Procedure Act, 5 U.S.C. § 706
NRC does not have authority to rule on challenges to Fish and Wildlife's compliance with the Endangered Species Act; CLI-12-21, 76 NRC 495 n.21 (2012)
- Atomic Energy Act, 102, 42 U.S.C. § 2132(a)
any license issued for a utilization or production facility for industrial or commercial purposes must meet the requirements set out in section 103 of the AEA; LBP-12-19, 76 NRC 191 (2012)
- Atomic Energy Act, 103d, 42 U.S.C. § 2133(d)
applicants are ineligible to obtain a license because they fail to meet the requirements of the AEA and NRC regulations regarding foreign ownership; LBP-12-22, 76 NRC 443 (2012)
Congress thought foreign ownership itself should be sufficient to require denial of a license in some circumstances; LBP-12-19, 76 NRC 196 (2012)
connection of the three prohibitions on foreign ownership with the conjunction "or" rather than "and" shows that a license may not be granted if *any* of the three prohibitions is violated; LBP-12-19, 76 NRC 195 (2012)
NRC has substantial discretion in determining the threshold percentage at which foreign ownership becomes too great, but that threshold must at a minimum include 100% foreign ownership or the prohibition in the Act would be rendered superfluous; LBP-12-19, 76 NRC 196 (2012)
NRC is prohibited from issuing a reactor license to any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government; LBP-12-19, 76 NRC 191 (2012)
- Atomic Energy Act, 161
compliance with NRC requirements presumptively ensures adequate protection, but new information may reveal that additional requirements are warranted, and in such situations, the Commission may act in accordance with its statutory authority to require licensees and construction permit holders to take action in order to protect health and safety and common defense and security; LBP-12-18, 76 NRC 153 (2012)
- Atomic Energy Act, 181, 42 U.S.C. § 2231
board determined that the oral portion of the proceeding should be closed to the public to allow for the free-ranging and thorough examination of witnesses and to ensure the effective safeguard and prevention from disclosure of restricted data; LBP-12-21, 76 NRC 231 (2012)
- Atomic Energy Act, 182, 42 U.S.C. § 2232
every license to operate a nuclear power reactor must contain a list of technical specifications necessary for adequate protection of public health and safety; LBP-12-25, 76 NRC 549 (2012)
technical specifications must include information on the amount, kind, and source of special nuclear material, the place of use, and the particular characteristics of the facility; LBP-12-25, 76 NRC 549 (2012)
- Atomic Energy Act, 189a, 42 U.S.C. § 2239a
NRC has authority to define the scope of its proceedings, which, in enforcement proceedings, is to permit challenges solely on whether an order should be sustained; LBP-12-14, 76 NRC 5 (2012)
opportunity for a hearing on license amendments is provided; CLI-12-20, 76 NRC 440 (2012)
- Atomic Energy Act, 189a(1)(A), 42 U.S.C. § 2239(a)(1)(A)
for an individual or organization to be deemed a "person whose interest may be affected by the proceeding,"so as to have standing as of right such that party status can be granted in an agency

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adjudicatory proceeding, the intervention petition must comply with 10 C.F.R. 2.309(d)(1)(i)-(iv); LBP-12-15, 76 NRC 23 (2012)

Atomic Energy Act, 193b(1), 42 U.S.C. § 2243(b)(1)

NRC shall conduct a single adjudicatory hearing on the record with regard to the licensing of the construction and operation of a uranium enrichment facility; LBP-12-21, 76 NRC 232-33 (2012)

Clean Water Act, 33 U.S.C. § 1326(a), (b)

license renewal applicants must submit documentation of their compliance with sections 316(a) and (b) of the Clean Water Act concerning thermal discharges; LBP-12-16, 76 NRC 53 (2012)

Clean Water Act, 401, 33 U.S.C. § 1341(a)

applicant for a federal discharge permit must provide a certification from the state that the proposed activity will not violate state water pollution control standards; LBP-12-16, 76 NRC 52 (2012)

Clean Water Act, 33 U.S.C. § 1371(c)(2)

NRC is precluded from second-guessing the conclusions in NPDES permits; LBP-12-16, 76 NRC 59 n.74 (2012)

Endangered Species Act, 16 U.S.C. § 1536(n)

NRC does not have authority to rule on challenges to Fish and Wildlife's compliance with the Act; CLI-12-21, 76 NRC 495 n.21 (2012)

Energy Reorganization Act, 201, 42 U.S.C. § 5841

action of the Commission shall be determined by a majority vote of the members present; CLI-12-17, 76 NRC 213 (2012)

Exec. Order No. 12,898, 3 C.F.R. 859 (1995), *reprinted as amended in* 42 U.S.C. § 4321

federal agencies shall identify and consider whether their actions will cause disproportionate environmental impacts on minority, low-income, or other sensitive populations; LBP-12-24, 76 NRC 520 (2012)

National Environmental Policy Act, 42 U.S.C. § 4331(b)

federal agencies must pause before committing resources to a project and consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives; LBP-12-17, 76 NRC 81 (2012); LBP-12-18, 76 NRC 159 (2012)

National Environmental Policy Act, 42 U.S.C. § 4332

when agencies propose major federal actions significantly affecting the quality of the human environment, preparation of an environmental impact statement is required; LBP-12-18, 76 NRC 159 (2012)

National Environmental Policy Act, 42 U.S.C. § 4332(2)(C)

agencies must prepare an environmental impact statement before approving any major federal action that will significantly affect the quality of the human environment; LBP-12-17, 76 NRC 81 (2012)

National Environmental Policy Act, 102(2)(C), 42 U.S.C. § 4332(2)(C)

agencies must consider the environmental impacts of major federal actions significantly affecting the quality of the human environment, as well as alternatives to the proposed action, in an environmental impact statement; LBP-12-23, 76 NRC 453 (2012)

National Environmental Policy Act, 102(2)(C)(i)-(iii), 42 U.S.C. § 4332(2)(C)(i)-(iii)

NRC Staff is required to issue a final environmental impact statement that thoroughly and objectively evaluates reasonable alternatives to the proposed action; LBP-12-17, 76 NRC 113 (2012)

National Environmental Policy Act, 42 U.S.C. § 4332(2)(C)(iii)

environmental impact statements are to include a detailed statement by the responsible official on alternatives to the proposed action; LBP-12-17, 76 NRC 82 (2012)

National Historic Preservation Act, 106, 16 U.S.C. § 470f (2006)

before licensing any federally assisted undertaking, federal agencies must take into account the effect of the undertaking on any site that is included or eligible for inclusion in the National Register of Historic Places; LBP-12-23, 76 NRC 480 (2012)

NRC must also allow the federal Advisory Council on Historic Preservation a reasonable opportunity to comment with regard to a combined license; LBP-12-23, 76 NRC 480 (2012)

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OTHERS

- Fed. R. Civ. P. 56
summary judgment movant bears the initial burden of demonstrating that no genuine issue as to any material fact exists and that it is entitled to judgment as a matter of law; LBP-12-23, 76 NRC 450 (2012) Fed. R. Evid. 403
courts may exclude relevant evidence if its probative value is substantially outweighed by a danger of unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence; LBP-12-21, 76 NRC 248 n.171 (2012)
- Fed. R. Evid. 615
at the request of any party a court must order witnesses excluded so that they cannot hear other witnesses' testimony; LBP-12-21, 76 NRC 249 (2012)
- 2 Pierce, Robert J., Jr., *Administrative Law Treatise* § 10.1, at 910 (5th ed. 2010)
if licensing boards deem prefiled evidence to be of little or no value, they simply need not ask about it at the evidentiary hearing, and are free to accord such evidence little or no weight; LBP-12-21, 76 NRC 248 n.171 (2012)
process similar to jury trial in NRC proceedings would require creating one licensing board to review the evidence for purposes of admissibility and a second board to weigh the admitted evidence for the purpose of ruling on the merits, which is unnecessary in administrative proceedings; LBP-12-21, 76 NRC 248 n.171 (2012)
- Schoenbaum, Thomas J., and Richard B. Stewart, *The Role of Mitigation and Conservation Measures in Achieving Compliance with Environmental Regulatory Statutes: Lessons from Section 316 of the Clean Water Act*, 8 N.Y.U. Envtl. L.J. 237, 276 (2000)
although NEPA does not mention mitigation, by administrative practice and regulation, mitigation plays an important role in the discharge by federal agencies of their procedural duty under NEPA to prepare an EIS; LBP-12-18, 76 NRC 159-60 (2012)
- Webster's Third New International Dictionary* 106 (Philip B. Gove ed. in chief, unabridged, 1976)
plain meaning of the word "approval," as "the act of approving" and "certification as to acceptability," which requires an affirmative action on the part of an approver, clearly establishes that requiring compliance is different from granting an approval; LBP-12-15, 76 NRC 34 (2012)
- 29 Wright, Charles Alan, & Gold, Victor James, *Federal Practice and Procedure: Evidence* § 6241 (1st ed. 1997)
whenever a party requests it, exclusion of witnesses is now mandatory rather than a matter of discretion; LBP-12-21, 76 NRC 249-50 (2012)

SUBJECT INDEX

ABEYANCE OF CONTENTION

as an exercise of its inherent supervisory authority over adjudications, the Commission directed that waste confidence contentions and any related contentions that may be filed in the near term be held in abeyance pending further order; LBP-12-24, 76 NRC 503 (2012)

contention concerning need under NEPA to include a discussion of the environmental impacts of spent fuel pool leakage, SFP fires, and the lack of a spent fuel repository is held in abeyance; LBP-12-26, 76 NRC 559 (2012)

in light of the vacatur of the Waste Confidence Decision and Temporary Storage Rule, environmental reports must consider the reasonably foreseeable impacts of permanent storage of spent fuel, and contentions concerning the failure of the ER to do so must be held in abeyance; LBP-12-24, 76 NRC 503 (2012)

ABEYANCE OF PROCEEDING

forcing a pro se intervenor to file monthly disclosures and closely follow a proceeding indefinitely solely to obtain a ruling on the merits of its claim would constitute significant unfairness and hardship; LBP-12-19, 76 NRC 184 (2012)

NRC will not issue licenses dependent upon the Waste Confidence Decision or the Temporary Storage Rule until the court's remand is appropriately addressed; CLI-12-17, 76 NRC 207 (2012); LBP-12-21, 76 NRC 218 (2012)

ACCIDENTS

all credible accident sequences must be identified in the integrated Safety analysis summary as well as items relied on for safety and necessary safety controls; LBP-12-21, 76 NRC 218 (2012)

uranium enrichment facility applications must identify radiological and chemical hazards, facility hazards that could affect safety of licensed materials, potential accident sequences and their consequences and likelihood of occurrence, and each item relied on for safety; LBP-12-21, 76 NRC 218 (2012)

See also Fukushima Accident; Three Mile Island Accident

ACCIDENTS, LOSS-OF-COOLANT

revision of 10 C.F.R. 50.63 to expand the coping capability to include cooling the spent fuel, preventing a loss-of-coolant accident, and preventing containment failure would be a significant benefit; LBP-12-18, 76 NRC 127 (2012)

ACCIDENTS, SEVERE

because the generic environmental impact statement provides a severe accident impacts analysis that envelopes potential impacts at all existing plants, the environmental impacts of severe accidents during the license renewal term already have been addressed generically in bounding fashion; LBP-12-18, 76 NRC 127 (2012)

NRC has found, through its individual plant examination and individual plant examination for external events processes and other risk studies, that the severe accident risks are small for all U.S. licensed nuclear power plants; LBP-12-26, 76 NRC 559 (2012)

station blackout is a beyond-design-basis event and therefore regulations requiring emergency operating procedures do not apply, and so operators would follow a set of procedures required by 10 C.F.R. 50.63(c)(ii) & (iii); LBP-12-18, 76 NRC 127 (2012)

ADJUDICATORY PROCEEDINGS

as an exercise of the Commission's inherent supervisory authority over agency proceedings, it need not address procedural issues that would merit further consideration in adjudications; CLI-12-16, 76 NRC 63 (2012)

SUBJECT INDEX

environmental impact statements are effectively amended through the adjudicatory process; LBP-12-17, 76 NRC 71 (2012)

NRC adjudication is not the appropriate forum for a challenge to a decision by a state regulatory agency; LBP-12-23, 76 NRC 445 (2012)

NRC Staff's final environmental impact statement, in conjunction with the adjudicatory record, becomes the relevant record of decision for the environmental portion of the proceeding; LBP-12-17, 76 NRC 71 (2012)

See also Abeyance of Proceeding; Closed Hearings; Combined License Proceedings; Enforcement Proceedings; Evidentiary Hearings; Mandatory Hearings; Notice of Hearing; Operating License Renewal Proceedings; Suspension of Proceeding; Termination of Proceeding; Uranium Enrichment Facility Proceedings

ADVISORY COUNCIL ON HISTORIC PRESERVATION

NRC must also allow this federal council a reasonable opportunity to comment with regard to a combined license; LBP-12-23, 76 NRC 445 (2012)

AFFIDAVITS

for factual disputes, petitioner need not proffer facts in formal affidavit or evidentiary form, sufficient to withstand a summary disposition motion; LBP-12-18, 76 NRC 127 (2012)

licensing boards or presiding officers should not conduct a trial on affidavits; LBP-12-23, 76 NRC 445 (2012)

AGING MANAGEMENT

applications for renewal of an ISFSI license must describe the aging management plan for management of issues associated with aging that could adversely affect structures, systems, and components important to safety; LBP-12-24, 76 NRC 503 (2012)

intervenors' challenge to the aging management plan must consist of more than allegations that the AMP is deficient, but rather must point to specific ways the AMP is inadequate or wrong; LBP-12-27, 76 NRC 583 (2012)

intervenors must point to the specific ways in which the shield building monitoring aging management plan is wrong or inadequate to raise a genuine dispute with applicant's license renewal application; LBP-12-27, 76 NRC 583 (2012)

it is not necessary or appropriate to throw open the full gamut of provisions in a facility's current licensing basis to reanalysis during the license renewal review, because the current licensing basis is effectively addressed and maintained by ongoing agency oversight, review, and enforcement; LBP-12-24, 76 NRC 503 (2012)

AGREEMENTS

licensees and vendors are expected to adhere to any obligations and commitments addressed in confirmatory action letters that NRC Staff issues to licensees or vendors to emphasize and confirm a licensee's or vendor's agreement to take certain actions in response to specific issues; DD-12-2, 76 NRC 391 (2012)

ALARA

ISFSI licensees must limit releases of radioactive materials to as low as is reasonably achievable, and establish operational limits to prevent doses to the public that exceed the limits of 10 C.F.R. 72.104(a)-(c); LBP-12-24, 76 NRC 503 (2012)

AMENDMENT OF CONTENTIONS

amendment or supplement to a contention is considered timely if filed within 60 days of the date when the material information on which it is based first becomes available to the moving party through service, publication, or any other means; LBP-12-27, 76 NRC 583 (2012)

motions to amend a contention must be based on new information that is materially different from information previously available and must be submitted in a timely fashion; LBP-12-27, 76 NRC 583 (2012)

revised rules no longer require leave from the presiding officer to amend a contention or file a new contentions; LBP-12-27, 76 NRC 583 (2012)

AMENDMENT OF REGULATIONS

any interested person may petition the Commission to issue, amend, or rescind any regulation; CLI-12-19, 76 NRC 377 (2012)

SUBJECT INDEX

NRC revised 10 C.F.R. 50.36 in 1995 and established clearer criteria as to what constitutes a technical specification that must be in the license; LBP-12-25, 76 NRC 540 (2012)
revision of 10 C.F.R. 50.63 to expand the coping capability to include cooling the spent fuel, preventing a loss-of-coolant accident, and preventing containment failure would be a significant benefit; LBP-12-18, 76 NRC 127 (2012)

APPEALS

appeal as of right on the question whether a hearing request should have been wholly denied is allowed; CLI-12-19, 76 NRC 377 (2012)
petitioners' request, though styled a petition for review, asked the Commission to reconsider its own prior ruling, and was therefore properly considered according to the standards governing a motion for reconsideration; CLI-12-17, 76 NRC 207 (2012)
petitions for review must be filed within 15 days; CLI-12-17, 76 NRC 207 (2012)
review of a board's dismissal of some contentions would normally await the end of the case; CLI-12-19, 76 NRC 377 (2012)

APPEALS, INTERLOCUTORY

Commission denies a petition for interlocutory review of a licensing board order granting a motion for cross-examination of witnesses; CLI-12-18, 76 NRC 371 (2012)
Commission may at its discretion grant a party's request for interlocutory review of a board decision; CLI-12-18, 76 NRC 371 (2012)
discretionary interlocutory review is granted only where the party demonstrates that the issue for which it seeks review threatens it with immediate and serious irreparable impact which, as a practical matter, could not be alleviated through an appeal following the presiding officer's final decision or affects the basic structure of the proceeding in a pervasive or unusual manner; CLI-12-18, 76 NRC 371 (2012)

APPELLATE REVIEW

absence of an error of law or abuse of discretion, the Commission generally defers to board contention admissibility rulings; CLI-12-19, 76 NRC 377 (2012)
adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of the final environmental impact statement; LBP-12-17, 76 NRC 71 (2012)
petition for review will be granted at the Commission's discretion, giving due weight to the existence of a substantial question with respect to one or more of the considerations of 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-12-21, 76 NRC 491 (2012)

APPLICANTS

burden of fulfilling the National Historic Preservation Act's consultation requirements rests exclusively with the NRC, not with the applicant; LBP-12-23, 76 NRC 445 (2012)
DOE may incorporate, in its geologic repository application, information in previous reports filed with the Commission, provided that such references are clear and specific; LBP-12-24, 76 NRC 503 (2012)
environmental contentions ultimately challenge NRC's compliance with NEPA, but applicant is free to support positions set forth in the environmental impact statement that are under challenge; LBP-12-17, 76 NRC 71 (2012)
federal trust responsibility to Indian tribes rests solely with the federal government and cannot be discharged by applicants; LBP-12-24, 76 NRC 503 (2012)
license applicant may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, or any part thereof, but applicant retains responsibility for the QA program; LBP-12-23, 76 NRC 445 (2012)

AQUATIC IMPACTS

licensing board finds no material dispute concerning the effect of calcium contained in the thermal effluent stream on the potential proliferation of *Lyngbya wollei*; LBP-12-23, 76 NRC 445 (2012)

ATOMIC ENERGY ACT

any license issued for a utilization or production facility for industrial or commercial purposes must meet the requirements set out in section 103; LBP-12-19, 76 NRC 184 (2012)
applicants are ineligible to obtain a license because they fail to meet the requirements of the AEA and NRC regulations regarding foreign ownership; LBP-12-22, 76 NRC 443 (2012)
board determined that the oral portion of the proceeding should be closed to the public to allow for the free-ranging and thorough examination of witnesses and to ensure the effective safeguard and prevention from disclosure of restricted data; LBP-12-21, 76 NRC 218 (2012)

SUBJECT INDEX

board is directed to consider whether a confirmatory action letter issued to licensee constitutes a de facto license amendment that would be subject to a hearing opportunity under AEA § 189a, and, if so, whether the petition meets the standing and contention admissibility requirements; CLI-12-20, 76 NRC 437 (2012)

Congress thought foreign ownership itself should be sufficient to require denial of a license in some circumstances; LBP-12-19, 76 NRC 184 (2012)

connection of the three prohibitions on foreign ownership with the conjunction “or” rather than “and” shows that a license may not be granted if *any* of the three prohibitions is violated; LBP-12-19, 76 NRC 184 (2012)

enrichment facilities are to be licensed pursuant to AEA §§ 53 and 63; LBP-12-21, 76 NRC 218 (2012)
every license to operate a nuclear power reactor must contain a list of technical specifications necessary for adequate protection of public health and safety; LBP-12-25, 76 NRC 540 (2012)

for an individual or organization to be deemed a “person whose interest may be affected by the proceeding,” so as to have standing as of right such that party status can be granted in an agency adjudicatory proceeding, the intervention petition must comply with 10 C.F.R. 2.309(d)(1)(i)-(iv); LBP-12-15, 76 NRC 14 (2012)

impact of a proposed action on public safety is an issue that must be considered under both the National Environmental Policy Act and the AEA; LBP-12-18, 76 NRC 127 (2012)

intervention petitioners must establish standing by demonstrating the nature of their right under the Atomic Energy Act to be made a party to the proceeding, nature and extent of their interest in the proceeding, and possible effect of any decision in the proceeding on their interest; LBP-12-24, 76 NRC 503 (2012)

it would be impermissible to construe the prohibition of foreign ownership so as to make it redundant or otherwise deprive it of operative effect; LBP-12-19, 76 NRC 184 (2012)

language of the National Environmental Policy Act indicates that Congress did not intend that it be precluded by the AEA; LBP-12-18, 76 NRC 127 (2012)

NRC cannot look to the sufficiency of safety standards enacted under the AEA to avoid its NEPA obligations; LBP-12-18, 76 NRC 127 (2012)

NRC has authority to define the scope of its proceedings, which, in enforcement proceedings, is to permit challenges solely on whether an order should be sustained; LBP-12-14, 76 NRC 1 (2012)

NRC has discretion in specifying the level of foreign ownership that would constitute a violation of the AEA; LBP-12-19, 76 NRC 184 (2012)

NRC is prohibited from issuing a reactor license to any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government; LBP-12-19, 76 NRC 184 (2012)

NRC shall conduct a single adjudicatory hearing on the record with regard to the licensing of the construction and operation of a uranium enrichment facility; LBP-12-21, 76 NRC 218 (2012)

NRC Staff review procedures used to evaluate applications for issuance or transfer of control of a production or utilization facility license in light of the prohibitions in AEA §§ 103d and 104d and in 10 C.F.R. 50.38 against foreign ownership or control are described; LBP-12-19, 76 NRC 184 (2012)

opportunity for a hearing on license amendments is provided; CLI-12-20, 76 NRC 437 (2012)

specific structure for the mandatory hearing requirement is not specified in the Act, and the Commission has granted licensing boards considerable flexibility to select the most appropriate approach in the circumstances of each individual case; LBP-12-21, 76 NRC 218 (2012)

BACKFITTING

compliance with NRC requirements presumptively ensures adequate protection, but new information may reveal that additional requirements are warranted, and in such situations, the Commission may act in accordance with its statutory authority to require licensees and construction permit holders to take action in order to protect health and safety and common defense and security; LBP-12-18, 76 NRC 127 (2012)

NRC may impose new requirements defined as “backfitting” on previously licensed power reactors only if the agency finds that there will be a substantial increase in the overall protection of the public health and safety or the common defense and security and that the direct and indirect costs of implementation for that facility are justified in view of this increased protection; LBP-12-18, 76 NRC 127 (2012)

SUBJECT INDEX

the Commission relied on the exception to the Backfit Rule that applies when regulatory action is necessary to ensure that the facility provides adequate protection to the health and safety of the public; LBP-12-18, 76 NRC 127 (2012)

BENEFIT-COST ANALYSIS

if the adverse environmental impacts of a proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs; LBP-12-18, 76 NRC 127 (2012)

license renewal applicant need not include analyses of the environmental impacts of Category 1 issues in its environmental report because NRC Staff incorporates the GEIS analysis of Category 1 issues as part of the overall cost-benefit balance in the supplemental environmental impact statement for license renewal; CLI-12-19, 76 NRC 377 (2012)

NRC generally reviews severe accident mitigation alternatives using a cost-benefit analysis, and SAMAs that are not cost-beneficial need not be implemented by licensee; LBP-12-18, 76 NRC 127 (2012)

NRC may impose new requirements defined as “backfitting” on previously licensed power reactors only if the agency finds that there will be a substantial increase in the overall protection of the public health and safety or the common defense and security and that the direct and indirect costs of implementation for that facility are justified in view of this increased protection; LBP-12-18, 76 NRC 127 (2012)

NRC’s position is that it need not compare the costs of alternatives to a proposed action if its FEIS does not identify an environmentally preferable alternative; LBP-12-18, 76 NRC 127 (2012)

qualitative benefits and costs in the cost-benefit analysis for the uranium enrichment facility are estimated to be small, moderate, or large, using the same general definitions found in the regulations of Part 51; LBP-12-21, 76 NRC 218 (2012)

there can be no “hard look” at the costs and benefits of a proposed action unless all costs are disclosed; LBP-12-18, 76 NRC 127 (2012)

to the extent that applicant proposes modifications to the facility in response to a request for information, NEPA also requires the consideration of the effectiveness and relative costs of a range of alternatives for satisfying the NRC’s concerns; LBP-12-15, 76 NRC 14 (2012)

BURDEN OF PERSUASION

summary disposition movant bears the initial burden of showing the absence of a genuine issue as to any material fact and that it is entitled to judgment as a matter of law; LBP-12-19, 76 NRC 184 (2012)

BURDEN OF PROOF

applicant in a licensing proceeding bears the burden of proof by a preponderance of the evidence on safety issues that it is entitled to the applied-for license; LBP-12-17, 76 NRC 71 (2012)

if summary disposition movant fails to make the requisite showing to satisfy that initial burden, then the board must deny the motion even if the opposing party chooses not to respond or its response is inadequate; LBP-12-23, 76 NRC 445 (2012)

if summary disposition proponent meets its burden, opponent must counter each adequately supported material fact with its own statement of material facts in dispute and supporting documentation and cannot rely on mere allegations or denials, or the facts in controversy will be deemed admitted; LBP-12-23, 76 NRC 445 (2012)

NRC Staff, not applicant, bears the ultimate burden of establishing compliance with NEPA; LBP-12-17, 76 NRC 71 (2012)

petitioner has the burden of going forward with a sufficient factual basis, but the ultimate burden of proof is not shifted from applicant to petitioner, nor do the rules require petitioner to prove its case at the contention admission stage; LBP-12-18, 76 NRC 127 (2012)

summary disposition movant bears the initial burden of demonstrating that no genuine issue as to any material fact exists and that it is entitled to judgment as a matter of law, even if the motion is unopposed; LBP-12-23, 76 NRC 445 (2012); LBP-12-26, 76 NRC 559 (2012)

BYPRODUCT MATERIALS LICENSES

application may incorporate information contained in previous applications, statements, or reports filed with the Commission, provided that the reference is clear and specific; LBP-12-24, 76 NRC 503 (2012)

CASE MANAGEMENT

Atomic Energy Act does not prescribe a specific structure for the mandatory hearing requirement, and the Commission has granted licensing boards considerable flexibility to select the most appropriate approach in the circumstances of each individual case; LBP-12-21, 76 NRC 218 (2012)

SUBJECT INDEX

if a board grants summary disposition of a foreign ownership contention, it could terminate the proceeding or move ahead with a pending environmental contention; LBP-12-19, 76 NRC 184 (2012)
one fundamental purpose of the prehearing conference and the scheduling order is expediting the disposition of the proceeding; LBP-12-19, 76 NRC 184 (2012)

CERTIFICATION

motions must be rejected if they do not include a certification by the attorney or representative of the moving party that movant has made a sincere effort to contact other parties in the proceeding and resolve the issue(s) raised in the motion, and that movant's efforts to resolve the issue(s) have been unsuccessful; LBP-12-27, 76 NRC 583 (2012)

CHANGE REQUESTS

every change request is reviewed against the criteria in the license application and the criteria in 10 C.F.R. 70.72 to determine whether NRC approval is required prior to implementing the change; LBP-12-21, 76 NRC 218 (2012)

CLEAN WATER ACT

applicant for a federal discharge permit must provide a certification from the state that the proposed activity will not violate state water pollution control standards; LBP-12-16, 76 NRC 44 (2012)
compliance with the CWA does not negate the requirement for NRC to weigh all environmental effects of a proposed action; LBP-12-16, 76 NRC 44 (2012)
Congress has severely limited the scope of NRC's inquiry into Clean Water Act § 316(a) determinations; LBP-12-16, 76 NRC 44 (2012)
license renewal applicants must submit documentation of compliance with sections 316(a) and (b) of the Clean Water Act concerning thermal discharges; LBP-12-16, 76 NRC 44 (2012)

CLOSED HEARINGS

board determined that the oral portion of the proceeding should be closed to the public to allow for the free-ranging and thorough examination of witnesses and to ensure the effective safeguard and prevention from disclosure of restricted data; LBP-12-21, 76 NRC 218 (2012)
boards have closed their hearings even when they were concerned with less sensitive (i.e., nonpublic but unclassified) types of information; LBP-12-21, 76 NRC 218 (2012)

COLLATERAL ESTOPPEL

affirmative misconduct means an affirmative misrepresentation or affirmative concealment of a material fact by the government, although it does not require that the government intended to mislead a party; LBP-12-16, 76 NRC 44 (2012)
claimant must prove a false representation by the government, that the government had the intent to induce the plaintiff to act on the misrepresentation, plaintiff's lack of knowledge or inability to obtain the true facts, and plaintiff's reliance on the misrepresentation to his detriment; LBP-12-16, 76 NRC 44 (2012)
claims must rely on its adversary's conduct in such a manner as to change his position for the worse, and that reliance must have been reasonable in that the party claiming the estoppel did not know nor should it have known that its adversary's conduct was misleading; LBP-12-16, 76 NRC 44 (2012)
doctrine is invoked to avoid injustice in particular cases; LBP-12-16, 76 NRC 44 (2012)
elements of a showing of estoppel against the government are described; LBP-12-16, 76 NRC 44 (2012)
fundamental fairness requires that applicant and NRC Staff be estopped from asserting that petitioners' contention is untimely; LBP-12-16, 76 NRC 44 (2012)
government may not be estopped on the same terms as any other litigant; LBP-12-16, 76 NRC 44 (2012)
there is a clear presumption against invoking the doctrine against government actors in any but the most extreme circumstances; LBP-12-16, 76 NRC 44 (2012)

COMBINED LICENSE APPLICATION

any person except one excluded by section 50.38 may file an application for a combined license for a nuclear power facility; LBP-12-19, 76 NRC 184 (2012)
any person who is a citizen, national, or agent of a foreign country, or any corporation, or other entity that NRC knows or has reason to believe is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, shall be ineligible to apply for and obtain a license; LBP-12-19, 76 NRC 184 (2012)
NRC must also allow the federal Advisory Council on Historic Preservation a reasonable opportunity to comment with regard to a combined license; LBP-12-23, 76 NRC 445 (2012)

SUBJECT INDEX

COMBINED LICENSE PROCEEDINGS

applicant bears the burden of proof by a preponderance of the evidence on safety issues that it is entitled to the applied-for license; LBP-12-17, 76 NRC 71 (2012)

discussion necessary to support a NEPA alternatives contention in a reactor license renewal proceeding is compared with that for a Part 52 COL proceeding; LBP-12-15, 76 NRC 14 (2012)

it is in the public interest for adjudications to proceed, except for contentions associated with waste confidence issues; CLI-12-16, 76 NRC 63 (2012)

proceeding is terminated because applicants have failed to provide information to show that they have changed their ownership situation so as to satisfy foreign ownership, control, and domination requirements; LBP-12-22, 76 NRC 443 (2012)

the Commission may require implementation of mitigation measures it deems necessary and appropriate by imposing conditions in the license; LBP-12-18, 76 NRC 127 (2012)

COMBINED LICENSES

any person who is a citizen, national, or agent of a foreign country, or any corporation, or other entity that NRC knows or has reason to believe is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, shall be ineligible to apply for and obtain a license; LBP-12-19, 76 NRC 184 (2012)

applicants are found ineligible to obtain a combined license because they are owned by a U.S. corporation that is 100% owned by a foreign corporation; LBP-12-19, 76 NRC 184 (2012); LBP-12-22, 76 NRC 443 (2012)

for agency decisions that are based on an environmental impact statement, a monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation; LBP-12-23, 76 NRC 445 (2012)

license cannot be issued until the foreign ownership issue is properly corrected and then applicants may move to reopen the record; LBP-12-19, 76 NRC 184 (2012)

license will not be issued where applicants are 100% owned by a foreign corporation, which is 85% owned by the French government, and the foreign corporation has the power to exercise ownership, control, or domination over applicants, and the Negation Action Plan submitted by applicants does not negate this situation; LBP-12-19, 76 NRC 184 (2012)

request that NRC conduct a separate generic NEPA analysis regarding whether the Fukushima events constitute new and significant information under NEPA that must be analyzed as part of the environmental review for new reactor and license renewal decisions is premature; LBP-12-18, 76 NRC 127 (2012)

waste confidence undergirds certain agency licensing decisions, in particular new reactor licensing and reactor license renewal; CLI-12-16, 76 NRC 63 (2012)

COMMENTS

NRC must allow the federal Advisory Council on Historic Preservation a reasonable opportunity to comment with regard to a combined license; LBP-12-23, 76 NRC 445 (2012)

COMMISSIONERS, AUTHORITY

action of the Commission shall be determined by a majority vote of the members present; CLI-12-17, 76 NRC 207 (2012)

COMMON DEFENSE AND SECURITY

no imminent risk to public health and safety or to the common defense and security post-Fukushima necessitates suspensions; LBP-12-18, 76 NRC 127 (2012)

COMPLIANCE

allowing licensee to propose its own strategies for coming into compliance with an enforcement order rather than mandating a certain set of plant alterations does not change the fundamental character of the order and transform it into an approval; LBP-12-15, 76 NRC 14 (2012)

legislative history and case law require compliance with NEPA unless compliance is impossible, or another statute specifically prohibits compliance with NEPA; LBP-12-18, 76 NRC 127 (2012)

licensee is not required to list an enforcement order and its compliance with the order's terms in the environmental report supporting its operating license renewal application; LBP-12-15, 76 NRC 14 (2012)

SUBJECT INDEX

merely pointing to a government compliance program is insufficient to demonstrate compliance with NEPA's requirement that agencies take a hard look at the environmental consequences of their proposed actions; LBP-12-23, 76 NRC 445 (2012)

plain meaning of the word "approval," as "the act of approving" and "certification as to acceptability," which requires an affirmative action on the part of an approver, clearly establishes that requiring compliance is different from granting an approval; LBP-12-15, 76 NRC 14 (2012)

plants licensed to operate before January 1, 1979, must meet fire safety regulations; DD-12-3, 76 NRC 416 (2012)

to consider any or all of NRC Staff documents as "approvals" by reason of the fact that they request information that will be used to assess compliance with agency requirements would impose an unintended reporting encumbrance; LBP-12-15, 76 NRC 14 (2012)

See also Procedure Compliance

COMPRESSED AIR ENERGY STORAGE

technology and its potential to produce baseload power in combination with other renewable sources are discussed; LBP-12-17, 76 NRC 71 (2012)

COMPUTER CODE

applicant's use of the MAAP code to generate fission product source terms for use in its severe accident mitigation alternatives analysis is reasonable under NEPA; LBP-12-26, 76 NRC 559 (2012)

CONFIRMATORY ACTION LETTER

board is directed to consider whether a CAL issued to licensee constitutes a de facto license amendment that would be subject to a hearing opportunity under AEA § 189a, and, if so, whether the petition meets the standing and contention admissibility requirements; CLI-12-20, 76 NRC 437 (2012)

licensees and vendors are expected to adhere to any obligations and commitments addressed in CALs that NRC Staff issues to licensees or vendors to emphasize and confirm a licensee's or vendor's agreement to take certain actions in response to specific issues; DD-12-2, 76 NRC 391 (2012)

CONSIDERATION OF ALTERNATIVES

agencies are not permitted to define the objectives of a proposed action so narrowly as to preclude a reasonable consideration of alternatives; LBP-12-17, 76 NRC 71 (2012)

agencies must consider the environmental impacts of major federal actions significantly affecting the quality of the human environment, as well as alternatives to the proposed action, in an environmental impact statement; LBP-12-23, 76 NRC 445 (2012)

agencies must devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits; LBP-12-17, 76 NRC 71 (2012)

agencies must rigorously explore and objectively evaluate all reasonable alternatives and briefly discuss reasons for eliminating alternatives; LBP-12-17, 76 NRC 71 (2012)

agencies should take into account the needs and goals of the parties involved in the application; LBP-12-17, 76 NRC 71 (2012)

allowing agencies to avoid a NEPA violation through a subsequent, conclusory statement that it would not have reached a different result even with the proper analysis would significantly undermine the statutory scheme; LBP-12-17, 76 NRC 71 (2012)

alternatives analysis is the heart of the environmental impact statement; LBP-12-17, 76 NRC 71 (2012)

applicant need only consider those alternatives that are reasonable; LBP-12-15, 76 NRC 14 (2012)

blindly adopting applicant's statement of the purpose of the action is a losing position because it does not allow for the full consideration of alternatives required by NEPA; LBP-12-17, 76 NRC 71 (2012)

contention seeking full impacts analysis of the power supply alternative of wind, either alone or in combination with solar and storage, is inadmissible because it fails to adequately demonstrate the capacity to produce baseload power; LBP-12-15, 76 NRC 14 (2012)

deficiencies in NRC Staff's analysis of a combination alternative is not harmless error; LBP-12-17, 76 NRC 71 (2012)

demonstration that an alternative energy technology, although not commercially viable at the time of the application, is under development for large-scale use and is likely to be available during the period of extended operation has not been made; LBP-12-15, 76 NRC 14 (2012)

discussion necessary to support a NEPA alternatives contention in a reactor license renewal proceeding is compared with that for a Part 52 combined license proceeding; LBP-12-15, 76 NRC 14 (2012)

SUBJECT INDEX

doctrine of harmless error has only limited application in NEPA cases, and none where the agency has failed to take the required hard look at environmental consequences and alternatives; LBP-12-17, 76 NRC 71 (2012)

draft environmental impact statements must include a preliminary analysis that considers and weighs alternatives available for reducing or avoiding adverse environmental effects; LBP-12-18, 76 NRC 127 (2012)

environmental impact statements are to include a detailed statement by the responsible official on alternatives to the proposed action; LBP-12-17, 76 NRC 71 (2012)

environmental reports for license renewal must address environmental impacts of the proposed action and compare those impacts to the impacts of alternative actions, but need only consider those alternatives that are reasonable; LBP-12-15, 76 NRC 14 (2012)

existence of a reasonable but unexamined alternative renders an environmental impact statement inadequate; LBP-12-17, 76 NRC 71 (2012)

federal agencies must consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives; LBP-12-17, 76 NRC 71 (2012)

final environmental impact statements need not discuss remote and speculative alternatives, but must consider only alternatives that bring about the ends of the proposed project; LBP-12-17, 76 NRC 71 (2012)

for an electrical generation alternative to qualify for in-depth review, the alternative must be able to provide 1190 MWe of baseload power during the license renewal term; LBP-12-15, 76 NRC 14 (2012)

if an alternative is commercially feasible and capable of bringing about the ends of the proposed project, then NRC Staff may not dismiss it merely because it is inconsistent with the preferences of interested parties, or for other reasons inconsistent with NEPA's rule of reason; LBP-12-17, 76 NRC 71 (2012)

inaccurate, incomplete, or misleading information in an environmental impact statement concerning the comparison of alternatives is itself sufficient to render the EIS unlawful and to compel its revision; LBP-12-17, 76 NRC 71 (2012)

license renewal applicant's environmental report must include a consideration of alternatives to mitigate severe accidents if NRC Staff has not previously considered them for applicant's plant in an environmental impact statement or related supplement or in an environmental assessment; CLI-12-19, 76 NRC 377 (2012)

NEPA does not require agencies to elevate environmental concerns over other appropriate considerations; LBP-12-17, 76 NRC 71 (2012)

NEPA imposes procedural restraints on agencies, which require them to take a hard look at the environmental impacts of a proposed action and the reasonable alternatives to that action; LBP-12-17, 76 NRC 71 (2012)

NEPA requires agencies to exercise a degree of skepticism in dealing with self-serving statements from the prime beneficiary of a project and to look at the general goal of the project, rather than only those alternatives preferred by the applicant; LBP-12-17, 76 NRC 71 (2012)

NEPA requires federal agencies to pause before committing resources to a project and consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives; LBP-12-18, 76 NRC 127 (2012)

NEPA requires that alternatives be considered as they exist and are likely to exist, not merely as they exist at the present time; LBP-12-17, 76 NRC 71 (2012)

NEPA's "hard look" requirement is tempered by a rule of reason; LBP-12-17, 76 NRC 71 (2012)

NRC Staff is required to issue a final environmental impact statement that thoroughly and objectively evaluates reasonable alternatives to the proposed action; LBP-12-17, 76 NRC 71 (2012)

NRC's position is that it need not compare the costs of alternatives to a proposed action if its FEIS does not identify an environmentally preferable alternative; LBP-12-18, 76 NRC 127 (2012)

project goals determine the alternatives that are considered reasonable; LBP-12-17, 76 NRC 71 (2012)

remote and speculative alternatives need not be addressed in a final environmental impact statement, but NEPA requires NRC Staff to consider reasonable alternatives that are likely to be available within the time frame of the proposed action; LBP-12-17, 76 NRC 71 (2012)

rule of reason is inherent in NEPA and its implementing regulations; LBP-12-17, 76 NRC 71 (2012)

Staff's environmental impact statement need only discuss those alternatives that will bring about the ends of the proposed action; LBP-12-15, 76 NRC 14 (2012)

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there is no assurance of a mitigation measure efficacy where the government conducted no study of its likely effects, proposed no monitoring to determine how effective the proposed mitigation would be, and did not consider alternatives in the event the measure fails; LBP-12-23, 76 NRC 445 (2012)

to the extent that applicant proposes modifications to the facility in response to a request for information, NEPA also requires the consideration of the effectiveness and relative costs of a range of alternatives for satisfying NRC's concerns; LBP-12-15, 76 NRC 14 (2012)

without substantive, comparative environmental impact information regarding other possible courses of action, the ability of an environmental impact statement to inform agency deliberation and facilitate public involvement would be greatly degraded; LBP-12-17, 76 NRC 71 (2012)

CONSTRUCTION OF MEANING

boards may appropriately view petitioner's supporting information in a light favorable to petitioner, but failure to provide such information regarding a proffered contention requires that the contention be rejected; LBP-12-27, 76 NRC 583 (2012)

boards may view petitioner's supporting information in a light favorable to the petitioner, but petitioner (not the board) is required to supply all of the required elements for a valid intervention petition; LBP-12-25, 76 NRC 540 (2012)

licensing boards must examine the record in the light most favorable to the opponent of summary disposition and draw all justifiable inferences in favor of that party; LBP-12-23, 76 NRC 445 (2012)

CONSTRUCTION OF TERMS

scope of the term "impact" includes cumulative impacts; LBP-12-24, 76 NRC 503 (2012)

CONSULTATION DUTY

burden of fulfilling the National Historic Preservation Act's consultation requirements rests exclusively with the NRC, not with the applicant; LBP-12-23, 76 NRC 445 (2012)

contention alleging that an Indian tribe had not been consulted concerning cultural resources, in violation of the National Historic Preservation Act, was premature because NRC Staff, not applicant, has the duty to consult with the tribe under the Act, and Staff had not completed its review process; LBP-12-19, 76 NRC 184 (2012)

Indian tribe's contention that NRC Staff had not fulfilled its National Historic Preservation Act consultation duty regarding cultural resources and tribal artifacts was premature because Staff had not completed its NEPA review; LBP-12-23, 76 NRC 445 (2012)

motions must be rejected if they do not include a certification by the attorney or representative of the moving party that movant has made a sincere effort to contact other parties in the proceeding and resolve the issue(s) raised in the motion, and that movant's efforts to resolve the issue(s) have been unsuccessful; LBP-12-27, 76 NRC 583 (2012)

CONTAINMENT SYSTEMS

each nuclear power plant must be able to cool the reactor core and maintain containment integrity in the event of a station blackout of a specified duration; LBP-12-18, 76 NRC 127 (2012)

CONTENTIONS

boards may construe an admitted contention contesting the environmental report as a challenge to a subsequently issued draft or final environmental impact statement without the need for intervenors to file a new or amended contention; LBP-12-23, 76 NRC 445 (2012)

by participating in NRC proceedings, intervenors accept the obligation of uncovering relevant, publicly available information; CLI-12-21, 76 NRC 491 (2012)

environmental contentions ultimately challenge NRC's compliance with NEPA, but applicant is free to support positions set forth in the environmental impact statement that are under challenge; LBP-12-17, 76 NRC 71 (2012)

if applicants believe that their actions render a contention moot, then they should promptly file a motion for summary disposition; LBP-12-19, 76 NRC 184 (2012)

intervenors are not only permitted but are required to file their contentions in response to the license application, rather than await a fully formalized administrative decision; LBP-12-19, 76 NRC 184 (2012)

See also Amendment of Contentions

CONTENTIONS, ADMISSIBILITY

absent error of law or abuse of discretion, the Commission generally defers to board contention admissibility rulings; CLI-12-19, 76 NRC 377 (2012)

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all contentions must proffer an issue of law or fact that is material to the outcome of a licensing proceeding, meaning that the subject matter of the contention must impact the grant or denial of a pending license application; LBP-12-27, 76 NRC 583 (2012)

almost every item originally contained in technical specifications has some conceivable connection to safety, but this general premise is insufficient, by itself, as a ground for intervention; LBP-12-25, 76 NRC 540 (2012)

although a contention might have been more detailed or otherwise better supported, petitioners have done enough to raise a question about the adequacy of the probability figures used in applicant's SAMA analysis, namely, whether they should have incorporated or otherwise acknowledged information from a Sandia study; LBP-12-18, 76 NRC 127 (2012)

any contention that falls outside the specified scope of the proceeding must be rejected; LBP-12-27, 76 NRC 583 (2012)

as tangible Fukushima lessons emerge, Fukushima-related contentions in individual adjudications may become more plausible, except insofar as NRC is taking generic steps to address them; LBP-12-18, 76 NRC 127 (2012)

asking questions and seeking additional information is an essential part of the NRC's licensing process, and such questioning does not automatically give rise to an admissible contention; LBP-12-27, 76 NRC 583 (2012)

attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support admission; LBP-12-15, 76 NRC 14 (2012)

board denies as untimely a motion to reopen and admit a new contention alleging that the licensee lacks certain required environmental permits and approvals from state and federal agencies; LBP-12-16, 76 NRC 44 (2012)

boards are not to decide the merits at the contention admissibility stage; LBP-12-18, 76 NRC 127 (2012)

boards may appropriately view petitioner's supporting information in a light favorable to petitioner, but failure to provide such information requires rejection of the contention; LBP-12-15, 76 NRC 14 (2012); LBP-12-27, 76 NRC 583 (2012)

boards may not make assumptions or draw inferences that favor petitioner or supply information that is lacking if petitioner neglects to provide the requisite support for its contentions; LBP-12-15, 76 NRC 14 (2012)

boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-12-18, 76 NRC 127 (2012)

boards should not accept in individual license proceedings contentions that are, or are about to become, the subject of rulemaking by the Commission; LBP-12-24, 76 NRC 503 (2012)

both the reopening and contention admissibility criteria require that new contentions be timely presented, generally within 30-60 days of the availability of the information on which the contention is based; CLI-12-21, 76 NRC 491 (2012)

broad-based issues akin to safety culture, such as operational history, quality assurance, quality control, management competence, and human factors, are outside the scope of license renewal because they raise issues that are relevant to current plant operation; LBP-12-27, 76 NRC 583 (2012)

burden is on intervenors to demonstrate that a balancing of the factors of 10 C.F.R. 2.309(c)(i)-(viii) weighs in favor of granting a late-filed petition; LBP-12-27, 76 NRC 583 (2012)

Category 1 issues in section 51.53(c)(3)(i) are excluded from site-specific review absent a waiver of the rule; CLI-12-19, 76 NRC 377 (2012)

challenge to the adequacy of the acceptance criteria or any other component of the current licensing basis is not within the scope of the license renewal proceeding; LBP-12-24, 76 NRC 503 (2012)

challenges to provisions of the current license that are not being changed and that are not fairly related to the license amendment request are outside the scope of the proceeding; LBP-12-25, 76 NRC 540 (2012)

contention alleging deficiencies or errors in an application also must indicate some significant link between the claimed deficiency and either the health and safety of the public or the environment; LBP-12-27, 76 NRC 583 (2012)

contention alleging that an Indian tribe had not been consulted concerning cultural resources, in violation of the National Historic Preservation Act, was premature because NRC Staff, not applicant, has the duty to consult with the tribe under the Act, and Staff had not completed its review process; LBP-12-19, 76 NRC 184 (2012)

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contention challenging removal of details from licensee's technical specifications to a licensee-controlled document was rejected; LBP-12-25, 76 NRC 540 (2012)

contention or amendment or supplement to a contention is considered timely if filed 60 days of the date when the material information on which it is based first became available to the moving party through service, publication, or any other means; LBP-12-27, 76 NRC 583 (2012)

contention proposing alternative inputs or methodologies for severe accident mitigation alternatives analysis must present some factual or expert basis for why the proposed changes in the analysis are warranted; LBP-12-26, 76 NRC 559 (2012)

contention seeking full impacts analysis of the power supply alternative of wind, either alone or in combination with solar and storage, is inadmissible because it fails to adequately demonstrate the capacity to produce baseload power; LBP-12-15, 76 NRC 14 (2012)

contention that challenges the legal sufficiency of the final environmental impact statement for a combined license is within the scope of the proceeding; LBP-12-18, 76 NRC 127 (2012)

contention that falls outside the specified scope of the proceeding must be rejected; LBP-12-15, 76 NRC 14 (2012); LBP-12-25, 76 NRC 540 (2012)

contention that the environmental report fails to satisfy 10 C.F.R. 51.53(c)(2) because it does not include information about plans to modify the facility in response to post-Fukushima enforcement order is inadmissible; LBP-12-15, 76 NRC 14 (2012)

contentions challenging existing NRC safety regulations are barred from consideration in adjudicatory proceedings; LBP-12-18, 76 NRC 127 (2012)

contentions may not challenge agency rules or regulations in any adjudicatory proceeding absent a waiver from the Commission; CLI-12-19, 76 NRC 377 (2012)

contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and directive referring the proceeding to the licensing board; LBP-12-15, 76 NRC 14 (2012)

contentions must focus on the license application, including the safety analysis report/technical report and the environmental report, challenging either specific portions or alleged omissions so as to establish a genuine dispute on a material issue of law or fact; LBP-12-15, 76 NRC 14 (2012)

contentions must include references to the specific portions of the application that petitioner disputes and the supporting reasons for each dispute; LBP-12-25, 76 NRC 540 (2012)

contentions must satisfy the six pleading requirements of 10 C.F.R. 2.309(f)(1); LBP-12-18, 76 NRC 127 (2012); LBP-12-23, 76 NRC 445 (2012); LBP-12-24, 76 NRC 503 (2012)

contentions on Category 1 issues amount to a challenge to the regulation barring challenges to generic environmental findings; CLI-12-19, 76 NRC 377 (2012)

contentions submitted after the initial filing period for receipt of petitions to intervene must be based on information not previously available and materially different than information previously available and must be submitted in a timely fashion based on availability of the new information; LBP-12-27, 76 NRC 583 (2012)

contentions that fail to directly controvert the application or that mistakenly assert that the application does not address a relevant issue will be dismissed; LBP-12-27, 76 NRC 583 (2012)

contentions that fall outside the specified scope of the proceeding are inadmissible; LBP-12-18, 76 NRC 127 (2012)

current safety issues are beyond the scope of a license renewal proceeding; LBP-12-27, 76 NRC 583 (2012)

demonstration that an alternative energy technology, although not commercially viable at the time of the application, is under development for large-scale use and is likely to be available during the period of extended operation has not been made; LBP-12-15, 76 NRC 14 (2012)

discussion necessary to support a NEPA alternatives contention in a reactor license renewal proceeding is compared with that for a Part 52 combined license proceeding; LBP-12-15, 76 NRC 14 (2012)

eight-factor balancing test is applied to determine whether nontimely contentions should be admitted; LBP-12-27, 76 NRC 583 (2012)

failure to comply with any of the six pleading requirements of 10 C.F.R. 2.309(f)(1) is grounds for dismissal of a contention; LBP-12-15, 76 NRC 14 (2012); LBP-12-24, 76 NRC 503 (2012); LBP-12-25, 76 NRC 540 (2012); LBP-12-27, 76 NRC 583 (2012)

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failure to directly controvert the application or to mistakenly assert that the application does not address a relevant issue will result in rejection of the contention; LBP-12-15, 76 NRC 14 (2012)

failure to provide sufficient factual or expert support for claims in a contention in contravention of section 2.309(f)(1)(v) also may have failed to show a genuine dispute with the application as required under section 2.309(f)(1)(vi); LBP-12-15, 76 NRC 14 (2012)

for factual disputes, petitioner need not proffer facts in formal affidavit or evidentiary form, sufficient to withstand a summary disposition motion; LBP-12-18, 76 NRC 127 (2012)

Fukushima contention that petitioners did not relate to any unique characteristics of the particular site at issue was akin to the generic type of NEPA review that the Commission declared premature; LBP-12-18, 76 NRC 127 (2012)

general requirements for admissibility for all contentions are set forth in 10 C.F.R. 2.309(f)(1)(i)-(vi); LBP-12-27, 76 NRC 583 (2012)

good cause for the failure to file on time is afforded the most weight in the balancing of the eight late-filing factors of 10 C.F.R. 2.309(c)(i)-(viii); LBP-12-27, 76 NRC 583 (2012)

if a contention satisfies the timeliness requirement of 10 C.F.R. 2.309(f)(2)(iii), then, by definition, it is not subject to 10 C.F.R. 2.309(c) which specifically applies to nontimely filings; LBP-12-18, 76 NRC 127 (2012)

if case-specific challenges to the waste confidence rule are appropriate for consideration, normal procedural rules will apply; CLI-12-16, 76 NRC 63 (2012)

if intervenors raise issues that are not within the scope of an admitted contention and have not sought to amend the contention to include those issues, the board will not consider the issues because they are outside the scope of the admitted contention; LBP-12-23, 76 NRC 445 (2012)

if petitioner could avoid the Commission's limitation on the scope of an enforcement order simply by characterizing its petition as opposing the order unless additional measures are granted, the Commission would never be able to limit its proceedings; LBP-12-14, 76 NRC 1 (2012)

if petitioner neglects to provide the requisite support for its contentions, it is not within the board's power to make assumptions or draw inferences that favor the petitioner, nor may the board supply information that is lacking; LBP-12-18, 76 NRC 127 (2012); LBP-12-27, 76 NRC 583 (2012)

in determining whether an issue is ripe for judicial decision, a court must evaluate fitness of the issues for judicial decision and hardship to the parties of withholding court consideration; LBP-12-19, 76 NRC 184 (2012)

Indian tribe's contention that NRC Staff had not fulfilled its National Historic Preservation Act consultation duty regarding cultural resources and tribal artifacts was premature because Staff had not completed its NEPA review; LBP-12-23, 76 NRC 445 (2012)

information offered in evidence, even if not specifically stated in the original contention and bases, may be relevant if it falls within the envelope, reach, or focus of the contention when read with the original bases offered for it; LBP-12-17, 76 NRC 71 (2012)

initial Notice and Order referring the proceeding to the licensing board defines the scope of litigable issues; LBP-12-27, 76 NRC 583 (2012)

intervenors cannot simply point to documents merely summarizing earlier documents or compiling preexisting, publicly available information into a single source as doing so does not render "new" the summarized or compiled information; LBP-12-27, 76 NRC 583 (2012)

intervenors' challenge to the aging management plan must consist of more than allegations that the AMP is deficient, but rather must point to specific ways the AMP is inadequate or wrong; LBP-12-27, 76 NRC 583 (2012)

intervenors may question whether the draft environmental impact statement includes a sufficient justification for its reliance upon future actions of a state agency; LBP-12-23, 76 NRC 445 (2012)

intervenors must make a showing for admission of a NEPA contention sufficient to require reasonable minds to inquire further; LBP-12-18, 76 NRC 127 (2012)

intervenors must point to the specific ways in which the shield building monitoring aging management plan is wrong or inadequate to raise a genuine dispute with applicant's license renewal application; LBP-12-27, 76 NRC 583 (2012)

intervenors must provide a concise statement of the facts or expert opinions that support their position and upon which they intend to rely at the hearing; LBP-12-18, 76 NRC 127 (2012)

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intervenor need not prove their case at the contention admission stage, but petitioner must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate; LBP-12-27, 76 NRC 583 (2012)

intervenor need not prove their case on the merits, but need only allege some fact or expert opinion that supports their position and demonstrates a genuine dispute with the sufficiency of the FEIS; LBP-12-18, 76 NRC 127 (2012)

license renewal applications must contain any significant new information relevant to environmental impacts of license renewal of which applicant is aware, and new information generally may be challenged in individual adjudications; CLI-12-19, 76 NRC 377 (2012)

licensing board finds no material dispute concerning the effect of calcium contained in the thermal effluent stream on the potential proliferation of *Lyngbya wollei*; LBP-12-23, 76 NRC 445 (2012)

licensing boards may not stretch the scope of admitted contentions beyond their reasonably inferred bounds, but may consider issues that, although not expressly stated, can reasonably be inferred from the arguments presented; LBP-12-17, 76 NRC 71 (2012)

licensing boards must admit an adequately supported contention alleging that the agency's NEPA analysis of severe accident mitigation alternatives is deficient; LBP-12-18, 76 NRC 127 (2012)

licensing boards should not accept in individual license proceedings contentions which are or are about to become the subject of general rulemaking by the Commission; CLI-12-16, 76 NRC 63 (2012)

licensing boards should not consider premature contentions; LBP-12-19, 76 NRC 184 (2012)

materiality requirement for contention admission often dictates that allegations of deficiencies or errors in an application also indicate some significant link between the claimed deficiency and either the public health and safety or the environment; LBP-12-15, 76 NRC 14 (2012)

motions to reopen to admit a new contention must be submitted in a timely fashion, based on new information that is materially different from information previously available or a balancing of the factors in 10 C.F.R. 2.326 must weigh in favor of admitting the contention; LBP-12-16, 76 NRC 44 (2012)

neither speculation nor conclusory assertions, even by an expert, alleging that a matter fails to satisfy the Atomic Energy Act or National Environmental Policy Act will suffice to allow admission of a contention; LBP-12-15, 76 NRC 14 (2012); LBP-12-27, 76 NRC 583 (2012)

NEPA is not intended to encompass every possible impact, and does not encompass potential losses due to individuals' perception of a risk; LBP-12-24, 76 NRC 503 (2012)

"new and significant information" requirement does not override, for purposes of litigating the issues in an adjudicatory proceeding, the exclusion of Category 1 issues in section 51.53(c)(3)(i) from site-specific review; CLI-12-19, 76 NRC 377 (2012)

new contention filed after the record has closed must also satisfy general contention admissibility requirements of 10 C.F.R. 2.309(f)(1)(i)-(vi); LBP-12-16, 76 NRC 44 (2012)

new contentions filed after the initial filing may only be admitted upon a showing that the information upon which they are based was not previously available and is materially different than information previously available and they have been submitted in a timely fashion based on the availability of the subsequent information; LBP-12-18, 76 NRC 127 (2012)

new contentions submitted within 30 days of the occurrence of the triggering the event are timely; LBP-12-18, 76 NRC 127 (2012)

no NRC rule or regulation is subject to attack in any adjudicatory proceeding; LBP-12-24, 76 NRC 503 (2012)

nontimely contentions might be admissible if petitioner can show that the contention is based on new information and was filed promptly after the new information became available; LBP-12-27, 76 NRC 583 (2012)

NRC adjudication is not the appropriate forum for a challenge to a decision by a state regulatory agency; LBP-12-23, 76 NRC 445 (2012)

NRC has authority to define the scope of its proceedings, which, in enforcement proceedings, is to permit challenges solely on whether an order should be sustained; LBP-12-14, 76 NRC 1 (2012)

NRC opinions have long referred back to the bases set forth in support of the contention when an issue arises over the scope of an admitted contention; LBP-12-17, 76 NRC 71 (2012)

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NRC's strict contention rule is designed to avoid resource-intensive hearings where petitioners have not provided sufficient support for their technical claims, and do not demonstrate a potential to meaningfully participate and inform a hearing; LBP-12-27, 76 NRC 583 (2012)

parties may not raise new arguments that are outside the scope of their contentions, but may legitimately amplify arguments presented in support of the contention in order to fairly respond to arguments raised by the opposing party; LBP-12-23, 76 NRC 445 (2012)

petition challenging an immediately effective enforcement order asking that licensee take certain physical security measures in addition to those already required by NRC regulations, to protect the spent fuel it planned to store at its power plant site was rejected; LBP-12-14, 76 NRC 1 (2012)

petition seeking additional enforcement measures beyond those prescribed by the order was properly denied; LBP-12-14, 76 NRC 1 (2012)

petitioner can justify missing a contention filing deadline by showing that the delay was caused by factors such as a weather event or unexpected health issues; LBP-12-27, 76 NRC 583 (2012)

petitioner has the burden of going forward with a sufficient factual basis, but the ultimate burden of proof is not shifted from applicant to petitioner, nor do the rules require petitioner to prove its case at the contention stage; LBP-12-18, 76 NRC 127 (2012)

petitioner is not required to set forth all its evidence or to prove its contentions at the admissibility stage; LBP-12-17, 76 NRC 71 (2012)

petitioner is required to present the factual allegations and/or expert opinion necessary to support its contention; LBP-12-15, 76 NRC 14 (2012); LBP-12-27, 76 NRC 583 (2012)

petitioner must demonstrate that a contention asserts an issue of law or fact that is material to the findings the NRC must make to support the action that is involved in the proceeding; LBP-12-18, 76 NRC 127 (2012)

petitioner must explain, with specificity, particular safety or legal reasons why moving a requirement from the license into a licensee-controlled document would be improper; LBP-12-25, 76 NRC 540 (2012)

petitioner must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate; LBP-12-18, 76 NRC 127 (2012)

petitioner must provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact, including references to specific portions of the application that petitioner disputes; LBP-12-24, 76 NRC 503 (2012)

petitioner must raise issues that are within the scope of the proceeding; LBP-12-25, 76 NRC 540 (2012)

petitioner's assertion that continued operation of an independent spent fuel storage installation causes fear and anxiety among its members is not a valid claim under NEPA; LBP-12-24, 76 NRC 503 (2012)

petitioners must satisfy the six basic requirements of specificity, brief explanation, scope, materiality, concise statement of alleged facts or expert opinion, and genuine dispute; LBP-12-25, 76 NRC 540 (2012)

petitioners' reliance on loss of future opportunities to challenge by adjudicatory intervention licensee-initiated changes in the low-level effluent monitoring details fell short of an admissible contention; LBP-12-25, 76 NRC 540 (2012)

petitioners who have been denied a hearing for raising an issue outside the scope of a proceeding could still raise the issue through a petition for enforcement under 10 C.F.R. 2.206; LBP-12-14, 76 NRC 1 (2012)

properly formulated contentions must focus on the license application in question, challenging either specific portions of, or alleged omissions from, the application (including the safety analysis report/technical report and the ER) so as to establish that a genuine dispute exists with the applicant on a material issue of law or fact; LBP-12-27, 76 NRC 583 (2012)

proposed new or amended contention shall be deemed timely if filed within 30 days of the date when the new and material information on which it is based first becomes available; LBP-12-23, 76 NRC 445 (2012)

purpose of contention pleading requirements is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-12-25, 76 NRC 540 (2012)

reference to Fukushima Task Force Report recommendations alone, without facts or expert opinion that explain their significance for the unique characteristics of the sites or reactors that are the subject of the petitions, does not provide sufficient support for the common contention; LBP-12-18, 76 NRC 127 (2012)

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reopening a proceeding with respect to a specific issue would not have the effect of reopening the proceeding for adjudication on unrelated matters once a record is closed; CLI-12-17, 76 NRC 207 (2012)

request that NRC conduct a separate generic NEPA analysis regarding whether the Fukushima events constitute new and significant information under NEPA that must be analyzed as part of the environmental review for new reactor and license renewal decisions is premature; LBP-12-18, 76 NRC 127 (2012)

review of a board's dismissal of some contentions would normally await the end of the case; CLI-12-19, 76 NRC 377 (2012)

review of a license renewal application does not reopen issues relating to a plant's current licensing basis; LBP-12-24, 76 NRC 503 (2012)

rules on contention admissibility are strict by design; LBP-12-25, 76 NRC 540 (2012)

scope of a proceeding is defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-12-18, 76 NRC 127 (2012)

scope of any hearing should include the proposed license amendments, and any health, safety, or environmental issues fairly raised by them; LBP-12-25, 76 NRC 540 (2012)

significant, high, and adverse disparate impacts are necessary to form a valid environmental justice contention; LBP-12-24, 76 NRC 503 (2012)

simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support the admission of the contention; LBP-12-27, 76 NRC 583 (2012)

speculation cannot be the basis for an admissible contention; LBP-12-27, 76 NRC 583 (2012)

subject matter of contentions must impact the grant or denial of a pending license application; LBP-12-15, 76 NRC 14 (2012); LBP-12-18, 76 NRC 127 (2012)

to the extent NRC takes action with respect to waste confidence on a case-by-case basis, litigants can challenge such site-specific agency actions in the adjudicatory process; CLI-12-16, 76 NRC 63 (2012)

to the extent petitioner seeks to have applicant implement safety measures in addition to those ordered, its recourse is to petition for rulemaking or to petition for license modification, suspension, or revocation; LBP-12-14, 76 NRC 1 (2012)

to the extent that Fukushima events provide the basis for contentions appropriate for litigation in individual proceedings, NRC procedural rules contain ample provisions through which litigants may seek admission of new or amended contentions; LBP-12-18, 76 NRC 127 (2012)

to the extent that intervenors' proposed contention is based on asserted deficiencies in NRC Staff's process for soliciting public participation pursuant to the National Historic Preservation Act, the contention fails to demonstrate a genuine dispute on a material issue of fact or law; LBP-12-23, 76 NRC 445 (2012)

to trigger a full adjudicatory hearing, petitioners must be able to proffer at least some minimal factual and legal foundation in support of their contentions; LBP-12-27, 76 NRC 583 (2012)

unless a contention, submitted with adequate factual, documentary, or expert support, raises a potentially significant deficiency in the severe accident mitigation alternatives analysis, a SAMA-related dispute will not be material to the licensing decision and is not appropriate for litigation in NRC proceedings; LBP-12-26, 76 NRC 559 (2012)

untimeliness constitutes sufficient grounds on its own for denying the motion to reopen and thus the board need not consider other subsections under sections 2.326 and 2.309; LBP-12-16, 76 NRC 44 (2012)

untimely motions to reopen that present an exceptionally grave issue may be admitted at the board's discretion; LBP-12-16, 76 NRC 44 (2012)

where a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by applicant, the contention is moot; LBP-12-27, 76 NRC 583 (2012)

where an issue arises over the scope of an admitted contention, NRC opinions have long referred back to the bases set forth in support of the contention; LBP-12-23, 76 NRC 445 (2012)

CONTENTIONS, LATE-FILED

board denies as untimely a motion to reopen and admit a new contention alleging that the licensee lacks certain required environmental permits and approvals from state and federal agencies; LBP-12-16, 76 NRC 44 (2012)

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both the reopening and contention admissibility criteria require that new contentions be timely presented, generally within 30-60 days of the availability of the information on which the contention is based; CLI-12-21, 76 NRC 491 (2012)

burden is on intervenors to demonstrate that a balancing of the factors of 10 C.F.R. 2.309(c)(i)-(viii) weighs in favor of granting a late-filed petition; LBP-12-27, 76 NRC 583 (2012)

good cause for the failure to file on time is afforded the most weight in the balancing of the eight late-filing factors of 10 C.F.R. 2.309(c)(i)-(viii); LBP-12-27, 76 NRC 583 (2012)

if a contention satisfies the timeliness requirement of 10 C.F.R. 2.309(f)(2)(iii), then, by definition, it is not subject to 10 C.F.R. 2.309(c) which specifically applies to nontimely filings; LBP-12-18, 76 NRC 127 (2012)

if a new contention is deemed untimely under section 2.309(f)(2)(iii), it will be evaluated under section 2.309(c)(1), which provides that a board presented with a nontimely contention shall balance eight factors to determine whether to admit the contention; LBP-12-23, 76 NRC 445 (2012)

intervenors cannot simply point to documents merely summarizing earlier documents or compiling preexisting, publicly available information into a single source as doing so does not render "new" the summarized or compiled information; LBP-12-27, 76 NRC 583 (2012)

motions to reopen to admit a new contention must be submitted in a timely fashion, based on new information that is materially different from information previously available or a balancing of the factors in 10 C.F.R. 2.326 must weigh in favor of admitting the contention; LBP-12-16, 76 NRC 44 (2012)

new contentions filed after the initial filing may only be admitted upon a showing that the information upon which they are based was not previously available and is materially different than information previously available and they have been submitted in a timely fashion based on the availability of the subsequent information; LBP-12-18, 76 NRC 127 (2012); LBP-12-27, 76 NRC 583 (2012)

NRC proceedings would be incapable of attaining finality if contentions that could have been raised at the outset could be added later at will, regardless of the stage of the proceeding; CLI-12-21, 76 NRC 491 (2012)

petitioner can justify missing a contention filing deadline by showing that the delay was caused by factors such as a weather event or unexpected health issues; LBP-12-27, 76 NRC 583 (2012)

petitioners who have not shown good cause for their late filing must demonstrate that the balance of the remaining factors weighs in their favor; CLI-12-21, 76 NRC 491 (2012)

revised rules no longer require leave from the presiding officer to amend a contention or file a new contentions; LBP-12-27, 76 NRC 583 (2012)

unless a deadline has been specified in the scheduling order for the proceeding, the determination of timeliness is subject to a reasonableness standard that depends on the facts and circumstances in the case; LBP-12-27, 76 NRC 583 (2012)

untimeliness constitutes sufficient grounds on its own for denying the motion to reopen and thus the board need not consider other subsections under sections 2.326 and 2.309; LBP-12-16, 76 NRC 44 (2012)

untimely motions to reopen that present an exceptionally grave issue may be admitted at the board's discretion; LBP-12-16, 76 NRC 44 (2012)

when determining whether a new contention is timely for purposes of reopening a record, the Commission looks to whether the information on which it is based was previously available or whether it is materially different from what was previously available, and whether it has been submitted in a timely fashion based on the information's availability; CLI-12-21, 76 NRC 491 (2012)

CONTESTED LICENSE APPLICATIONS

once all contentions have been decided, the contested proceeding is terminated; LBP-12-19, 76 NRC 184 (2012)

CONTRACTORS

license applicant may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, or any part thereof, but applicant retains responsibility for the quality assurance program; LBP-12-23, 76 NRC 445 (2012)

CONTROL ROOM

modernization plans for seismic instrumentation following failure of an annunciation panel in the main control room are discussed; DD-12-2, 76 NRC 391 (2012)

SUBJECT INDEX

CORRECTIVE ACTION PROGRAM

uranium enrichment facility applicant's commitment to monitoring and the corrective action program provides reasonable assurance that public health and safety will be protected and applicant has a program in compliance with the regulations; LBP-12-21, 76 NRC 218 (2012)

COUNCIL ON ENVIRONMENTAL QUALITY

CEQ regulations receive substantial deference from federal courts; LBP-12-17, 76 NRC 71 (2012)

COUNCIL ON ENVIRONMENTAL QUALITY GUIDELINES

CEQ guidance does not bind NRC, but NRC gives it substantial deference; LBP-12-17, 76 NRC 71 (2012)

CEQ Guidance does not change or substitute for any law, regulation, or other legally binding requirement and is not legally enforceable, and some courts have declined to defer to it; LBP-12-23, 76 NRC 445 (2012)

CEQ regulations require that agencies discuss possible mitigation measures in defining the scope of the EIS, in discussing alternatives to the proposed action and consequences of that action, and in explaining its ultimate decision; LBP-12-18, 76 NRC 127 (2012)

in determining whether a federal action would significantly affect the environment, the agency should consider the degree to which the proposed action affects public health and safety; LBP-12-18, 76 NRC 127 (2012)

CROSS-EXAMINATION

although there is no right to reciprocal cross-examination, the parties should be accorded equivalent treatment under the applicable regulatory standard; CLI-12-18, 76 NRC 371 (2012)

boards are expected to explain the necessity of cross-examination in greater detail than a broad-brush reference to a proceedings voluminous or technical nature; CLI-12-18, 76 NRC 371 (2012)

Commission denies a petition for interlocutory review of a licensing board order granting a motion for cross-examination of witnesses; CLI-12-18, 76 NRC 371 (2012)

complexity and number of issues in a proceeding do not per se lead ineluctably to the conclusion that cross-examination is necessary to ensure a fair and adequate hearing; CLI-12-18, 76 NRC 371 (2012)

where parties have provided prefiled direct testimony in Subpart L cases and submitted a list of confidential proposed questions for the board to ask the witnesses, the need for cross-examination by parties should be a rare circumstance, except where questions of witness credibility, motive, or intent are at issue; CLI-12-18, 76 NRC 371 (2012)

CUMULATIVE IMPACTS ANALYSIS

absence of any reference to "cumulative impacts" in a document incorporated by reference negates any intention to incorporate any discussion of cumulative impacts from these prior documents into an environmental report, consistent with the maxim of *expressio unius est exclusio alterius*, i.e., the expression of one thing is to the exclusion of another; LBP-12-24, 76 NRC 503 (2012)

applicant is not required to assess cumulative impacts in its environmental report, but NUREG-1748 requests that applicant discuss any past, present, or reasonably foreseeable future actions that could result in cumulative impacts when combined with the proposed action; LBP-12-24, 76 NRC 503 (2012)

"cumulative impact" is defined as the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions; LBP-12-24, 76 NRC 503 (2012)

CURRENT LICENSING BASIS

challenge to the adequacy of the acceptance criteria or any other component of the current licensing basis is not within the scope of the license renewal proceeding; LBP-12-24, 76 NRC 503 (2012)

independent spent fuel storage installation CLB includes plant-specific design-basis information defined in 10 C.F.R. 50.2 as documented in the most recent final safety analysis report; LBP-12-24, 76 NRC 503 (2012)

it is not necessary or appropriate to throw open the full gamut of provisions in a facility's CLB to reanalysis during the license renewal review, because the CLB is effectively addressed and maintained by ongoing agency oversight, review, and enforcement; LBP-12-24, 76 NRC 503 (2012)

review of a license renewal application does not reopen issues relating to a plant's CLB; LBP-12-24, 76 NRC 503 (2012)

DAMAGES

walkdowns and inspections performed by licensee, industry, and NRC personnel following an earthquake that exceeded the plant's design basis are described; DD-12-2, 76 NRC 391 (2012)

SUBJECT INDEX

DEADLINES

both the reopening and contention admissibility criteria require that new contentions be timely presented, generally within 30-60 days of the availability of the information on which the contention is based; CLI-12-21, 76 NRC 491 (2012)

contention or amendment or supplement to a contention is considered timely if filed within 60 days of the date when the material information on which it is based first becomes available to the moving party through service, publication, or any other means; LBP-12-27, 76 NRC 583 (2012)

motions must be filed no later than 10 days after the occurrence or circumstance from which the motion arises; LBP-12-26, 76 NRC 559 (2012)

new contentions submitted within 30 days of the occurrence of the triggering event are timely; LBP-12-18, 76 NRC 127 (2012)

petitions for review must be filed within 15 days; CLI-12-17, 76 NRC 207 (2012)

reconsideration motions must be filed within 10 days of the action for which reconsideration is requested; CLI-12-17, 76 NRC 207 (2012)

unless a deadline has been specified in the scheduling order for the proceeding, the determination of timeliness is subject to a reasonableness standard that depends on the facts and circumstances in the case; LBP-12-27, 76 NRC 583 (2012)

where NRC Staff provided advice regarding timing that misled a petitioner, the Staff had conceded timeliness in light of such advice; LBP-12-16, 76 NRC 44 (2012)

DECISION ON THE MERITS

boards are not to decide the merits at the contention admissibility stage; LBP-12-18, 76 NRC 127 (2012)

if, after considering all arguments and facts proffered by the parties, no genuine issue of material fact exists, the Board may dispose of all arguments based on the pleadings; LBP-12-19, 76 NRC 184 (2012)

See also Licensing Board Decisions

DEFENSE-IN-DEPTH POLICY

objectives of licensee's fire protection program to extend the concept of defense-in-depth to fire protection are discussed; DD-12-3, 76 NRC 416 (2012)

DEFINITIONS

"baseload power" is defined as power generating energy intended to continuously produce electricity at or near full capacity, with high availability; LBP-12-15, 76 NRC 14 (2012)

"cumulative impact" is defined as the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions; LBP-12-24, 76 NRC 503 (2012)

design basis is information that identifies specific functions to be performed by a structure, system, or component of a facility; LBP-12-24, 76 NRC 503 (2012)

"design basis" is the set of regulations adopted without regard to their cost as fundamentally required for all NRC standards that set requirements for adequate protection of health and safety; LBP-12-18, 76 NRC 127 (2012)

"exceptionally grave" issues warranting reopening of a record are limited to those affecting public safety; CLI-12-21, 76 NRC 491 (2012)

low-level radioactive waste traditionally has been defined by what it is not; LBP-12-21, 76 NRC 218 (2012)

plain meaning of the word "approval," as "the act of approving" and "certification as to acceptability," which requires an affirmative action on the part of an approver, clearly establishes that requiring compliance is different from granting an approval; LBP-12-15, 76 NRC 14 (2012)

ripeness is a justiciability doctrine designed to prevent Article III courts from premature judicial review of abstract controversies and to protect the agencies from judicial interference until an administrative decision has been formalized and its effects felt in a concrete way by the challenging parties; LBP-12-19, 76 NRC 184 (2012)

technical specifications are those technical requirements that are incorporated in an NRC license; LBP-12-25, 76 NRC 540 (2012)

DESIGN

deviations from the original design must be evaluated against the criteria in 10 C.F.R. 70.72 to determine if a license amendment is required or if applicant could make the change without NRC approval; LBP-12-21, 76 NRC 218 (2012)

SUBJECT INDEX

every change request is reviewed against the criteria in the license application and the criteria in 10 C.F.R. 70.72 to determine whether NRC approval is required prior to implementing the change; LBP-12-21, 76 NRC 218 (2012)

level of detail required for a licensing decision does not require a final facility design or an absolutely complete identification of all items relied on for safety and accident sequences, but instead sufficient information must be provided to understand the process and functions of items relied on for safety and to afford reasonable assurance that the integrated safety analysis is complete; LBP-12-21, 76 NRC 218 (2012)

DESIGN BASIS

current licensing basis for an independent spent fuel storage installation includes plant-specific design-basis information defined in 10 C.F.R. 50.2 as documented in the most recent final safety analysis report; LBP-12-24, 76 NRC 503 (2012)

design basis is information that identifies specific functions to be performed by a structure, system, or component of a facility; LBP-12-24, 76 NRC 503 (2012)

design of new uranium enrichment facilities must provide for adequate protection against natural phenomena, fires and explosions, chemical risks produced from licensed material, facility conditions, and hazardous chemicals produced from licensed material; LBP-12-21, 76 NRC 218 (2012)

the set of regulations adopted without regard to their cost as fundamentally required for all NRC standards that set requirements for adequate protection of health and safety forms the design basis; LBP-12-18, 76 NRC 127 (2012)

DIFFERING PROFESSIONAL OPINION

agency was not precluded from conducting licensing reviews or making licensing decisions prior to a resolution of the DPO by the NRC Staff; LBP-12-21, 76 NRC 218 (2012)

DISCLOSURE

if NRC Staff had in hand new information that could render invalid the original site-specific analysis, then such information should be identified and evaluated by Staff for its significance, consistent with NEPA requirements; CLI-12-19, 76 NRC 377 (2012)

there can be no “hard look” at the costs and benefits of a proposed action unless all costs are disclosed; LBP-12-18, 76 NRC 127 (2012)

DISCOVERY

intervenor is not entitled to NRC Staff’s review documents as a discovery tool; CLI-12-17, 76 NRC 207 (2012)

DOCUMENTATION

license renewal applicants must submit documentation of compliance with sections 316(a) and (b) of the Clean Water Act concerning thermal discharges; LBP-12-16, 76 NRC 44 (2012)

simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information’s significance, is inadequate to support the admission of the contention; LBP-12-27, 76 NRC 583 (2012)

DOSE LIMITS

independent spent fuel storage installation licensees must limit releases of radioactive materials to as low as is reasonably achievable, and establish operational limits to prevent doses to the public that exceed the limits of 10 C.F.R. 72.104(a)-(c); LBP-12-24, 76 NRC 503 (2012)

uranium enrichment facility licensee must survey radiation levels in unrestricted and controlled areas and radioactive materials in effluents released to unrestricted and controlled areas to demonstrate compliance with the dose limits in section 20.1301 for individual members of the public; LBP-12-21, 76 NRC 218 (2012)

DOSE, RADIOLOGICAL

uranium enrichment facility licensee must submit biannual reports to the NRC specifying the quantity of each of the principal radionuclides released to unrestricted areas in liquid and gaseous effluents during the previous 6 months of operation, and such other information as the Commission may require to estimate maximum potential annual radiation doses to the public resulting from effluent releases; LBP-12-21, 76 NRC 218 (2012)

DRAFT ENVIRONMENTAL IMPACT STATEMENT

both the content of the DEIS and the additional material submitted by the parties form part of the adjudicatory record; LBP-12-23, 76 NRC 445 (2012)

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- intervenor may question whether the DEIS includes a sufficient justification for its reliance on future actions of a state agency; LBP-12-23, 76 NRC 445 (2012)
- NRC Staff must prepare a final environmental impact statement in accordance with the requirements of 10 C.F.R. 51.71 for a DEIS; LBP-12-18, 76 NRC 127 (2012)
- preliminary analysis that considers and weighs alternatives available for reducing or avoiding adverse environmental effects must be included; LBP-12-18, 76 NRC 127 (2012)
- public comment period is required for draft and supplemental EIS; CLI-12-16, 76 NRC 63 (2012)
- DRY CASK STORAGE**
- licensee determined that dry cask storage cask displacement and damage to the NUHOMS HD 32PTH caused by an earthquake exceeding the design basis were not reportable; DD-12-2, 76 NRC 391 (2012)
- licensee's assessment of the structural integrity and radiation shielding capability of both the TN-32 cask and NUHOMS HD dry cask storage systems following an earthquake exceeding the plant's design basis is described; DD-12-2, 76 NRC 391 (2012)
- DRY STORAGE CASKS**
- loss of spent fuel confinement would produce a dose of 0.15 rem at the nearest site boundary, which is less than the 5-rem limit; LBP-12-24, 76 NRC 503 (2012)
- pressure monitoring system that functions to alert independent spent fuel storage installation operators of potential storage problems, specifically a leak of one of the seals, is intended to meet the requirements for monitoring of dry spent fuel storage; LBP-12-24, 76 NRC 503 (2012)
- EARTHQUAKE MOTION**
- licensee is required to shut down a nuclear power plant when the vibratory ground motion exceeds that of the operating basis earthquake; DD-12-2, 76 NRC 391 (2012)
- request that NRC suspend the operating licenses until completion of a set of activities related to the effects of an earthquake that exceeded the plant's operating basis earthquake is granted in part and denied in part; DD-12-2, 76 NRC 391 (2012)
- EARTHQUAKES**
- licensee determined that dry cask storage cask displacement and damage to the NUHOMS HD 32PTH caused by an earthquake exceeding the design basis were not reportable; DD-12-2, 76 NRC 391 (2012)
- licensee's assessment of the structural integrity and radiation shielding capability of both the TN-32 cask and NUHOMS HD dry cask storage systems following an earthquake exceeding the plant's design basis is described; DD-12-2, 76 NRC 391 (2012)
- ELECTRICAL POWER**
- "baseload power" is defined as power generating energy intended to continuously produce electricity at or near full capacity, with high availability; LBP-12-15, 76 NRC 14 (2012)
- for an electrical generation alternative to qualify for in-depth review, the alternative must be able to provide 1190 MWe of baseload power during the license renewal term; LBP-12-15, 76 NRC 14 (2012)
- EMERGENCY CORE COOLING SYSTEM**
- each nuclear power plant must be able to cool the reactor core and maintain containment integrity in the event of a station blackout of a specified duration; LBP-12-18, 76 NRC 127 (2012)
- EMERGENCY OPERATING PROCEDURES**
- station blackout is a beyond-design-basis event and therefore regulations requiring emergency operating procedures do not apply, and so operators would follow a set of procedures required by 10 C.F.R. 50.63(c)(ii) & (iii); LBP-12-18, 76 NRC 127 (2012)
- ENDANGERED SPECIES**
- it is unlawful for any person to harvest, possess, or sell river herring in the Commonwealth of Massachusetts or in waters under its jurisdiction; LBP-12-16, 76 NRC 44 (2012)
- ENDANGERED SPECIES ACT**
- Biological Opinion and its accompanying Incidental Take Statement issued by U.S. Fish and Wildlife Service were arbitrary and capricious because they were based in part on a conservation plan that was not enforceable under the Act; LBP-12-23, 76 NRC 445 (2012)
- NRC does not have authority to rule on challenges to Fish and Wildlife's compliance with the Endangered Species Act; CLI-12-21, 76 NRC 491 (2012)
- ENERGY REORGANIZATION ACT**
- action of the Commission shall be determined by a majority vote of the members present; CLI-12-17, 76 NRC 207 (2012)

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ENFORCEMENT

Biological Opinion and its accompanying Incidental Take Statement issued by U.S. Fish and Wildlife Service were arbitrary and capricious because they were based in part on a conservation plan that was not enforceable under the Endangered Species Act; LBP-12-23, 76 NRC 445 (2012)

for agency decisions such as a combined license that are based on an environmental impact statement, a monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation; LBP-12-23, 76 NRC 445 (2012)

ENFORCEMENT ORDERS

allowing licensee to propose its own strategies for coming into compliance with an enforcement order rather than mandating a certain set of plant alterations does not change the fundamental character of the order and transform it into an approval; LBP-12-15, 76 NRC 14 (2012)

licensee is not required to list an enforcement order and its compliance with the order's terms in the environmental report supporting its operating license renewal application; LBP-12-15, 76 NRC 14 (2012)

petition challenging an immediately effective enforcement order asking that licensee to take certain physical security measures in addition to those already required by NRC regulations, to protect the spent fuel it planned to store at its power plant site was rejected; LBP-12-14, 76 NRC 1 (2012)

Staff enforcement orders are essentially directives to licensee to achieve compliance with the order's requirements by a certain date; LBP-12-15, 76 NRC 14 (2012)

to the extent petitioner seeks to have applicant implement safety measures in addition to those ordered, its recourse is to petition for rulemaking or to petition for license modification, suspension, or revocation; LBP-12-14, 76 NRC 1 (2012)

ENFORCEMENT PROCEEDINGS

if petitioner could avoid the Commission's limitation on the scope of an enforcement order simply by characterizing its petition as opposing the order unless additional measures are granted, the Commission would never be able to limit its proceedings; LBP-12-14, 76 NRC 1 (2012)

NRC has authority to define the scope of its proceedings, which, in enforcement proceedings, is to permit challenges solely on whether an order should be sustained; LBP-12-14, 76 NRC 1 (2012)

petition seeking additional enforcement measures beyond those prescribed by the order was properly denied; LBP-12-14, 76 NRC 1 (2012)

record before the board falls far short of rebutting the presumption that 10 C.F.R. 2.206 is a meaningful avenue for seeking administrative relief; CLI-12-20, 76 NRC 437 (2012)

ENVIRONMENTAL ANALYSIS

compliance with the Clean Water Act does not negate the requirement for NRC to weigh all environmental effects of a proposed action; LBP-12-16, 76 NRC 44 (2012)

discussion of steps that can be taken to mitigate adverse environmental consequences plays an important role in the environmental analysis under NEPA; LBP-12-18, 76 NRC 127 (2012)

whether the NEPA analysis is generic or site-by-site, it must be thorough and comprehensive; LBP-12-18, 76 NRC 127 (2012)

ENVIRONMENTAL ASSESSMENT

increase in noise levels is a significant impact because the agency's environmental assessment made no firm commitment to any noise mitigation measures; LBP-12-23, 76 NRC 445 (2012)

public comment will be afforded in advance on any generic waste confidence document that NRC issues on remand, be it a fresh rule, a policy statement, an environmental assessment, or an environmental impact statement; CLI-12-16, 76 NRC 63 (2012)

ENVIRONMENTAL EFFECTS

Category 2 issues focus on severe accident mitigation, to further reduce severe accident risk (probability or consequences); CLI-12-19, 76 NRC 377 (2012)

in areas with a designated use as aquatic habitat, cooling water intake structures hinder the attainment of water quality standards; LBP-12-16, 76 NRC 44 (2012)

in light of the dim prospects for moving forward with a geologic repository in the contemporary political environment, NRC must consider the environmental effects of storing waste in spent fuel pools or casks for extended periods; LBP-12-24, 76 NRC 503 (2012)

license applicants were permitted to omit any discussion of any environmental impact of spent fuel storage in independent spent fuel storage installations for the period following the term of the initial

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ISFSI license in any environmental report, environmental impact statement, environmental assessment, or other analysis; LBP-12-24, 76 NRC 503 (2012)

NEPA requires a reasonably close causal relationship between the environmental effect and the alleged cause; LBP-12-21, 76 NRC 218 (2012)

to reopen a record, petitioners must reveal a seriously different picture of the environmental impact of a proposed project; LBP-12-16, 76 NRC 44 (2012)

ENVIRONMENTAL IMPACT STATEMENT

a reasonably complete discussion of possible mitigation measures is required; LBP-12-18, 76 NRC 127 (2012)

agencies must devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits; LBP-12-17, 76 NRC 71 (2012)

agencies must prepare an EIS before approving any major federal action that will significantly affect the quality of the human environment; LBP-12-17, 76 NRC 71 (2012); LBP-12-23, 76 NRC 445 (2012)

agencies must rigorously explore and objectively evaluate all reasonable alternatives and briefly discuss reasons for eliminating alternatives; LBP-12-17, 76 NRC 71 (2012)

agencies violate NEPA when their EIS fails to adequately respond to the critical opinions of their own experts; LBP-12-18, 76 NRC 127 (2012)

agency that has prepared an EIS cannot simply rest on the original document but must be alert to new information that may alter the results of its original environmental analysis, and continue to take a hard look at the environmental effects of its planned action, even after a proposal has received initial approval; LBP-12-18, 76 NRC 127 (2012)

alternatives analysis is the heart of the EIS; LBP-12-17, 76 NRC 71 (2012)

although NEPA does not mention mitigation, by administrative practice and regulation, mitigation plays an important role in the discharge by federal agencies of their procedural duty under NEPA to prepare an EIS; LBP-12-18, 76 NRC 127 (2012)

any adverse environmental effects that cannot be avoided should the proposal be implemented and a reasonably complete discussion of possible mitigation measures must be included; LBP-12-23, 76 NRC 445 (2012)

boards may construe an admitted contention contesting the environmental report as a challenge to a subsequently issued draft or final EIS without the need for intervenors to file a new or amended contention; LBP-12-23, 76 NRC 445 (2012)

CEQ regulations require that agencies discuss possible mitigation measures in defining the scope of the EIS, in discussing alternatives to the proposed action and consequences of that action, and in explaining its ultimate decision; LBP-12-18, 76 NRC 127 (2012)

common practice in an EIS is to use bounding evaluations when more exact calculations cannot be performed or are not necessary; LBP-12-18, 76 NRC 127 (2012)

detailed statement by the responsible official on alternatives to the proposed action is required; LBP-12-17, 76 NRC 71 (2012)

EISs cannot fulfill their role of providing a springboard for public comment if they fail to evaluate significant issues such as measures that the agency's experts recommend to mitigate the consequences of a severe accident; LBP-12-18, 76 NRC 127 (2012)

environmental contentions ultimately challenge NRC's compliance with NEPA, but applicant is free to support positions set forth in the environmental impact statement that are under challenge; LBP-12-17, 76 NRC 71 (2012)

environmental report for limited work authorization application for a site where a construction permit was issued but construction of the plant was never completed may incorporate the earlier EIS; LBP-12-24, 76 NRC 503 (2012)

existence of a reasonable but unexamined alternative renders an EIS inadequate; LBP-12-17, 76 NRC 71 (2012)

federal agencies must consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives; LBP-12-17, 76 NRC 71 (2012)

for agency decisions such as a combined license that are based on an EIS, a monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation; LBP-12-23, 76 NRC 445 (2012)

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goals of NEPA are to ensure that agency decisionmakers will have detailed information concerning significant environmental impacts of proposed projects when they make their decisions and to guarantee that such information will be available to the larger audience that may also play a role in the decisionmaking process; LBP-12-17, 76 NRC 71 (2012)

if NRC Staff had in hand new information that could render invalid the original site-specific analysis, then such information should be identified and evaluated by Staff for its significance, consistent with NEPA requirements; CLI-12-19, 76 NRC 377 (2012)

if the adverse environmental impacts of a proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs; LBP-12-18, 76 NRC 127 (2012)

implicit in NEPA's demand that an agency prepare a detailed environmental impact statement is an understanding that the EIS will discuss the extent to which adverse effects can be avoided; LBP-12-18, 76 NRC 127 (2012)

in determining whether a federal action would significantly affect the environment, the agency should consider the degree to which the proposed action affects public health and safety; LBP-12-18, 76 NRC 127 (2012)

license applicants were permitted to omit any discussion of any environmental impact of spent fuel storage in independent spent fuel storage installations for the period following the term of the initial ISFSI license in any environmental report, environmental impact statement, environmental assessment, or other analysis; LBP-12-24, 76 NRC 503 (2012)

merely pointing to a government compliance program is insufficient to demonstrate compliance with NEPA's requirement that agencies take a hard look at the environmental consequences of their proposed actions; LBP-12-23, 76 NRC 445 (2012)

NEPA does not call for certainty or precision, but an estimate of anticipated (not unduly speculative) impacts; LBP-12-18, 76 NRC 127 (2012)

NEPA does not mandate particular results, but simply prescribes the necessary process; LBP-12-17, 76 NRC 71 (2012)

NEPA does not require a fully developed plan that will mitigate all environmental harm before an agency can act, only that mitigation be discussed in sufficient detail to ensure that environmental consequences have been fully evaluated; LBP-12-18, 76 NRC 127 (2012); LBP-12-23, 76 NRC 445 (2012)

NEPA does not require agencies to elevate environmental concerns over other appropriate considerations; LBP-12-18, 76 NRC 127 (2012)

NEPA regulations require consideration of severe accident mitigation alternatives in its EISs and supplements thereto at the operating license stage; LBP-12-15, 76 NRC 14 (2012)

NEPA requires federal agencies to pause before committing resources to a project and consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives; LBP-12-18, 76 NRC 127 (2012)

NRC policy statement is not a sufficient vehicle to preclude consideration of severe accident mitigation design alternatives, and NRC must take the requisite hard look at them, giving them the careful consideration and disclosure required by the National Environmental Policy Act; CLI-12-19, 76 NRC 377 (2012)

NRC Staff need only discuss those alternatives that will bring about the ends of the proposed action; LBP-12-15, 76 NRC 14 (2012)

NRC's obligation to evaluate new recommendations for enhanced accident mitigation does not depend upon whether intervenors have identified unique characteristics of the site or the proposed new reactor; LBP-12-18, 76 NRC 127 (2012)

NRC's record of decision for the license must state whether the Commission has taken all practicable measures within its jurisdiction to avoid or minimize environmental harm from the alternative selected, and if not, to explain why those measures were not adopted; LBP-12-18, 76 NRC 127 (2012)

public comment periods are beneficial only to the extent the public has meaningful information on which to comment; LBP-12-17, 76 NRC 71 (2012)

requirement to prepare an EIS is a procedural mechanism designed to assure that agencies give proper consideration to the environmental consequences of their actions; LBP-12-18, 76 NRC 127 (2012)

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rule of reason under NEPA means that an agency must only consider reasonably foreseeable impacts in its EIS, and need not address those that are remote and speculative or inconsequential small;

LBP-12-17, 76 NRC 71 (2012)

there can be no “hard look” at the costs and benefits of a proposed action unless all costs are disclosed;

LBP-12-18, 76 NRC 127 (2012)

when agencies propose major federal actions significantly affecting the quality of the human environment, preparation of an EIS is required; LBP-12-18, 76 NRC 127 (2012)

See also Draft Environmental Impact Statement; Final Environmental Impact Statement; Generic Environmental Impact Statement; Supplemental Environmental Impact Statement

ENVIRONMENTAL ISSUES

although safety issues are reviewed under the adequacy and sufficiency standard, licensing boards conducting mandatory hearings must independently consider the final balance among the conflicting costs and benefits when reviewing NEPA issues; LBP-12-21, 76 NRC 218 (2012)

if a board grants summary disposition of a foreign ownership contention, it could terminate the proceeding or move ahead with a pending environmental contention; LBP-12-19, 76 NRC 184 (2012)

issue raised in untimely motion to reopen could be exceptionally grave depending on the circumstances of the case and the facts presented but the motion will be granted rarely and only in truly extraordinary circumstances; CLI-12-21, 76 NRC 491 (2012)

migration tenet helps to expedite hearings by obviating the need to file and litigate the same contention up to three times and applies when the information contained in a subsequently released document is sufficiently similar to the information contained in the original document upon which the original contention was filed; LBP-12-23, 76 NRC 445 (2012)

NRC’s longstanding practice of considering environmental issues through general rulemaking in appropriate circumstances has been endorsed by higher courts; LBP-12-18, 76 NRC 127 (2012)

severe accident mitigation alternatives analysis is a Category 2 issue; CLI-12-19, 76 NRC 377 (2012)

See also National Environmental Policy Act

ENVIRONMENTAL JUSTICE

federal agencies shall identify and consider whether their actions will cause disproportionate environmental impacts on minority, low-income, or other sensitive populations; LBP-12-24, 76 NRC 503 (2012)

significant, high, and adverse disparate impacts are necessary to form a valid environmental justice contention; LBP-12-24, 76 NRC 503 (2012)

ENVIRONMENTAL REPORT

absence of any reference to “cumulative impacts” in a document incorporated by reference negates any intention to incorporate any discussion of cumulative impacts from these prior documents into an ER, consistent with the maxim of *expressio unius est exclusio alterius*, i.e., the expression of one thing is to the exclusion of another; LBP-12-24, 76 NRC 503 (2012)

applicant for license renewal must address environmental impacts of the proposed action and compare those impacts to the impacts of alternative actions, but need only consider those alternatives that are reasonable; LBP-12-15, 76 NRC 14 (2012)

applicant had no legal duty to update its environmental report to encompass matters that occurred after that report was filed with the agency; LBP-12-15, 76 NRC 14 (2012)

applicant is not required to assess cumulative impacts in its ER, but NUREG-1748 requests that applicant discuss any past, present, or reasonably foreseeable future actions that could result in cumulative impacts when combined with the proposed action; LBP-12-24, 76 NRC 503 (2012)

applicant is not required to discuss the federal government’s trust responsibility to Indian tribes in its ER; LBP-12-24, 76 NRC 503 (2012)

applicant is not required to explain every aspect of the process it must pursue in the course of obtaining a federal permit, license, or approval; LBP-12-15, 76 NRC 14 (2012)

applicant must discuss in its ER the impact of the proposed action on the environment; LBP-12-24, 76 NRC 503 (2012)

application for land disposal of radioactive waste may incorporate by reference information contained in the application or in any previous application, statement, or report filed with the Commission provided that such references are clear and specific; LBP-12-24, 76 NRC 503 (2012)

SUBJECT INDEX

boards may construe an admitted contention contesting the ER as a challenge to a subsequently issued draft or final environmental impact statement without the need for intervenors to file a new or amended contention; LBP-12-23, 76 NRC 445 (2012)

contention that the ER fails to satisfy 10 C.F.R. 51.53(c)(2) because it does not include information about plans to modify the facility in response to post-Fukushima enforcement order is inadmissible; LBP-12-15, 76 NRC 14 (2012)

ERs prepared under 10 C.F.R. 51.53(a) may incorporate by reference any information contained in a prior ER or supplement thereto that relates to the production or utilization facility or site, or any information contained in a related final environmental document previously prepared by NRC Staff; LBP-12-24, 76 NRC 503 (2012)

for Category 2 environmental issues, applicants must include a site-specific environmental analysis in their license renewal applications; CLI-12-19, 76 NRC 377 (2012)

for materials license amendment or renewal application or other form of permission for which applicant has previously submitted an ER, the supplement to applicant's ER may be limited to incorporating by reference, updating, or supplementing the information previously submitted to reflect any significant environmental change, including any resulting from operational experience or a change in operations or proposed decommissioning activities; LBP-12-24, 76 NRC 503 (2012)

in light of the vacatur of the Waste Confidence Decision and Temporary Storage Rule, ERs must consider the reasonably foreseeable impacts of permanent storage of spent fuel, and contentions concerning the failure of the ER to do so must be held in abeyance; LBP-12-24, 76 NRC 503 (2012)

license applicants were permitted to omit any discussion of any environmental impact of spent fuel storage in independent spent fuel storage installations for the period following the term of the initial ISFSI license in any ER, environmental impact statement, environmental assessment, or other analysis; LBP-12-24, 76 NRC 503 (2012)

license renewal applicant must include a consideration of alternatives to mitigate severe accidents if NRC Staff has not previously considered them for applicant's plant in an environmental impact statement or related supplement or in an environmental assessment; CLI-12-19, 76 NRC 377 (2012)

license renewal applicant need not include analyses of the environmental impacts of Category 1 issues in its ER because NRC Staff incorporates the GEIS analysis of Category 1 issues as part of the overall cost-benefit balance in the supplemental environmental impact statement for license renewal; CLI-12-19, 76 NRC 377 (2012)

license renewal applicants must include in their ER any new and significant information of which they are aware; CLI-12-19, 76 NRC 377 (2012)

license renewal applications must contain any significant new information relevant to environmental impacts of license renewal of which applicant is aware, and new information generally may be challenged in individual adjudications; CLI-12-19, 76 NRC 377 (2012)

licensee is not required to list an enforcement order and its compliance with the order's terms in the environmental report supporting its operating license renewal application; LBP-12-15, 76 NRC 14 (2012)

limited work authorization application for a site where a construction permit was issued but construction of the plant was never completed may incorporate the earlier environmental impact statement; LBP-12-24, 76 NRC 503 (2012)

NRC Staff relies heavily on applicant's ER in preparing its final environmental impact statement; LBP-12-17, 76 NRC 71 (2012)

NRC Staff was asked to review generically an applicant's duty to supplement or correct its ER; CLI-12-19, 76 NRC 377 (2012)

post-operating license stage supplement to applicant's ER may incorporate by reference any information contained in applicant's construction permit stage ER; LBP-12-24, 76 NRC 503 (2012)

uranium enrichment facility applicant is required to prepare an ER; LBP-12-21, 76 NRC 218 (2012)

ENVIRONMENTAL REVIEW

absent a valid regulation limiting NRC's NEPA obligations, the consideration of alternative severe accident mitigation measures may not be excluded from the agency's NEPA reviews; LBP-12-18, 76 NRC 127 (2012)

SUBJECT INDEX

after a licensing board in an uncontested proceeding determines that Staff's NEPA review is adequate, it must then independently consider the final balance among conflicting factors that is struck in the Staff's recommendation; LBP-12-21, 76 NRC 218 (2012)

agencies are not permitted to define the objectives of a proposed action so narrowly as to preclude a reasonable consideration of alternatives; LBP-12-17, 76 NRC 71 (2012)

agency that has prepared an EIS cannot simply rest on the original document but must be alert to new information that may alter the results of its original environmental analysis, and continue to take a hard look at the environmental effects of its planned action, even after a proposal has received initial approval; LBP-12-18, 76 NRC 127 (2012)

agency's reliance on mitigation in making a finding of no significant impact is justified if the proposed mitigation is imposed by statute or regulation or has been so integrated into the initial proposal that it is impossible to define the proposal without mitigation; LBP-12-23, 76 NRC 445 (2012)

agency's reliance on mitigation in making a finding of no significant impact must be justified; LBP-12-23, 76 NRC 445 (2012)

although NRC has found that severe accident risks are small for all U.S. licensed nuclear power plants, NRC Staff is required under NEPA to consider mitigation alternatives during its license renewal review; LBP-12-26, 76 NRC 559 (2012)

Indian tribe's contention that NRC Staff had not fulfilled its National Historic Preservation Act consultation duty regarding cultural resources and tribal artifacts was premature because Staff had not completed its NEPA review; LBP-12-23, 76 NRC 445 (2012)

NEPA ensures that an agency will not act on incomplete information, only to regret its decision after it is too late to correct; LBP-12-17, 76 NRC 71 (2012)

NEPA imposes procedural restraints on agencies, which require them to take a hard look at the environmental impacts of a proposed action and the reasonable alternatives to that action; LBP-12-17, 76 NRC 71 (2012)

NEPA's "hard look" requirement is tempered by a rule of reason; LBP-12-17, 76 NRC 71 (2012)

NRC is required to analyze potential terrorist attacks as part of its NEPA review with regard to facilities located in the Ninth Circuit; LBP-12-21, 76 NRC 218 (2012)

NRC Staff must prepare supplemental environmental review documents when there are 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; LBP-12-18, 76 NRC 127 (2012)

proposed mitigation measures are sufficient if they are supported by sufficient evidence, such as studies conducted by the agency, or are adequately policed; LBP-12-23, 76 NRC 445 (2012)

to satisfy the hard-look requirement, NRC must provide detailed analysis of new information and a reasonable explanation of the agency's decision concerning supplementation, not merely a conclusory assertion that the agency has reviewed the new information and concluded that no supplement is required; LBP-12-18, 76 NRC 127 (2012)

when conducting a NEPA-required environmental review, an agency may consider the ameliorative effects of mitigation in determining the environmental impacts of an activity; LBP-12-23, 76 NRC 445 (2012)

ERROR

deficiencies in NRC Staff's analysis of a combination alternative is not harmless error; LBP-12-17, 76 NRC 71 (2012)

if leave to file a motion for reconsideration is granted, the motion must demonstrate a compelling circumstance, such as the existence of a clear and material error in a decision, which could not have reasonably been anticipated, which renders the decision invalid; CLI-12-17, 76 NRC 207 (2012)

licensing board was not justified in rendering a final judgment in the face of unfolding developments having a decided bearing and conceivably crucial effect on the issue that shaped that judgment; LBP-12-19, 76 NRC 184 (2012)

See also Harmless Error

EVIDENCE

courts may exclude relevant evidence if its probative value is substantially outweighed by a danger of unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence; LBP-12-21, 76 NRC 218 (2012)

SUBJECT INDEX

Federal Rules of Evidence are not directly applicable to NRC proceedings, but NRC adjudicatory boards often look to those rules for guidance; LBP-12-21, 76 NRC 218 (2012)

if licensing boards deem prefiled evidence to be of little or no value, they simply need not ask about it at the evidentiary hearing, and are free to accord such evidence little or no weight; LBP-12-21, 76 NRC 218 (2012)

information offered in evidence, even if not specifically stated in the original contention and bases, may be relevant if it falls within the envelope, reach, or focus of the contention when read with the original bases offered for it; LBP-12-17, 76 NRC 71 (2012)

licensing boards may not stretch the scope of admitted contentions beyond their reasonably inferred bounds, but may consider issues that, although not expressly stated, can reasonably be inferred from the arguments presented; LBP-12-17, 76 NRC 71 (2012)

only relevant, material, and reliable evidence that is not unduly repetitious will be admitted; LBP-12-21, 76 NRC 218 (2012)

petitioner is not required to set forth all its evidence or to prove its contentions at the admissibility stage; LBP-12-17, 76 NRC 71 (2012)

strict rules of evidence do not apply to written submissions; LBP-12-21, 76 NRC 218 (2012)

to avoid summary disposition, intervenors must present contrary evidence so significantly probative that it creates a material factual issue; LBP-12-19, 76 NRC 184 (2012)

written prefiled testimony and exhibits are typically submitted well in advance of the evidentiary hearing, and in most common types of hearings, licensing boards themselves, not the parties, orally examine the witnesses; LBP-12-21, 76 NRC 218 (2012)

See also Federal Rules of Evidence

EVIDENTIARY HEARINGS

if a board grants summary disposition of a foreign ownership contention, it could terminate the proceeding or move ahead with a pending environmental contention; LBP-12-19, 76 NRC 184 (2012)

if licensing boards deem prefiled evidence to be of little or no value, they simply need not ask about it at the evidentiary hearing, and are free to accord such evidence little or no weight; LBP-12-21, 76 NRC 218 (2012)

licensing boards are not the appropriate vehicles for reviewing 2.206 petitions; CLI-12-20, 76 NRC 437 (2012)

NRC Staff will disposition violations as part of its ongoing reactor oversight process, and evidentiary hearings before NRC at the request of third parties are not a part of this process; DD-12-3, 76 NRC 416 (2012)

process similar to jury trial in NRC proceedings would require creating one licensing board to review the evidence for purposes of admissibility and a second board to weigh the admitted evidence for the purpose of ruling on the merits, which is unnecessary in administrative proceedings; LBP-12-21, 76 NRC 218 (2012)

to trigger a full adjudicatory hearing, petitioners must be able to proffer at least some minimal factual and legal foundation in support of their contentions; LBP-12-27, 76 NRC 583 (2012)

written prefiled testimony and exhibits are typically submitted well in advance of the evidentiary hearing, and in most common types of hearings, licensing boards themselves, not the parties, orally examine the witnesses; LBP-12-21, 76 NRC 218 (2012)

EXCEPTIONS

the Commission relied on the exception to the Backfit Rule that applies when regulatory action is necessary to ensure that the facility provides adequate protection to the health and safety of the public; LBP-12-18, 76 NRC 127 (2012)

EXEMPTIONS

NRC may, upon application by any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest; LBP-12-21, 76 NRC 218 (2012)

NRC Staff granted an exemption from 10 C.F.R. 74.33(c)(5) subject to license conditions that require applicant to submit, for the Staff's prior review and approval, detailed analyses of such potentially credible diversion scenarios and the processes and management measures best suited to address them; LBP-12-21, 76 NRC 218 (2012)

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FAIRNESS

although there is no right to reciprocal cross-examination, the parties should be accorded equivalent treatment under the applicable regulatory standard; CLI-12-18, 76 NRC 371 (2012)
forcing a pro se intervenor to file monthly disclosures and closely follow a proceeding indefinitely solely to obtain a ruling on the merits of its claim would constitute significant unfairness and hardship; LBP-12-19, 76 NRC 184 (2012)
fundamental fairness requires that applicant and NRC Staff be estopped from asserting that petitioners' contention is untimely; LBP-12-16, 76 NRC 44 (2012)
where NRC Staff provided advice regarding timing that misled a petitioner, the Staff had conceded timeliness in light of such advice; LBP-12-16, 76 NRC 44 (2012)

FALSE STATEMENTS

effect of a pattern of quality assurance violations is not necessarily to show that particular safety-related information is false, but to erode confidence that NRC can reasonably have in, and create substantial uncertainty about the quality of, the work that is tainted by the alleged QA violations; LBP-12-23, 76 NRC 445 (2012)

FEDERAL RULES OF CIVIL PROCEDURE

NRC applies summary disposition standards analogous to the standards used by the federal courts when ruling on motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)

FEDERAL RULES OF EVIDENCE

at the request of any party a court must order witnesses excluded so that they cannot hear other witnesses' testimony; LBP-12-21, 76 NRC 218 (2012)
courts may exclude relevant evidence if its probative value is substantially outweighed by a danger of unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence; LBP-12-21, 76 NRC 218 (2012)
federal rules are not directly applicable to NRC proceedings, but NRC adjudicatory boards often look to those rules for guidance; LBP-12-21, 76 NRC 218 (2012)

FINAL ENVIRONMENTAL IMPACT STATEMENT

adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of the FEIS; LBP-12-17, 76 NRC 71 (2012)
contention that challenges the legal sufficiency of the FEIS for a combined license is within the scope of the proceeding; LBP-12-18, 76 NRC 127 (2012)
if an alternative is commercially feasible and capable of bringing about the ends of the proposed project, then Staff may not dismiss it merely because it is inconsistent with the preferences of interested parties, or for other reasons inconsistent with NEPA's rule of reason; LBP-12-17, 76 NRC 71 (2012)
inaccurate, incomplete, or misleading information in an environmental impact statement concerning the comparison of alternatives is itself sufficient to render the EIS unlawful and to compel its revision; LBP-12-17, 76 NRC 71 (2012)
intervenors need not prove their case on the merits, but need only allege some facts or expert opinion that support their position and demonstrate a genuine dispute with the sufficiency of the FEIS; LBP-12-18, 76 NRC 127 (2012)
NRC Staff is required to issue an FEIS that thoroughly and objectively evaluates reasonable alternatives to the proposed action; LBP-12-17, 76 NRC 71 (2012)
NRC Staff must prepare an FEIS in accordance with the requirements of 10 C.F.R. 51.71 for a draft EIS; LBP-12-18, 76 NRC 127 (2012)
NRC Staff need not discuss remote and speculative alternatives, but must consider only alternatives that bring about the ends of the proposed project; LBP-12-17, 76 NRC 71 (2012)
NRC Staff relies heavily on applicant's environmental report in preparing its FEIS; LBP-12-17, 76 NRC 71 (2012)
NRC Staff's FEIS, in conjunction with the adjudicatory record, becomes the relevant record of decision for the environmental portion of the proceeding; LBP-12-17, 76 NRC 71 (2012)
NRC's position is that it need not compare the costs of alternatives to a proposed action if its FEIS does not identify an environmentally preferable alternative; LBP-12-18, 76 NRC 127 (2012)

SUBJECT INDEX

remote and speculative alternatives need not be addressed, but NEPA requires NRC Staff to consider reasonable alternatives that are likely to be available within the time frame of the proposed action; LBP-12-17, 76 NRC 71 (2012)

role of the FEIS is to expose the reasoning and data of the agency proposing the action to scrutiny by the public and by other branches of the government; LBP-12-18, 76 NRC 127 (2012)

FINAL SAFETY ANALYSIS REPORT

circumstances under which licensee may make changes to its facility and procedures as described in its updated FSAR and conduct tests or experiments not otherwise described in the UFSAR without obtaining a license amendment are discussed; CLI-12-20, 76 NRC 437 (2012)

current licensing basis for an independent spent fuel storage installation includes plant-specific design-basis information defined in 10 C.F.R. 50.2 as documented in the most recent final safety analysis report; LBP-12-24, 76 NRC 503 (2012)

FINDING OF NO SIGNIFICANT IMPACT

agency's reliance on mitigation in making a finding of no significant impact is justified if the proposed mitigation is imposed by statute or regulation or has been so integrated into the initial proposal that it is impossible to define the proposal without mitigation; LBP-12-23, 76 NRC 445 (2012)

agency's reliance on mitigation in making a finding of no significant impact must be justified; LBP-12-23, 76 NRC 445 (2012)

Biological Opinion and its accompanying Incidental Take Statement issued by U.S. Fish and Wildlife Service were arbitrary and capricious because they were based in part on a conservation plan that was not enforceable under the Endangered Species Act; LBP-12-23, 76 NRC 445 (2012)

increase in noise levels is a significant impact because the agency's environmental assessment made no firm commitment to any noise mitigation measures; LBP-12-23, 76 NRC 445 (2012)

mitigation measures that are a mandatory condition qualify as the type that can be relied upon for a FONSI; LBP-12-23, 76 NRC 445 (2012)

proposed mitigation measures are sufficient if they are supported by sufficient evidence, such as studies conducted by the agency, or are adequately policed; LBP-12-23, 76 NRC 445 (2012)

there is no assurance of a mitigation measure efficacy where the government conducted no study of its likely effects, proposed no monitoring to determine how effective the proposed mitigation would be, and did not consider alternatives in the event the measure fails; LBP-12-23, 76 NRC 445 (2012)

when conducting a NEPA-required environmental review, an agency may consider the ameliorative effects of mitigation in determining the environmental impacts of an activity; LBP-12-23, 76 NRC 445 (2012)

FIRE PROTECTION

objectives of licensee's program to extend the concept of defense-in-depth to fire protection are discussed; DD-12-3, 76 NRC 416 (2012)

request that NRC take enforcement action to correct alleged noncompliance with fire protection regulations is granted; DD-12-3, 76 NRC 416 (2012)

use of operator manual actions in lieu of the protection methods specified in 10 C.F.R. Part 50, Appendix R, § III.G.2 is not consistent with the regulations, and plants need regulatory approval for each specific OMA proposed; DD-12-3, 76 NRC 416 (2012)

FIRE PROTECTION SYSTEMS

detection systems shall be automatic and capable of operating with or without offsite power; DD-12-3, 76 NRC 416 (2012)

licensee cited for violations for use of unapproved operator manual actions to mitigate safe shutdown equipment malfunctions caused by a fire-induced single spurious actuation in lieu of protecting the equipment; DD-12-3, 76 NRC 416 (2012)

means to ensure that a redundant train of safe-shutdown cables and equipment is free of fire damage in instances in which redundant trains are located in the same fire area outside of primary containment are described; DD-12-3, 76 NRC 416 (2012)

FIRE SAFETY

plants licensed to operate before January 1, 1979, must meet fire safety regulations; DD-12-3, 76 NRC 416 (2012)

underlying purpose of 10 C.F.R. Part 50, Appendix R, § III.G is to ensure that the ability to achieve and maintain safe shutdown is preserved following a fire event; DD-12-3, 76 NRC 416 (2012)

SUBJECT INDEX

FIRES

contention concerning need under NEPA to include a discussion of the environmental impacts of spent fuel pool leakage, SFP fires, and the lack of a spent fuel repository is held in abeyance; LBP-12-26, 76 NRC 559 (2012)

licensee cited for violations for use of unapproved operator manual actions to mitigate safe shutdown equipment malfunctions caused by a fire-induced single spurious actuation in lieu of protecting the equipment; DD-12-3, 76 NRC 416 (2012)

underlying purpose of 10 C.F.R. Part 50, Appendix R, § III.G is to ensure that the ability to achieve and maintain safe shutdown is preserved following a fire event; DD-12-3, 76 NRC 416 (2012)

FOREIGN OWNERSHIP

any person who is a citizen, national, or agent of a foreign country, or any corporation, or other entity that NRC knows or has reason to believe is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, shall be ineligible to apply for and obtain a license; LBP-12-19, 76 NRC 184 (2012)

applicants are found ineligible to obtain a combined license because they are owned by a U.S. corporation that is 100% owned by a foreign corporation; LBP-12-19, 76 NRC 184 (2012)

applicants are ineligible to obtain a license because they fail to meet the requirements of the AEA and NRC regulations regarding foreign ownership; LBP-12-22, 76 NRC 443 (2012)

combined license cannot be issued until the foreign ownership issue is properly corrected and then applicants may move to reopen the record; LBP-12-19, 76 NRC 184 (2012)

combined license will not be issued where applicants are 100% owned by a foreign corporation, which is 85% owned by the French government, and the foreign corporation has the power to exercise ownership, control, or domination over applicants, and the Negation Action Plan submitted by applicants does not negate this situation; LBP-12-19, 76 NRC 184 (2012)

Congress thought foreign ownership itself should be sufficient to require denial of a license in some circumstances; LBP-12-19, 76 NRC 184 (2012)

connection of the three prohibitions on foreign ownership with the conjunction “or” rather than “and” shows that a license may not be granted if *any* of the three prohibitions is violated; LBP-12-19, 76 NRC 184 (2012)

it would be impermissible to construe the prohibition of foreign ownership so as to make it redundant or otherwise deprive it of operative effect; LBP-12-19, 76 NRC 184 (2012)

NRC has discretion in specifying the level of foreign ownership that would constitute a violation of the Atomic Energy Act; LBP-12-19, 76 NRC 184 (2012)

NRC has substantial discretion in determining the threshold percentage at which foreign ownership becomes too great, but that threshold must at a minimum include 100% foreign ownership or the prohibition in the Act would be rendered superfluous; LBP-12-19, 76 NRC 184 (2012)

NRC is prohibited from issuing a reactor license to any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government; LBP-12-19, 76 NRC 184 (2012)

NRC Staff review procedures used to evaluate applications for issuance or transfer of control of a production or utilization facility license in light of the prohibitions in Atomic Energy Act §103d and 104d and in 10 C.F.R. 50.38 against foreign ownership or control are described; LBP-12-19, 76 NRC 184 (2012)

proceeding is terminated because applicants have failed to provide information to show that they have changed their ownership situation so as to satisfy foreign ownership, control, and domination requirements; LBP-12-22, 76 NRC 443 (2012)

FUEL CLADDING

licensee must protect spent fuel cladding from degradation during storage or confine the fuel in such a way that degradation does not cause operational problems when removed from storage; LBP-12-24, 76 NRC 503 (2012)

FUKUSHIMA ACCIDENT

as tangible Fukushima lessons emerge, Fukushima-related contentions in individual adjudications may become more plausible, except insofar as NRC is taking generic steps to address them; LBP-12-18, 76 NRC 127 (2012)

SUBJECT INDEX

contention that petitioners did not relate to any unique characteristics of the particular site at issue was akin to the generic type of NEPA review that the Commission declared premature; LBP-12-18, 76 NRC 127 (2012)

contention that the environmental report fails to satisfy 10 C.F.R. 51.53(c)(2) because it does not include information about plans to modify the facility in response to post-Fukushima enforcement order is inadmissible; LBP-12-15, 76 NRC 14 (2012)

continued operation and licensing activities post-Fukushima do not pose an imminent risk to public health and safety; LBP-12-18, 76 NRC 127 (2012)

environmental impacts of the accident are not so significant as to satisfy the Commission's criterion for supplementing an environmental impact statement; LBP-12-18, 76 NRC 127 (2012)

no imminent risk to public health and safety or to the common defense and security post-Fukushima necessitates suspensions; LBP-12-18, 76 NRC 127 (2012)

none of the post-Fukushima orders or information requests can be characterized as approvals that must be obtained in connection with renewal of an operating license; LBP-12-15, 76 NRC 14 (2012)

reference to generic agency recommendations alone, without facts or expert opinion that explain their significance for the unique characteristics of the sites or reactors that are the subject of the petitions, does not provide sufficient support for the common contention; LBP-12-18, 76 NRC 127 (2012)

request that NRC conduct a separate generic NEPA analysis regarding whether the Fukushima events constitute new and significant information under NEPA that must be analyzed as part of the environmental review for new reactor and license renewal decisions is premature; LBP-12-18, 76 NRC 127 (2012)

request to suspend licensing and rulemaking activities pending completion of the NRC Task Force's evaluation of the implications of the Fukushima accident and issuance of any proposed regulatory decisions and/or environmental analyses is denied; LBP-12-18, 76 NRC 127 (2012)

to the extent that Fukushima events provide the basis for contentions appropriate for litigation in individual proceedings, NRC procedural rules contain ample provisions through which litigants may seek admission of new or amended contentions; LBP-12-18, 76 NRC 127 (2012)

GENERIC ENVIRONMENTAL IMPACT STATEMENT

because the GEIS provides a severe accident impacts analysis that envelopes potential impacts at all existing plants, the environmental impacts of severe accidents during the license renewal term already have been addressed generically in bounding fashion; LBP-12-18, 76 NRC 127 (2012)

contentions on Category 1 issues amount to a challenge to the regulation barring challenges to generic environmental findings; CLI-12-19, 76 NRC 377 (2012)

license renewal applicant need not include analyses of the environmental impacts of Category 1 issues in its environmental report because NRC Staff incorporates the GEIS analysis of Category 1 issues as part of the overall cost-benefit balance in the supplemental environmental impact statement for license renewal; CLI-12-19, 76 NRC 377 (2012)

public comment will be afforded in advance on any generic waste confidence document that NRC issues on remand, be it a fresh rule, a policy statement, an environmental assessment, or an environmental impact statement; CLI-12-16, 76 NRC 63 (2012)

request that NRC conduct a separate generic NEPA analysis regarding whether the Fukushima events constitute new and significant information under NEPA that must be analyzed as part of the environmental review for new reactor and license renewal decisions is premature; LBP-12-18, 76 NRC 127 (2012)

GENERIC ISSUES

as tangible Fukushima lessons emerge, Fukushima-related contentions in individual adjudications may become more plausible, except insofar as the NRC is taking generic steps to address them; LBP-12-18, 76 NRC 127 (2012)

comprehensive generic analysis may be used to evaluate onsite risks that are essentially common to all plants, as long as NRC provides the opportunity for concerned parties to raise site-specific differences at the time of a specific site's licensing; LBP-12-18, 76 NRC 127 (2012)

Fukushima contention that petitioners did not relate to any unique characteristics of the particular site at issue was akin to the generic type of NEPA review that the Commission declared premature; LBP-12-18, 76 NRC 127 (2012)

SUBJECT INDEX

“new and significant information” requirement does not override, for purposes of litigating the issues in an adjudicatory proceeding, the exclusion of Category 1 issues in section 51.53(c)(3)(i) from site-specific review; CLI-12-19, 76 NRC 377 (2012)

GEOLOGIC REPOSITORIES

contention concerning need under NEPA to include a discussion of the environmental impacts of spent fuel pool leakage, SFP fires, and the lack of a spent fuel repository is held in abeyance; LBP-12-26, 76 NRC 559 (2012)

DOE may incorporate in its application for geologic repository information from previous reports filed with the Commission, provided that such references are clear and specific; LBP-12-24, 76 NRC 503 (2012)

in light of the dim prospects for moving forward with a geologic repository in the contemporary political environment, NRC must consider the environmental effects of storing waste in spent fuel pools or casks for extended periods; LBP-12-24, 76 NRC 503 (2012)

HARMLESS ERROR

doctrine has only limited application in NEPA cases, and none where the agency has failed to take the required hard look at environmental consequences and alternatives; LBP-12-17, 76 NRC 71 (2012)

HAZARDOUS MATERIALS

uranium enrichment facility applications must identify radiological and chemical hazards, facility hazards that could affect safety of licensed materials, potential accident sequences and their consequences and likelihood of occurrence, and each item relied on for safety; LBP-12-21, 76 NRC 218 (2012)

HEALTH AND SAFETY

in determining whether a federal action would significantly affect the environment, the agency should consider the degree to which the proposed action affects public health and safety; LBP-12-18, 76 NRC 127 (2012)

no imminent risk to public health and safety or to the common defense and security post-Fukushima necessitates suspensions; LBP-12-18, 76 NRC 127 (2012)

the Commission relied on the exception to the Backfit Rule that applies when regulatory action is necessary to ensure that the facility provides adequate protection to the health and safety of the public; LBP-12-18, 76 NRC 127 (2012)

HEARING PROCEDURES

Atomic Energy Act does not prescribe a specific structure for the mandatory hearing requirement, and the Commission has granted licensing boards considerable flexibility to select the most appropriate approach in the circumstances of each individual case; LBP-12-21, 76 NRC 218 (2012)

HEARING REQUESTS

boards must find that petitioner has standing and has proposed at least one admissible contention; CLI-12-19, 76 NRC 377 (2012)

HEARING REQUESTS, LATE-FILED

having no one to represent petitioners’ perspective if the hearing requests are denied is insufficient to excuse untimeliness; LBP-12-16, 76 NRC 44 (2012)

hearing requests were dismissed as untimely and referred to the Executive Director for Operations for consideration under section 2.206; CLI-12-20, 76 NRC 437 (2012)

HEARING RIGHTS

board is directed to consider whether a confirmatory action letter issued to licensee constitutes a de facto license amendment that would be subject to a hearing opportunity under AEA § 189a, and, if so, whether the petition meets the standing and contention admissibility requirements; CLI-12-20, 76 NRC 437 (2012)

opportunity for a hearing on license amendments is provided; CLI-12-20, 76 NRC 437 (2012)

petitioners’ reliance on loss of future opportunities to challenge by adjudicatory intervention licensee-initiated changes in the low-level effluent monitoring details fell short of an admissible contention; LBP-12-25, 76 NRC 540 (2012)

referrals may be made when a petition does not satisfy the legal requirements for a hearing or intervention and it is determined that referral to the section 2.206 process is appropriate; CLI-12-20, 76 NRC 437 (2012)

standing criteria for federally recognized Indian tribes are less stringent, but only where the facility at issue is within the tribe’s boundaries; LBP-12-24, 76 NRC 503 (2012)

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IMPARTIALITY

NRC Staff is but one of the parties to a licensing proceeding, and the positions that it may take are in no way binding upon the licensing board; LBP-12-23, 76 NRC 445 (2012)

INCORPORATION BY REFERENCE

absence of any reference to “cumulative impacts” in a document incorporated by reference negates any intention to incorporate any discussion of cumulative impacts from these prior documents into an environmental report, consistent with the maxim of *expressio unius est exclusio alterius*, i.e., the expression of one thing is to the exclusion of another; LBP-12-24, 76 NRC 503 (2012)

applicant may incorporate material by reference that the applicant itself has previously submitted, not material prepared by NRC Staff; LBP-12-24, 76 NRC 503 (2012)

DOE may incorporate, in its geologic repository application, information from previous reports filed with the Commission, provided that such references are clear and specific; LBP-12-24, 76 NRC 503 (2012)

environmental report for a limited work authorization application for a site where a construction permit was issued but construction of the plant was never completed may incorporate the earlier environmental impact statement; LBP-12-24, 76 NRC 503 (2012)

environmental report for application for land disposal of radioactive waste may incorporate by reference information contained in the application or in any previous application, statement, or report filed with the Commission provided that such references are clear and specific; LBP-12-24, 76 NRC 503 (2012)

environmental reports prepared under 10 C.F.R. 51.53(a) may incorporate by reference any information contained in a prior environmental report or supplement thereto that relates to the production or utilization facility or site, or any information contained in a related final environmental document previously prepared by NRC Staff; LBP-12-24, 76 NRC 503 (2012)

for a contract to incorporate the terms of extrinsic material by reference, it must explicitly, or at least precisely, identify the written material being incorporated and must clearly communicate that the purpose of the reference is to incorporate the referenced material into the contract; LBP-12-24, 76 NRC 503 (2012)

for materials licenses amendment or renewal applications or other forms of permission for which applicant has previously submitted an environmental report, the supplement to applicant’s ER may be limited to incorporating by reference, updating, or supplementing the information previously submitted to reflect any significant environmental change, including any resulting from operational experience or a change in operations or proposed decommissioning activities; LBP-12-24, 76 NRC 503 (2012)

it is not sufficient to incorporate by reference large portions of material where doing so would force one to sift through it in search of asserted factual support that is not otherwise specified; LBP-12-24, 76 NRC 503 (2012)

language used to incorporate extrinsic material by reference must explicitly, or at least precisely, identify the written material being incorporated; LBP-12-24, 76 NRC 503 (2012)

license application for byproduct material may incorporate information contained in previous applications, statements, or reports filed with the Commission, provided that the reference is clear and specific; LBP-12-24, 76 NRC 503 (2012)

license for source material may incorporate information contained in previous applications, statements, or reports filed with the Commission, provided that the reference is clear and specific; LBP-12-24, 76 NRC 503 (2012)

notice of incorporated terms is reasonable where, under the particular facts of the case, a reasonably prudent person should have seen them; LBP-12-24, 76 NRC 503 (2012)

operating license application may incorporate any pertinent information submitted with a construction permit application; LBP-12-24, 76 NRC 503 (2012)

paper to be incorporated into a written instrument by reference must be so referred to and described in the instrument that the paper may be identified beyond all reasonable doubt; LBP-12-24, 76 NRC 503 (2012)

post-operating license stage supplement to applicant’s environmental report may incorporate by reference any information contained in applicant’s construction permit stage ER; LBP-12-24, 76 NRC 503 (2012)

reference by the contracting parties to an extraneous writing for a particular purpose makes it a part of their agreement only for the purpose specified; LBP-12-24, 76 NRC 503 (2012)

SUBJECT INDEX

special nuclear materials license applications may incorporate by reference information contained in previous applications, statements, or reports filed with the Commission if the references are clear and specific; LBP-12-24, 76 NRC 503 (2012)

where extraneous writing is incorporated for a specific purpose, the writing will be incorporated only to the extent of the reference and for the specific purpose intended, and the reference must be clear and unequivocal; LBP-12-24, 76 NRC 503 (2012)

INDEPENDENT SPENT FUEL STORAGE INSTALLATION

applications for renewal of an ISFSI license must describe the aging management plan for management of issues associated with aging that could adversely affect structures, systems, and components important to safety; LBP-12-24, 76 NRC 503 (2012)

current licensing basis for an ISFSI includes plant-specific design-basis information defined in 10 C.F.R. 50.2 as documented in the most recent final safety analysis report; LBP-12-24, 76 NRC 503 (2012)

it is not necessary or appropriate to throw open the full gamut of provisions in a facility's current licensing basis to reanalysis during the license renewal review, because the current licensing basis is effectively addressed and maintained by ongoing agency oversight, review, and enforcement; LBP-12-24, 76 NRC 503 (2012)

license applicants were permitted to omit any discussion of any environmental impact of spent fuel storage in independent spent fuel storage installations for the period following the term of the initial ISFSI license in any environmental report, environmental impact statement, environmental assessment, or other analysis; LBP-12-24, 76 NRC 503 (2012)

licensees must limit releases of radioactive materials to as low as is reasonably achievable, and establish operational limits to prevent doses to the public that exceed the limits of 10 C.F.R. 72.104(a)-(c); LBP-12-24, 76 NRC 503 (2012)

pressure monitoring system that functions to alert ISFSI operators of potential storage problems, specifically a leak of one of the seals, is intended to meet the requirements for monitoring of dry spent fuel storage; LBP-12-24, 76 NRC 503 (2012)

spent nuclear fuel can be stored safely at licensed nuclear facilities until such time as a long-term geologic storage facility is constructed; LBP-12-24, 76 NRC 503 (2012)

INDEPENDENT SPENT FUEL STORAGE INSTALLATION PROCEEDINGS

challenge to the adequacy of the acceptance criteria or any other component of the current licensing basis is not within the scope of the license renewal proceeding; LBP-12-24, 76 NRC 503 (2012)

petitioner in materials licensing actions is entitled to a presumption of standing if petitioner resides in the zone of reasonably foreseeable harm from the source of radioactivity and the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-12-24, 76 NRC 503 (2012)

ruling on petitions for waiver of application of the waste confidence rule in ISFSI license renewal proceeding is deferred and held in abeyance; LBP-12-24, 76 NRC 503 (2012)

INSPECTION

walkdowns and inspections performed by licensee, industry, and NRC personnel following an earthquake that exceeded the plant's design basis are described; DD-12-2, 76 NRC 391 (2012)

See also NRC Inspection

INSTRUMENTATION

modernization plans for seismic instrumentation following failure of an annunciation panel in the main control room are discussed; DD-12-2, 76 NRC 391 (2012)

INTEGRATED SAFETY ANALYSIS

all credible accident sequences must be identified in the ISA Summary as well as items relied on for safety and necessary safety controls; LBP-12-21, 76 NRC 218 (2012)

requirements for uranium enrichment facility licensing are detailed; LBP-12-21, 76 NRC 218 (2012)

summary must accompany the uranium enrichment facility license application and contain a general description of the site and the facility with emphasis on factors that could affect safety and description of each process analyzed in the ISA; LBP-12-21, 76 NRC 218 (2012)

uranium enrichment facility licensee must submit an annual update of the ISA summary; LBP-12-21, 76 NRC 218 (2012)

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INTENT

affirmative misconduct means an affirmative misrepresentation or affirmative concealment of a material fact by the government, although it does not require that the government intended to mislead a party; LBP-12-16, 76 NRC 44 (2012)

estoppel claimant must prove a false representation by the government, that the government had the intent to induce the plaintiff to act on the misrepresentation, plaintiff's lack of knowledge or inability to obtain the true facts, and plaintiff's reliance on the misrepresentation to his detriment; LBP-12-16, 76 NRC 44 (2012)

INTERVENORS

by participating in NRC proceedings, intervenors accept the obligation of uncovering relevant, publicly available information; CLI-12-21, 76 NRC 491 (2012)

INTERVENTION

referrals may be made when a petition does not satisfy the legal requirements for a hearing or intervention and it is determined that referral to the section 2.206 process is appropriate; CLI-12-20, 76 NRC 437 (2012)

INTERVENTION PETITIONERS

petitioners, not just parties, may request a rule waiver in NRC adjudicatory proceedings; CLI-12-19, 76 NRC 377 (2012)

INTERVENTION PETITIONS

petitioners must establish standing and propose at least one admissible contention; LBP-12-25, 76 NRC 540 (2012)

INTERVENTION PETITIONS, LATE-FILED

intervention petitioner can justify filing a petition after the initial deadline has expired by showing that the contention is based on new information and that the petition was filed promptly after the new information became available; LBP-12-25, 76 NRC 540 (2012)

intervention petitioner must either file its petition by the date specified in the *Federal Register* notice or show good cause for filing after the deadline; LBP-12-25, 76 NRC 540 (2012)

INTERVENTION RULINGS

appeal as of right on the question whether a hearing request should have been wholly denied is allowed; CLI-12-19, 76 NRC 377 (2012)

board is directed to consider whether a confirmatory action letter issued to licensee constitutes a de facto license amendment that would be subject to a hearing opportunity under AEA § 189a, and, if so, whether the petition meets the standing and contention admissibility requirements; CLI-12-20, 76 NRC 437 (2012)

boards have an independent obligation to determine whether petitioners meet the threshold criterion for intervention even if their standing is uncontested; LBP-12-24, 76 NRC 503 (2012)

boards may view petitioner's supporting information in a light favorable to petitioner, but petitioner (not the board) is required to supply all of the required elements for a valid intervention petition; LBP-12-25, 76 NRC 540 (2012)

to grant a hearing request, boards must find that petitioner has standing and has proposed at least one admissible contention; CLI-12-19, 76 NRC 377 (2012)

JURISDICTION

petitions for reconsideration may not be filed except upon leave of the adjudicatory body that rendered the decision and that procedural deficiency is reason enough to deny the request; CLI-12-17, 76 NRC 207 (2012)

See also Licensing Boards, Jurisdiction; Nuclear Regulatory Commission, Jurisdiction; Presiding Officer, Jurisdiction

LICENSE AMENDMENTS

deviations from the original design must be evaluated against the criteria in 10 C.F.R. 70.72 to determine if a license amendment is required or if applicant could make the change without NRC approval; LBP-12-21, 76 NRC 218 (2012)

LICENSE APPLICATIONS

applicant may incorporate material by reference that the applicant itself has previously submitted, not material prepared by NRC Staff; LBP-12-24, 76 NRC 503 (2012)

See also Combined License Application; Contested License Applications

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LICENSE CONDITIONS

implication that any agency prerequisite with which applicant must comply to operate a plant during an extended term constitutes an “approval” under 10 C.F.R. 51.45(d) would entail an unreasonably strained definition of “approval”; LBP-12-15, 76 NRC 14 (2012)

in a combined license proceeding, the Commission may require implementation of mitigation measures it deems necessary and appropriate by imposing conditions in the license; LBP-12-18, 76 NRC 127 (2012)

NRC Staff granted an exemption from 10 C.F.R. 74.33(c)(5) subject to license conditions that require applicant to submit, for the Staff’s prior review and approval, detailed analyses of such potentially credible diversion scenarios and the processes and management measures best suited to address them; LBP-12-21, 76 NRC 218 (2012)

record of decision must also summarize any license conditions and monitoring programs adopted in connection with mitigation measures; LBP-12-18, 76 NRC 127 (2012)

when contentions in contested hearings are purportedly resolved by license conditions, the Commission has stated that such conditions must be drawn very precisely; LBP-12-21, 76 NRC 218 (2012)

LICENSE RENEWAL

See Operating License Renewal; Operating License Renewal Proceedings

LICENSE RENEWAL APPLICATIONS

severe accident mitigation alternatives analysis for relicensing must be performed by licensee and included in the license renewal application; LBP-12-26, 76 NRC 559 (2012)

LICENSING

NRC will not issue licenses dependent upon the Waste Confidence Decision or the Temporary Storage Rule until the court’s remand is appropriately addressed; CLI-12-17, 76 NRC 207 (2012)

LICENSING BOARD DECISIONS

adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of the final environmental impact statement; LBP-12-17, 76 NRC 71 (2012)

licensing board was not justified in rendering a final judgment in the face of unfolding developments having a decided bearing and conceivably crucial effect on the issue that shaped that judgment; LBP-12-19, 76 NRC 184 (2012)

NRC will not issue final licenses dependent upon the Waste Confidence Rule until the court’s remand is appropriately addressed; LBP-12-21, 76 NRC 218 (2012)

LICENSING BOARD ORDERS

boards are expected to explain the necessity of cross-examination in greater detail than a broad-brush reference to a proceedings voluminous or technical nature; CLI-12-18, 76 NRC 371 (2012)

LICENSING BOARDS, AUTHORITY

Atomic Energy Act does not prescribe a specific structure for the mandatory hearing requirement, and the Commission has granted licensing boards considerable flexibility to select the most appropriate approach in the circumstances of each individual case; LBP-12-21, 76 NRC 218 (2012)

boards have an important but limited role in mandatory proceedings; LBP-12-21, 76 NRC 218 (2012)

boards have closed their hearings even when they were concerned with less sensitive (i.e., nonpublic but unclassified) types of information; LBP-12-21, 76 NRC 218 (2012)

boards lack authority to direct NRC Staff’s regulatory reviews; LBP-12-19, 76 NRC 184 (2012)

boards may appropriately view petitioner’s supporting information in a light favorable to the petitioner, but failure to provide such information regarding a proffered contention requires that the contention be rejected; LBP-12-27, 76 NRC 583 (2012)

boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-12-18, 76 NRC 127 (2012)

boards may view petitioner’s supporting information in a light favorable to the petitioner, but petitioner (not the board) is required to supply all of the required elements for a valid intervention petition; LBP-12-25, 76 NRC 540 (2012)

if a board grants summary disposition of a foreign ownership contention, it could terminate the proceeding or move ahead with a pending environmental contention; LBP-12-19, 76 NRC 184 (2012)

if petitioner neglects to provide the requisite support for its contentions, it is not within the board’s power to make assumptions or draw inferences that favor the petitioner, nor may the board supply information that is lacking; LBP-12-15, 76 NRC 14 (2012); LBP-12-18, 76 NRC 127 (2012); LBP-12-27, 76 NRC 583 (2012)

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licensing boards may not stretch the scope of admitted contentions beyond their reasonably inferred bounds, but may consider issues that, although not expressly stated, can reasonably be inferred from the arguments presented; LBP-12-17, 76 NRC 71 (2012)

untimely motions to reopen that present an exceptionally grave issue may be admitted at the board's discretion; LBP-12-16, 76 NRC 44 (2012)

LICENSING BOARDS, JURISDICTION

boards do not have jurisdiction to determine whether other government entities have properly followed their regulations or procedures; LBP-12-16, 76 NRC 44 (2012)

section 2.318(a) does not provide an exhaustive list of every situation where board jurisdiction lapses; CLI-12-17, 76 NRC 210 (2012); CLI-12-17, 76 NRC 207 (2012)

LIMITED WORK AUTHORIZATION

environmental report for LWA application for a site where a construction permit was issued but construction of the plant was never completed may incorporate the earlier environmental impact statement; LBP-12-24, 76 NRC 503 (2012)

LOW-INCOME POPULATIONS

federal agencies shall identify and consider whether their actions will cause disproportionate environmental impacts on minority, low-income, or other sensitive populations; LBP-12-24, 76 NRC 503 (2012)

MANAGEMENT

applicant must establish and maintain a configuration management system to evaluate, implement, and track changes to the site, structures, processes, systems, equipment, components, computer programs, and activities of personnel; LBP-12-21, 76 NRC 218 (2012)

See also Case Management

MANDATORY HEARINGS

although safety issues are reviewed under the adequacy and sufficiency standard, licensing boards must independently consider the final balance among the conflicting costs and benefits when reviewing National Environmental Policy Act issues; LBP-12-21, 76 NRC 218 (2012)

Atomic Energy Act does not prescribe a specific structure for the hearing requirement, and the Commission has granted licensing boards considerable flexibility to select the most appropriate approach in the circumstances of each individual case; LBP-12-21, 76 NRC 218 (2012)

boards should not second-guess the underlying technical or factual findings by the NRC Staff; LBP-12-21, 76 NRC 218 (2012)

giving appropriate deference to NRC Staff technical expertise, boards are to probe the logic and evidence supporting NRC Staff findings and decide whether those findings are sufficient to support license issuance; LBP-12-21, 76 NRC 218 (2012)

licensing boards conducting hearings on uncontested issues are expected to take an independent hard look at NRC Staff safety and environmental findings but are not to replicate NRC Staff work; LBP-12-21, 76 NRC 218 (2012)

licensing boards conducting hearings on uncontested issues should conduct a simple sufficiency review of uncontested issues, not a de novo review; LBP-12-21, 76 NRC 218 (2012)

licensing boards have an important but limited role in mandatory proceedings; LBP-12-21, 76 NRC 218 (2012)

NRC shall conduct a single adjudicatory hearing on the record with regard to the licensing of the construction and operation of a uranium enrichment facility; LBP-12-21, 76 NRC 218 (2012)

MATERIAL CONTROL AND ACCOUNTING

NRC Staff granted an exemption from 10 C.F.R. 74.33(c)(5) subject to license conditions that require applicant to submit, for the Staff's prior review and approval, detailed analyses of such potentially credible diversion scenarios and the processes and management measures best suited to address them; LBP-12-21, 76 NRC 218 (2012)

MATERIAL MISREPRESENTATION

affirmative misconduct means an affirmative misrepresentation or affirmative concealment of a material fact by the government, although it does not require that the government intended to mislead a party; LBP-12-16, 76 NRC 44 (2012)

estoppel claimant must prove a false representation by the government, that the government had the intent to induce the plaintiff to act on the misrepresentation, plaintiff's lack of knowledge or inability to

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obtain the true facts, and plaintiff's reliance on the misrepresentation to his detriment; LBP-12-16, 76 NRC 44 (2012)

MATERIALITY

all contentions must proffer an issue of law or fact that is material to the outcome of a licensing proceeding, meaning that the subject matter of the contention must impact the grant or denial of a pending license application; LBP-12-27, 76 NRC 583 (2012)

contentions alleging deficiencies or errors in an application must also indicate some significant link between the claimed deficiency and either the public health and safety or the environment; LBP-12-15, 76 NRC 14 (2012); LBP-12-27, 76 NRC 583 (2012)

petitioner must demonstrate that a contention asserts an issue of law or fact that is material to the findings the NRC must make to support the action that is involved in the proceeding; LBP-12-18, 76 NRC 127 (2012)

subject matter of contentions must impact the grant or denial of a pending license application; LBP-12-15, 76 NRC 14 (2012); LBP-12-18, 76 NRC 127 (2012)

MATERIALS LICENSE AMENDMENT APPLICATIONS

for application or other form of permission for which applicant has previously submitted an environmental report, the supplement to applicant's ER may be limited to incorporating by reference, updating, or supplementing the information previously submitted to reflect any significant environmental change, including any resulting from operational experience or a change in operations or proposed decommissioning activities; LBP-12-24, 76 NRC 503 (2012)

MATERIALS LICENSE PROCEEDINGS

application or other form of permission for which applicant has previously submitted an environmental report, the supplement to applicant's ER may be limited to incorporating by reference, updating, or supplementing the information previously submitted to reflect any significant environmental change, including any resulting from operational experience or a change in operations or proposed decommissioning activities; LBP-12-24, 76 NRC 503 (2012)

MATERIALS LICENSE RENEWAL

applicant is not required to assess cumulative impacts in its environmental report, but NUREG-1748 requests that applicant discuss any past, present, or reasonably foreseeable future actions that could result in cumulative impacts when combined with the proposed action; LBP-12-24, 76 NRC 503 (2012)

applications for renewal of an ISFSI license must describe the aging management plan for management of issues associated with aging that could adversely affect structures, systems, and components important to safety; LBP-12-24, 76 NRC 503 (2012)

it is not necessary or appropriate to throw open the full gamut of provisions in a facility's current licensing basis to reanalysis during the license renewal review, because the current licensing basis is effectively addressed and maintained by ongoing agency oversight, review, and enforcement; LBP-12-24, 76 NRC 503 (2012)

MATERIALS LICENSE RENEWAL PROCEEDINGS

challenge to the adequacy of the acceptance criteria or any other component of the current licensing basis is not within the scope of the proceeding; LBP-12-24, 76 NRC 503 (2012)

petitioner is entitled to a presumption of standing if petitioner resides in the zone of reasonably foreseeable harm from the source of radioactivity and the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-12-24, 76 NRC 503 (2012)

ruling on petitions for waiver of application of the waste confidence rule in independent spent fuel storage installation license renewal proceeding is deferred and held it in abeyance; LBP-12-24, 76 NRC 503 (2012)

there is no predefined distance marking the area of potential offsite consequences on which to establish standing and thus this must be judged on a case-by-case basis; LBP-12-24, 76 NRC 503 (2012)

MIGRATION TENET

boards may construe an admitted contention contesting the environmental report as a challenge to a subsequently issued draft or final environmental impact statement without the need for intervenors to file a new or amended contention; LBP-12-23, 76 NRC 445 (2012)

tenet helps to expedite hearings by obviating the need to file and litigate the same contention up to three times and applies when the information contained in a subsequently released document is sufficiently

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similar to the information contained in the original document upon which the original contention was filed; LBP-12-23, 76 NRC 445 (2012)

MINORITIES

federal agencies shall identify and consider whether their actions will cause disproportionate environmental impacts on minority, low-income, or other sensitive populations; LBP-12-24, 76 NRC 503 (2012)

MISREPRESENTATION

estoppel claims must rely on its adversary's conduct in such a manner as to change his position for the worse, and that reliance must have been reasonable in that the party claiming the estoppel did not know nor should it have known that its adversary's conduct was misleading; LBP-12-16, 76 NRC 44 (2012)

See also Material Misrepresentation

MODIFICATION ORDER

none of the post-Fukushima orders or information requests can be characterized as approvals that must be obtained in connection with renewal of an operating license; LBP-12-15, 76 NRC 14 (2012)

MONITORING

fire detection systems shall be automatic and capable of operating with or without offsite power;

DD-12-3, 76 NRC 416 (2012)

for agency decisions such as a combined license that are based on an environmental impact statement, a monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation; LBP-12-23, 76 NRC 445 (2012)

intervenors must point to the specific ways in which the shield building monitoring aging management plan is wrong or inadequate to raise a genuine dispute with applicant's license renewal application; LBP-12-27, 76 NRC 583 (2012)

pressure monitoring system that functions to alert ISFSI operators of potential storage problems, specifically a leak of one of the seals, is intended to meet the requirements for monitoring of dry spent fuel storage; LBP-12-24, 76 NRC 503 (2012)

record of decision must also summarize any license conditions and monitoring programs adopted in connection with mitigation measures; LBP-12-18, 76 NRC 127 (2012)

there is no assurance of a mitigation measure efficacy where the government conducted no study of its likely effects, proposed no monitoring to determine how effective the proposed mitigation would be, and did not consider alternatives in the event the measure fails; LBP-12-23, 76 NRC 445 (2012)

uranium enrichment facility applicant's commitment to monitoring and the corrective action program provides reasonable assurance that public health and safety will be protected and applicant has a program in compliance with the regulations; LBP-12-21, 76 NRC 218 (2012)

See also Radiological Monitoring

MOOTNESS

if applicants believe that their actions render a contention moot, then they should promptly file a motion for summary disposition; LBP-12-19, 76 NRC 184 (2012)

where a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by applicant, the contention is moot; LBP-12-27, 76 NRC 583 (2012)

MOTIONS

motions must be filed no later than 10 days after the occurrence or circumstance from which the motion arises; LBP-12-26, 76 NRC 559 (2012)

motions must be rejected if they do not include a certification by the attorney or representative of the moving party that movant has made a sincere effort to contact other parties in the proceeding and resolve the issue(s) raised in the motion, and that movant's efforts to resolve the issue(s) have been unsuccessful; LBP-12-27, 76 NRC 583 (2012)

MOTIONS FOR RECONSIDERATION

if leave to file a motion for reconsideration is granted, the motion must demonstrate a compelling circumstance, such as the existence of a clear and material error in a decision, which could not have reasonably been anticipated, which renders the decision invalid; CLI-12-17, 76 NRC 207 (2012)

lateness is a sufficient ground on which to deny a motion; CLI-12-17, 76 NRC 207 (2012)

motion is denied for failure to meet the high standard of 10 C.F.R. 2.323(e); LBP-12-26, 76 NRC 559 (2012)

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motions must be filed within 10 days of the action for which reconsideration is requested; CLI-12-17, 76 NRC 207 (2012)

motions should be based on an elaboration of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification; CLI-12-17, 76 NRC 207 (2012)

motions should not simply reargue matters already considered but rejected; CLI-12-17, 76 NRC 207 (2012)

petitioners' request, though styled a petition for review, asked the Commission to reconsider its own prior ruling, and was therefore properly considered according to the standards governing a motion for reconsideration; CLI-12-17, 76 NRC 207 (2012)

petitions for reconsideration may not be filed except upon leave of the adjudicatory body that rendered the decision and that procedural deficiency is reason enough to deny the request; CLI-12-17, 76 NRC 207 (2012)

MOTIONS TO REOPEN

board denies as untimely a motion to reopen and admit a new contention alleging that the licensee lacks certain required environmental permits and approvals from state and federal agencies; LBP-12-16, 76 NRC 44 (2012)

both the reopening and contention admissibility criteria require that new contentions be timely presented, generally within 30-60 days of the availability of the information on which the contention is based; CLI-12-21, 76 NRC 491 (2012)

burden for those seeking to reopen a closed record is a heavy one; CLI-12-21, 76 NRC 491 (2012)

environmental issue raised in untimely motion to reopen could be exceptionally grave depending on the circumstances of the case and the facts presented but will be granted rarely and only in truly extraordinary circumstances; CLI-12-21, 76 NRC 491 (2012)

in codifying the reopening requirements, the more neutral "exceptionally grave issue" language was chosen over the case law-based "sufficiently grave threat to public safety" phrasing; CLI-12-21, 76 NRC 491 (2012)

intervenor must file a motion demonstrating, among other things, that a materially different result would be or would have been likely had the newly proffered evidence been considered initially; LBP-12-19, 76 NRC 184 (2012)

motions must be timely; CLI-12-21, 76 NRC 491 (2012)

motions to admit a new contention must be submitted in a timely fashion, based on new information that is materially different from information previously available or a balancing of the factors in 10 C.F.R. 2.326 must weigh in favor of admitting the contention; LBP-12-16, 76 NRC 44 (2012)

new contention filed after the record has closed must also satisfy general contention admissibility requirements of 10 C.F.R. 2.309(f)(1)(i)-(vi); LBP-12-16, 76 NRC 44 (2012)

untimeliness constitutes sufficient grounds on its own for denying the motion to reopen and thus the board need not consider other subsections under sections 2.326 and 2.309; LBP-12-16, 76 NRC 44 (2012)

untimely motions that present an exceptionally grave issue may be admitted at the board's discretion; CLI-12-21, 76 NRC 491 (2012); LBP-12-16, 76 NRC 44 (2012)

when determining whether a new contention is timely for purposes of reopening a record, the Commission looks to whether the information on which it is based was previously available or whether it is materially different from what was previously available, and whether it has been submitted in a timely fashion based on the information's availability; CLI-12-21, 76 NRC 491 (2012)

See also Reopening a Record

MOTIONS TO WITHDRAW

when a motion to withdraw an application is unopposed and the withdrawal causes no apparent harm to the public or any party, it is appropriate to grant the motion without prejudice or imposition of additional terms; LBP-12-20, 76 NRC 215 (2012)

withdrawal of an application after issuance of a notice of hearing shall be on such terms as the presiding officer may prescribe; LBP-12-20, 76 NRC 215 (2012)

NATIONAL ENVIRONMENTAL POLICY ACT

a nondiscretionary duty is imposed on NRC to amend an environmental impact statement if new and significant information comes to light; LBP-12-18, 76 NRC 127 (2012)

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a reasonably close causal relationship between the environmental effect and the alleged cause is required; LBP-12-21, 76 NRC 218 (2012)

absent a valid regulation limiting NRC's NEPA obligations, the consideration of alternative severe accident mitigation measures may not be excluded from the agency's NEPA reviews; LBP-12-18, 76 NRC 127 (2012)

agencies are encouraged to coordinate the NHPA §106 process with the agency's process for complying with NEPA; LBP-12-23, 76 NRC 445 (2012)

agencies are not permitted to define the objectives of a proposed action so narrowly as to preclude a reasonable consideration of alternatives; LBP-12-17, 76 NRC 71 (2012)

agencies are not required to elevate environmental concerns over other appropriate considerations; LBP-12-18, 76 NRC 127 (2012)

agencies are required to exercise a degree of skepticism in dealing with self-serving statements from the prime beneficiary of a project and to look at the general goal of the project, rather than only those alternatives preferred by the applicant; LBP-12-17, 76 NRC 71 (2012)

agencies are to consider environmental impacts of their actions to the fullest extent possible; LBP-12-21, 76 NRC 218 (2012)

agencies must consider the environmental impacts of major federal actions significantly affecting the quality of the human environment, as well as alternatives to the proposed action, in an environmental impact statement; LBP-12-23, 76 NRC 445 (2012)

agencies must devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits; LBP-12-17, 76 NRC 71 (2012)

agencies must prepare an environmental impact statement before approving any major federal action that will significantly affect the quality of the human environment; LBP-12-17, 76 NRC 71 (2012)

agencies must rigorously explore and objectively evaluate all reasonable alternatives and briefly discuss reasons for eliminating alternatives; LBP-12-17, 76 NRC 71 (2012)

agencies shall plan for involving the public in the National Historic Preservation Act § 106 process but may use the agency's procedures for public involvement under NEPA if they provide adequate opportunities for public involvement; LBP-12-23, 76 NRC 445 (2012)

agencies violate NEPA when their EIS fails to adequately respond to the critical opinions of their own experts; LBP-12-18, 76 NRC 127 (2012)

agency that has prepared an EIS cannot simply rest on the original document but must be alert to new information that may alter the results of its original environmental analysis, and continue to take a hard look at the environmental effects of its planned action, even after a proposal has received initial approval; LBP-12-18, 76 NRC 127 (2012)

allowing agencies to avoid a NEPA violation through a subsequent, conclusory statement that it would not have reached a different result even with the proper analysis would significantly undermine the statutory scheme; LBP-12-17, 76 NRC 71 (2012)

alternatives analysis is the heart of the environmental impact statement; LBP-12-17, 76 NRC 71 (2012)

alternatives must be considered as they exist and are likely to exist, not merely as they exist at the present time; LBP-12-17, 76 NRC 71 (2012)

although NEPA does not mention mitigation, by administrative practice and regulation, mitigation plays an important role in the discharge by federal agencies of their procedural duty under NEPA to prepare an EIS; LBP-12-18, 76 NRC 127 (2012)

although NEPA's requirements are procedural, federal agencies are held to a strict standard of compliance with the Act's requirements; LBP-12-18, 76 NRC 127 (2012)

although NRC has found that severe accident risks are small for all U.S. licensed nuclear power plants, NRC Staff is required under NEPA to consider mitigation alternatives during its license renewal review; LBP-12-26, 76 NRC 559 (2012)

applicant's use of the MAAP code to generate fission product source terms for use in its severe accident mitigation alternatives analysis is reasonable under NEPA; LBP-12-26, 76 NRC 559 (2012)

Biological Opinion and its accompanying Incidental Take Statement issued by U.S. Fish and Wildlife Service were arbitrary and capricious because they were based in part on a conservation plan that was not enforceable under the Endangered Species Act; LBP-12-23, 76 NRC 445 (2012)

blindly adopting applicant's statement of the purpose of the action is a losing position because it does not allow for the full consideration of alternatives required by NEPA; LBP-12-17, 76 NRC 71 (2012)

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certainty or precision in an environmental analysis is not called for, but rather an estimate of anticipated (not unduly speculative) impacts; LBP-12-18, 76 NRC 127 (2012)

compliance with NEPA is a primary duty of every federal agency, and fulfillment of this responsibility should not depend on vigilance and limited resources of environmental plaintiffs; LBP-12-18, 76 NRC 127 (2012)

consideration of severe accident mitigation alternatives in its environmental impact statements and supplements thereto is required at the operating license stage; LBP-12-15, 76 NRC 14 (2012)

considering alternatives under NEPA, agencies should take into account the needs and goals of the parties involved in the application; LBP-12-17, 76 NRC 71 (2012)

discussion necessary to support a NEPA alternatives contention in a reactor license renewal proceeding is compared with that for a Part 52 combined license proceeding; LBP-12-15, 76 NRC 14 (2012)

discussion of steps that can be taken to mitigate adverse environmental consequences plays an important role in the environmental analysis under NEPA; LBP-12-18, 76 NRC 127 (2012)

doctrine of harmless error has only limited application in NEPA cases, and none where the agency has failed to take the required hard look at environmental consequences and alternatives; LBP-12-17, 76 NRC 71 (2012)

environmental impact statements are to include a detailed statement by the responsible official on alternatives to the proposed action; LBP-12-17, 76 NRC 71 (2012)

federal agencies are required to pause before committing resources to a project and consider the likely environmental impacts of the preferred course of action as well as reasonable alternatives; LBP-12-17, 76 NRC 71 (2012); LBP-12-18, 76 NRC 127 (2012)

final environmental impact statements need not discuss remote and speculative alternatives, but must consider only alternatives that bring about the ends of the proposed project; LBP-12-17, 76 NRC 71 (2012)

Fukushima contention that petitioners did not relate to any unique characteristics of the particular site at issue was akin to the generic type of NEPA review that the Commission declared premature; LBP-12-18, 76 NRC 127 (2012)

goals of NEPA are to ensure that agency decisionmakers will have detailed information concerning significant environmental impacts of proposed projects when they make their decisions and to guarantee that such information will be available to the larger audience that may also play a role in the decisionmaking process; LBP-12-17, 76 NRC 71 (2012)

if an alternative is commercially feasible and capable of bringing about the ends of the proposed project, then Staff may not dismiss it merely because it is inconsistent with the preferences of interested parties, or for other reasons inconsistent with NEPA's rule of reason; LBP-12-17, 76 NRC 71 (2012)

if NRC Staff had in hand new information that could render invalid the original site-specific analysis, then such information should be identified and evaluated by Staff for its significance, consistent with NEPA requirements; CLI-12-19, 76 NRC 377 (2012)

if the adverse environmental impacts of a proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs; LBP-12-18, 76 NRC 127 (2012)

impact of a proposed action on public safety is an issue that must be considered under both NEPA and the Atomic Energy Act; LBP-12-18, 76 NRC 127 (2012)

implicit in NEPA's demand that an agency prepare a detailed environmental impact statement is an understanding that the EIS will discuss the extent to which adverse effects can be avoided; LBP-12-18, 76 NRC 127 (2012)

language of NEPA indicates that Congress did not intend that it be precluded by the Atomic Energy Act; LBP-12-18, 76 NRC 127 (2012)

legislative history and case law require compliance with NEPA unless compliance is impossible, or another statute specifically prohibits compliance with NEPA; LBP-12-18, 76 NRC 127 (2012)

merely pointing to a government compliance program is insufficient to demonstrate compliance with NEPA's requirement that agencies take a hard look at the environmental consequences of their proposed actions; LBP-12-23, 76 NRC 445 (2012)

NEPA does not mandate particular results, but simply prescribes the necessary process; LBP-12-17, 76 NRC 71 (2012)

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NEPA does not require a fully developed plan that will mitigate all environmental harm before an agency can act, only that mitigation be discussed in sufficient detail to ensure that environmental consequences have been fully evaluated; LBP-12-23, 76 NRC 445 (2012)

NEPA does not require agencies to elevate environmental concerns over other appropriate considerations; LBP-12-17, 76 NRC 71 (2012)

NEPA ensures that agencies will not act on incomplete information, only to regret their decision after it is too late to correct; LBP-12-17, 76 NRC 71 (2012)

NEPA imposes procedural restraints on agencies, which require them to take a hard look at the environmental impacts of a proposed action and the reasonable alternatives to that action; LBP-12-17, 76 NRC 71 (2012)

NEPA is not intended to encompass every possible impact, and does not encompass potential losses due to individuals' perception of a risk; LBP-12-24, 76 NRC 503 (2012)

NEPA requires a hard look at severe accident mitigation measures; LBP-12-26, 76 NRC 559 (2012)

NEPA requires that agencies provide a reasonably complete discussion of possible severe accident mitigation measures; LBP-12-18, 76 NRC 127 (2012)

NEPA severe accident mitigation alternatives analysis need not reflect the most conservative, or worst-case, analysis; LBP-12-26, 76 NRC 559 (2012)

NEPA's "hard look" requirement is tempered by a rule of reason; LBP-12-17, 76 NRC 71 (2012)

NRC cannot look to the sufficiency of safety standards enacted under the Atomic Energy Act to avoid its NEPA obligations; LBP-12-18, 76 NRC 127 (2012)

NRC is required to analyze potential terrorist attacks as part of its NEPA review with regard to facilities located in the Ninth Circuit; LBP-12-21, 76 NRC 218 (2012)

NRC policy statement is not a sufficient vehicle to preclude consideration of severe accident mitigation design alternatives, and NRC must take the requisite hard look at them, giving them the careful consideration and disclosure required by the National Environmental Policy Act; CLI-12-19, 76 NRC 377 (2012)

NRC Staff, not the applicant, bears the ultimate burden of establishing compliance with NEPA; LBP-12-17, 76 NRC 71 (2012)

NRC violated the National Environmental Policy Act in issuing its 2010 update to the Waste Confidence Decision and accompanying Temporary Storage Rule; CLI-12-16, 76 NRC 63 (2012)

petitioner's assertion that continued operation of an independent spent fuel storage installation causes fear and anxiety among its members is not a valid claim under NEPA; LBP-12-24, 76 NRC 503 (2012)

primary obligation of satisfying the requirements of NEPA rests on the agency; LBP-12-18, 76 NRC 127 (2012)

project goals determine the alternatives that are considered reasonable; LBP-12-17, 76 NRC 71 (2012)

relationship between the uranium enrichment facility's product and production of high-level waste is too attenuated to show the requirement of a reasonably close causal relationship required by NEPA; LBP-12-21, 76 NRC 218 (2012)

remote and speculative alternatives need not be addressed in a final environmental impact statement, but NEPA requires NRC Staff to consider reasonable alternatives that are likely to be available within the time frame of the proposed action; LBP-12-17, 76 NRC 71 (2012)

requirement to prepare an environmental impact statement is a procedural mechanism designed to ensure that agencies give proper consideration to the environmental consequences of their actions; LBP-12-18, 76 NRC 127 (2012)

rule of reason is inherent in NEPA and its implementing regulations; LBP-12-17, 76 NRC 71 (2012)

rule of reason means that an agency must only consider reasonably foreseeable impacts in its environmental impact statement, and need not address those that are remote and speculative or inconsequentially small; LBP-12-17, 76 NRC 71 (2012)

Staff's environmental impact statement need only discuss those alternatives that will bring about the ends of the proposed action; LBP-12-15, 76 NRC 14 (2012)

subject of postdecision supplemental environmental impact statements is not expressly addressed in NEPA; LBP-12-18, 76 NRC 127 (2012)

to the extent that applicant proposes modifications to the facility in response to a request for information, NEPA also requires the consideration of the effectiveness and relative costs of a range of alternatives for satisfying the NRC's concerns; LBP-12-15, 76 NRC 14 (2012)

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when agencies propose major federal actions significantly affecting the quality of the human environment, preparation of an environmental impact statement is required; LBP-12-18, 76 NRC 127 (2012)
without substantive, comparative environmental impact information regarding other possible courses of action, the ability of an environmental impact statement to inform agency deliberation and facilitate public involvement would be greatly degraded; LBP-12-17, 76 NRC 71 (2012)

NATIONAL HISTORIC PRESERVATION ACT

agencies are encouraged to coordinate the NHPA § 106 process with the agency's process for complying with NEPA; LBP-12-23, 76 NRC 445 (2012)
agencies shall plan for involving the public in the NHPA § 106 process but may use the agency's procedures for public involvement under NEPA if they provide adequate opportunities for public involvement; LBP-12-23, 76 NRC 445 (2012)
agency officials must, except where appropriate to protect confidentiality concerns of affected parties, provide the public with information about an undertaking and its effects on historic properties and seek public comment and input; LBP-12-23, 76 NRC 445 (2012)
before licensing any federally assisted undertaking, federal agencies must take into account the effect of the undertaking on any site that is included or eligible for inclusion in the National Register of Historic Places; LBP-12-23, 76 NRC 445 (2012)
burden of fulfilling the Act's consultation requirements rests exclusively with the NRC, not with the applicant; LBP-12-23, 76 NRC 445 (2012)
contention alleging that an Indian tribe had not been consulted concerning cultural resources, in violation of the Act, was premature because NRC Staff, not applicant, has the duty to consult with the tribe under the Act, and Staff had not completed its review process; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)
NRC must also allow the federal Advisory Council on Historic Preservation a reasonable opportunity to comment with regard to a combined license; LBP-12-23, 76 NRC 445 (2012)
procedures for an agency to follow in complying with section 106 are listed; LBP-12-23, 76 NRC 445 (2012)
the Act and its implementing regulations do not require that the agency implement any mitigation measures, let alone that those measures meet a certain standard of protection for historic properties; LBP-12-23, 76 NRC 445 (2012)
to the extent that intervenors' proposed contention is based on asserted deficiencies in NRC Staff's process for soliciting public participation pursuant to the National Historic Preservation Act, the contention fails to demonstrate a genuine dispute on a material issue of fact or law; LBP-12-23, 76 NRC 445 (2012)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

applicant for a federal discharge permit must provide a certification from the state that the proposed activity will not violate state water pollution control standards; LBP-12-16, 76 NRC 44 (2012)
NRC is precluded from second-guessing the conclusions in NPDES permits; LBP-12-16, 76 NRC 44 (2012)

NATIVE AMERICANS

applicant is not required to discuss the federal government's trust responsibility to Indian tribes in its environmental report; LBP-12-24, 76 NRC 503 (2012)
contention alleging that an Indian tribe had not been consulted concerning cultural resources, in violation of the National Historic Preservation Act, was premature because NRC Staff, not applicant, has the duty to consult with the tribe under the Act, and Staff had not completed its review process; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)
federal government owes a trust responsibility to Indian tribes; LBP-12-24, 76 NRC 503 (2012)
federal trust responsibility to Indian tribes extends not just to the Interior Department, but attaches to the federal government as a whole; LBP-12-24, 76 NRC 503 (2012)
federal trust responsibility to Indian tribes rests solely with the federal government and cannot be discharged by applicants; LBP-12-24, 76 NRC 503 (2012)
standing criteria for federally recognized Indian tribes are less stringent, but only where the facility at issue is within the tribe's boundaries; LBP-12-24, 76 NRC 503 (2012)

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NEGATION ACTION PLAN

combined license will not be issued where applicants are 100% owned by a foreign corporation, which is 85% owned by the French government, and the foreign corporation has the power to exercise ownership, control, or domination over applicants, and the Negation Action Plan submitted by applicants does not negate this situation; LBP-12-19, 76 NRC 184 (2012)

NOISE

increase in noise levels is a significant impact because the agency's environmental assessment made no firm commitment to any noise mitigation measures; LBP-12-23, 76 NRC 445 (2012)

NONCOMPLIANCES

request that NRC take enforcement action to correct alleged noncompliance with fire protection regulations is granted; DD-12-3, 76 NRC 416 (2012)

use of operator manual actions in lieu of the protection methods specified in 10 C.F.R. Part 50, Appendix R, § III.G.2 is not consistent with the regulations, and plants need regulatory approval for each specific OMA proposed; DD-12-3, 76 NRC 416 (2012)

NOTICE OF HEARING

contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and directive referring the proceeding to the licensing board; LBP-12-15, 76 NRC 14 (2012)

NRC will hold a hearing under 10 C.F.R. Part 2, Subparts A, C, G, and I, on each application for issuance of a license for construction and operation of a uranium enrichment facility and will publish public notice of the hearing in the Federal Register at least 30 days before the hearing; LBP-12-21, 76 NRC 218 (2012)

scope of a proceeding is defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-12-18, 76 NRC 127 (2012)

withdrawal of an application after issuance of a notice of hearing shall be on such terms as the presiding officer may prescribe; LBP-12-20, 76 NRC 215 (2012)

NRC GUIDANCE DOCUMENTS

guidance documents do not have the force of law, but the Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility has benefited from extensive consideration within the agency, with which the Commission has never expressed disagreement; LBP-12-21, 76 NRC 218 (2012)

NRC INSPECTION

NRC is required to verify through inspection that the facility has been constructed in accordance with the requirements of the license; LBP-12-21, 76 NRC 218 (2012)

NRC POLICY

NRC proceedings would be incapable of attaining finality if contentions that could have been raised at the outset could be added later at will, regardless of the stage of the proceeding; CLI-12-21, 76 NRC 491 (2012)

See also Policy Statements

NRC PROCEEDINGS

Federal Rules of Evidence are not directly applicable to NRC proceedings, but NRC adjudicatory boards often look to those rules for guidance; LBP-12-21, 76 NRC 218 (2012)

NRC STAFF

burden of fulfilling the National Historic Preservation Act's consultation requirements rests exclusively with the NRC, not with the applicant; LBP-12-23, 76 NRC 445 (2012)

Staff is but one of the parties to a licensing proceeding, and the positions that it may take are in no way binding upon the licensing board; LBP-12-23, 76 NRC 445 (2012)

violations will be dispositioned by Staff as part of its ongoing reactor oversight process, and evidentiary hearings before NRC at the request of third parties are not a part of this process; DD-12-3, 76 NRC 416 (2012)

NRC STAFF REVIEW

absent a valid regulation limiting NRC's NEPA obligations, the consideration of alternative severe accident mitigation measures may not be excluded from the agency's NEPA reviews; LBP-12-18, 76 NRC 127 (2012)

SUBJECT INDEX

after a licensing board in an uncontested proceeding determines that Staff's NEPA review is adequate, it must then independently consider the final balance among conflicting factors that is struck in the Staff's recommendation; LBP-12-21, 76 NRC 218 (2012)

agency's reliance on mitigation in making a finding of no significant impact is justified if the proposed mitigation is imposed by statute or regulation or has been so integrated into the initial proposal that it is impossible to define the proposal without mitigation; LBP-12-23, 76 NRC 445 (2012)

agency's reliance on mitigation in making a finding of no significant impact must be justified; LBP-12-23, 76 NRC 445 (2012)

although NRC has found that severe accident risks are small for all U.S. licensed nuclear power plants, NRC Staff is required under NEPA to consider mitigation alternatives during its license renewal review; LBP-12-26, 76 NRC 559 (2012)

boards conducting mandatory hearings should not second-guess the underlying technical or factual findings by NRC Staff; LBP-12-21, 76 NRC 218 (2012)

boards lack authority to direct NRC Staff's regulatory reviews; LBP-12-19, 76 NRC 184 (2012)

burden of establishing compliance with NEPA falls on NRC Staff, not applicant; LBP-12-17, 76 NRC 71 (2012)

compliance with the Clean Water Act does not negate the requirement for NRC to weigh all environmental effects of a proposed action; LBP-12-16, 76 NRC 44 (2012)

contention alleging that an Indian tribe had not been consulted concerning cultural resources, in violation of the National Historic Preservation Act, was premature because NRC Staff, not applicant, has the duty to consult with the tribe under the Act, and Staff had not completed its review process; LBP-12-19, 76 NRC 184 (2012)

deficiencies in Staff's analysis of a combination alternative is not harmless error; LBP-12-17, 76 NRC 71 (2012)

giving appropriate deference to NRC Staff technical expertise, boards are to probe the logic and evidence supporting Staff findings and decide whether those findings are sufficient to support license issuance; LBP-12-21, 76 NRC 218 (2012)

if NRC Staff had in hand new information that could render invalid the original site-specific analysis, then such information should be identified and evaluated by Staff for its significance, consistent with NEPA requirements; CLI-12-19, 76 NRC 377 (2012)

intervenor is not entitled to Staff's review documents as a discovery tool; CLI-12-17, 76 NRC 207 (2012)

it is not necessary or appropriate to throw open the full gamut of provisions in a facility's current licensing basis to reanalysis during the license renewal review, because the CLB is effectively addressed and maintained by ongoing agency oversight, review, and enforcement; LBP-12-24, 76 NRC 503 (2012)

licensing boards conducting mandatory hearings on uncontested issues are expected to take an independent hard look at Staff safety and environmental findings but are not to replicate Staff work; LBP-12-21, 76 NRC 218 (2012)

procedures used to evaluate applications for issuance or transfer of control of a production or utilization facility license in light of the prohibitions in Atomic Energy Act §§ 103d and 104d and in 10 C.F.R. 50.38 against foreign ownership or control are described; LBP-12-19, 76 NRC 184 (2012)

Staff must prepare a final environmental impact statement in accordance with the requirements of 10 C.F.R. 51.71 for a draft environmental impact statement; LBP-12-18, 76 NRC 127 (2012)

Staff relies heavily on applicant's environmental report in preparing its final environmental impact statement; LBP-12-17, 76 NRC 71 (2012)

supplemental environmental review documents must be prepared when there are 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; LBP-12-18, 76 NRC 127 (2012)

to satisfy the hard look requirement, NRC must provide detailed analysis of new information and a reasonable explanation of the agency's decision concerning supplementation, not merely a conclusory assertion that the agency has reviewed the new information and concluded that no supplement is required; LBP-12-18, 76 NRC 127 (2012)

when conducting a NEPA-required environmental review, an agency may consider the ameliorative effects of mitigation in determining the environmental impacts of an activity; LBP-12-23, 76 NRC 445 (2012)

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NUCLEAR NON-PROLIFERATION

issues are dependent upon the actions and decisions of the President, Congress, international organizations, and officials of other nations, and constitute issues of international policy unrelated to NRC's licensing criteria; LBP-12-21, 76 NRC 218 (2012)

issues span a host of factors far removed from and far afield from the NRC's decision whether to license a uranium enrichment facility; LBP-12-21, 76 NRC 218 (2012)

NUCLEAR REGULATORY COMMISSION

NRC violated the National Environmental Policy Act in issuing its 2010 update to the Waste Confidence Decision and accompanying Temporary Storage Rule; CLI-12-16, 76 NRC 63 (2012)

NUCLEAR REGULATORY COMMISSION, AUTHORITY

as an exercise of its inherent supervisory authority over adjudications, the Commission directed that waste confidence contentions and any related contentions that may be filed in the near term be held in abeyance pending further order; LBP-12-24, 76 NRC 503 (2012)

as an exercise of the Commission's inherent supervisory authority over agency proceedings, it need not address procedural issues that would merit further consideration in adjudications; CLI-12-16, 76 NRC 63 (2012)

Commission may at its discretion grant a party's request for interlocutory review of a board decision; CLI-12-18, 76 NRC 371 (2012)

compliance with NRC requirements presumptively ensures adequate protection, but new information may reveal that additional requirements are warranted, and in such situations, the Commission may act in accordance with its statutory authority to require licensees and construction permit holders to take action in order to protect health and safety and common defense and security; LBP-12-18, 76 NRC 127 (2012)

Congress has severely limited the scope of NRC's inquiry into Clean Water Act § 316(a) determinations; LBP-12-16, 76 NRC 44 (2012)

Council on Environmental Quality guidance does not bind NRC, but NRC gives it substantial deference; LBP-12-17, 76 NRC 71 (2012)

courts give controlling weight to an agency's interpretation of its own regulation unless it is plainly erroneous or inconsistent with the regulation; LBP-12-19, 76 NRC 184 (2012)

NRC has authority to define the scope of its proceedings, which, in enforcement proceedings, is to permit challenges solely on whether an order should be sustained; LBP-12-14, 76 NRC 1 (2012)

NRC has authority to determine, and to prescribe by rule or regulation, what additional information should be included in technical specifications to ensure public health and safety; LBP-12-25, 76 NRC 540 (2012)

NRC has substantial discretion in determining the threshold percentage at which foreign ownership becomes too great, but that threshold must at a minimum include 100% foreign ownership or the prohibition in the Act would be rendered superfluous; LBP-12-19, 76 NRC 184 (2012)

NRC may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest; LBP-12-21, 76 NRC 218 (2012)

NUCLEAR REGULATORY COMMISSION, JURISDICTION

NRC does not have authority to rule on challenges to Fish and Wildlife's compliance with the Endangered Species Act; CLI-12-21, 76 NRC 491 (2012)

NRC is precluded from second-guessing the conclusions in NPDES permits; LBP-12-16, 76 NRC 44 (2012)

OPERATING BASIS EARTHQUAKE

following an earthquake exceeding the design basis, the plant must remain shut down until licensee demonstrates to NRC that no functional damage occurred to those features necessary for continued operation without undue risk to the health and safety of the public; DD-12-2, 76 NRC 391 (2012)

licensee is required to shut down a nuclear power plant when the vibratory ground motion exceeds that of the operating basis earthquake; DD-12-2, 76 NRC 391 (2012)

request that NRC suspend the operating licenses until completion of a set of activities related to the effects of an earthquake that exceeded the plant's operating basis earthquake is granted in part and denied in part; DD-12-2, 76 NRC 391 (2012)

SUBJECT INDEX

there is no requirement for licensee to submit a license amendment request following an earthquake that exceeds its design basis; DD-12-2, 76 NRC 391 (2012)

walkdowns and inspections performed by licensee, industry, and NRC personnel following an earthquake the exceeded the plant's design basis are described; DD-12-2, 76 NRC 391 (2012)

OPERATING LICENSE AMENDMENT PROCEEDINGS

contentions that attack provisions of the current license that are not being changed and that are not fairly related to the license amendment request are outside the scope; LBP-12-25, 76 NRC 540 (2012)

opportunity for a hearing on license amendments is provided; CLI-12-20, 76 NRC 437 (2012)

petitioner must explain, with specificity, particular safety or legal reasons why moving a requirement from the license into a licensee-controlled document would be improper; LBP-12-25, 76 NRC 540 (2012)

scope of any hearing should include the proposed license amendments, and any health, safety, or environmental issues fairly raised by them; LBP-12-25, 76 NRC 540 (2012)

OPERATING LICENSE AMENDMENTS

board is directed to consider whether a confirmatory action letter issued to licensee constitutes a de facto license amendment that would be subject to a hearing opportunity under AEA § 189a, and, if so, whether the petition meets the standing and contention admissibility requirements; CLI-12-20, 76 NRC 437 (2012)

circumstances under which licensee may make changes to its facility and procedures as described in its updated FSAR and conduct tests or experiments not otherwise described in the UFSAR without obtaining a license amendment are discussed; CLI-12-20, 76 NRC 437 (2012)

license amendment to eliminate numerous detailed procedures for monitoring routine radioactive releases from the technical specifications and transfer them to a licensee-controlled document would allow licensee to make future changes to the radiation monitoring procedures without going through another license amendment; LBP-12-25, 76 NRC 540 (2012)

there is no requirement for licensee to submit a license amendment request following an earthquake that exceeds its design basis; DD-12-2, 76 NRC 391 (2012)

OPERATING LICENSE APPLICATIONS

application may incorporate any pertinent information submitted with application for construction permit; LBP-12-24, 76 NRC 503 (2012)

OPERATING LICENSE RENEWAL

although NRC has found that severe accident risks are small for all U.S. licensed nuclear power plants, NRC Staff is required under NEPA to consider mitigation alternatives during its license renewal review; LBP-12-26, 76 NRC 559 (2012)

applicant for a federal discharge permit must provide a certification from the state that the proposed activity will not violate state water pollution control standards; LBP-12-16, 76 NRC 44 (2012)

applicant need not include analyses of the environmental impacts of Category 1 issues in its environmental report because NRC Staff incorporates the GEIS analysis of Category 1 issues as part of the overall cost-benefit balance in the supplemental environmental impact statement for license renewal; CLI-12-19, 76 NRC 377 (2012)

applicant's environmental report must include a consideration of alternatives to mitigate severe accidents if NRC Staff has not previously considered them for applicant's plant in an environmental impact statement or related supplement or in an environmental assessment; CLI-12-19, 76 NRC 377 (2012)

applicants must include in their environmental reports any new and significant information of which they are aware; CLI-12-19, 76 NRC 377 (2012)

applicants must submit documentation of compliance with sections 316(a) and (b) of the Clean Water Act concerning thermal discharges; LBP-12-16, 76 NRC 44 (2012)

applications must contain any significant new information relevant to environmental impacts of license renewal of which applicant is aware, and new information generally may be challenged in individual adjudications; CLI-12-19, 76 NRC 377 (2012)

Category 2 issues focus on severe accident mitigation, to further reduce severe accident risk (probability or consequences); CLI-12-19, 76 NRC 377 (2012)

environmental reports for license renewal must address environmental impacts of the proposed action and compare those impacts to the impacts of alternative actions, but need only consider those alternatives that are reasonable; LBP-12-15, 76 NRC 14 (2012)

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for an electrical generation alternative to qualify for in-depth review, the alternative must be able to provide baseload power during the license renewal term; LBP-12-15, 76 NRC 14 (2012)

for Category 2 environmental issues, applicants must include a site-specific environmental analysis in their license renewal applications; CLI-12-19, 76 NRC 377 (2012)

if NRC Staff had in hand new information that could render invalid the original site-specific analysis, then such information should be identified and evaluated by Staff for its significance, consistent with NEPA requirements; CLI-12-19, 76 NRC 377 (2012)

if renewed license is set aside on appeal, the previous operating license would be reinstated; LBP-12-16, 76 NRC 44 (2012)

implication that any agency prerequisite with which applicant must comply to operate a plant during an extended term constitutes an “approval” under 10 C.F.R. 51.45(d) would entail an unreasonably strained definition of “approval”; LBP-12-15, 76 NRC 14 (2012)

licensee is not required to list an enforcement order and its compliance with the order’s terms in the environmental report supporting its application; LBP-12-15, 76 NRC 14 (2012)

none of the post-Fukushima orders or information requests can be characterized as approvals that must be obtained in connection with license renewal; LBP-12-15, 76 NRC 14 (2012)

request that NRC conduct a separate generic NEPA analysis regarding whether the Fukushima events constitute new and significant information under NEPA that must be analyzed as part of the environmental review for new reactor and license renewal decisions is premature; LBP-12-18, 76 NRC 127 (2012)

severe accident mitigation alternatives are category 2 items under 10 C.F.R. Part 51, Subpart A, App. B; LBP-12-15, 76 NRC 14 (2012)

waste confidence undergirds certain agency licensing decisions, in particular new reactor licensing and reactor license renewal; CLI-12-16, 76 NRC 63 (2012)

OPERATING LICENSE RENEWAL PROCEEDINGS

broad-based issues akin to safety culture such as operational history, quality assurance, quality control, management competence, and human factors are outside the scope of license renewal because they raise issues that are relevant to current plant operation; LBP-12-27, 76 NRC 583 (2012)

Commission remands license renewal proceeding to the board for the limited purpose of considering a rule waiver petition; CLI-12-19, 76 NRC 377 (2012)

contention seeking full impacts analysis of the power supply alternative of wind, either alone or in combination with solar and storage, is inadmissible because it fails to adequately demonstrate the capacity to produce baseload power; LBP-12-15, 76 NRC 14 (2012)

contentions on Category 1 issues amount to a challenge to the regulation barring challenges to generic environmental findings; CLI-12-19, 76 NRC 377 (2012)

current safety issues are beyond the scope of the proceeding; LBP-12-27, 76 NRC 583 (2012)

discussion necessary to support a NEPA alternatives contention in a reactor license renewal proceeding is compared with that for a Part 52 combined license proceeding; LBP-12-15, 76 NRC 14 (2012)

intervenor’s challenge to the aging management plan must consist of more than allegations that the AMP is deficient, but rather must point to specific ways the AMP is inadequate or wrong; LBP-12-27, 76 NRC 583 (2012)

intervenor’s must point to the specific ways in which the shield building monitoring aging management plan is wrong or inadequate to raise a genuine dispute with applicant’s license renewal application; LBP-12-27, 76 NRC 583 (2012)

it is in the public interest for adjudications to proceed, except for contentions associated with waste confidence issues; CLI-12-16, 76 NRC 63 (2012)

“new and significant information” requirement does not override, for purposes of litigating the issues in an adjudicatory proceeding, the exclusion of Category 1 issues in section 51.53(c)(3)(i) from site-specific review; CLI-12-19, 76 NRC 377 (2012)

proximity presumption of standing in has not been explicitly endorsed by the Commission, but has been cited favorably for renewals in the context of a combined license hearing; LBP-12-15, 76 NRC 14 (2012)

representational standing associated with causation in power reactor license renewal proceedings is deemed fulfilled if a member of the organization resides or has significant contacts in an area within a 50-mile radius of the facility; LBP-12-15, 76 NRC 14 (2012)

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OPERATING LICENSES

every license to operate a nuclear power reactor must contain a list of technical specifications necessary for adequate protection of public health and safety; LBP-12-25, 76 NRC 540 (2012)

NEPA regulations require consideration of severe accident mitigation alternatives in its environmental impact statements and supplements thereto at the operating license stage; LBP-12-15, 76 NRC 14 (2012)

ORAL ARGUMENT

board determined that the oral portion of the proceeding should be closed to the public to allow for the free-ranging and thorough examination of witnesses and to ensure the effective safeguard and prevention from disclosure of restricted data; LBP-12-21, 76 NRC 218 (2012)

written prefiled testimony and exhibits are typically submitted well in advance of the evidentiary hearing, and in most common types of hearings, licensing boards themselves, not the parties, orally examine the witnesses; LBP-12-21, 76 NRC 218 (2012)

PARTIES

NRC Staff is but one of the parties to a licensing proceeding, and the positions that it may take are in no way binding upon the licensing board; LBP-12-23, 76 NRC 445 (2012)

petitioners, not just parties, may request a rule waiver in NRC adjudicatory proceedings; CLI-12-19, 76 NRC 377 (2012)

there are places in NRC rules where “party” is used not as a term of art, but rather as a substitute for “participant”; CLI-12-19, 76 NRC 377 (2012)

PERMITS

another permitting regime for discharges does not foreclose the department from developing compatible methods of regulating water intakes at cooling water intake structures; LBP-12-16, 76 NRC 44 (2012)

board denies as untimely a motion to reopen and admit a new contention alleging that the licensee lacks certain required environmental permits and approvals from state and federal agencies; LBP-12-16, 76 NRC 44 (2012)

whether non-NRC permits are required is the responsibility of bodies that issue such permits; LBP-12-16, 76 NRC 44 (2012)

PHYSICAL SECURITY

petition challenging an immediately effective enforcement order asking that licensee take certain physical security measures in addition to those already required by NRC regulations, to protect the spent fuel it planned to store at its power plant site, was rejected; LBP-12-14, 76 NRC 1 (2012)

PLEADINGS

both the content of the draft environmental impact statement and the additional material submitted by the parties form part of the adjudicatory record; LBP-12-23, 76 NRC 445 (2012)

POLICY STATEMENTS

NRC policy statements are not a sufficient vehicle to preclude consideration of severe accident mitigation design alternatives, and NRC must take the requisite hard look at SAMDAs, giving them the careful consideration and disclosure required by the National Environmental Policy Act; CLI-12-19, 76 NRC 377 (2012)

public comment will be afforded in advance on any generic waste confidence document that NRC issues on remand, be it a fresh rule, a policy statement, an environmental assessment, or an environmental impact statement; CLI-12-16, 76 NRC 63 (2012)

See also NRC Policy

PRESIDING OFFICER, AUTHORITY

withdrawal of an application after issuance of a notice of hearing shall be on such terms as the presiding officer may prescribe; LBP-12-20, 76 NRC 215 (2012)

PRESIDING OFFICER, JURISDICTION

jurisdiction terminates when the time period for the Commission to direct certification expires, when the Commission renders a final decision, and when the presiding officer withdraws from the case upon disqualifying himself; CLI-12-17, 76 NRC 207 (2012)

PRESUMPTION OF LEGITIMACY

adjudicative bodies are to accord government records and official conduct a presumption of legitimacy; LBP-12-14, 76 NRC 1 (2012)

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record falls far short of rebutting the presumption that a petition for license modification, suspension, or revocation is a meaningful avenue for seeking administrative relief; LBP-12-14, 76 NRC 1 (2012)

PRO SE LITIGANTS

forcing a pro se intervenor to file monthly disclosures and closely follow a proceeding indefinitely solely to obtain a ruling on the merits of its claim would constitute significant unfairness and hardship; LBP-12-19, 76 NRC 184 (2012)

PROBABILISTIC RISK ASSESSMENT

although a contention might have been more detailed or otherwise better supported, petitioners have done enough to raise a question about the adequacy of the probability figures used in applicant's SAMA analysis, namely, whether they should have incorporated or otherwise acknowledged information from a Sandia study; LBP-12-18, 76 NRC 127 (2012)

PROCEDURE COMPLIANCE

although NEPA's requirements are procedural, federal agencies are held to a strict standard of compliance with the act's requirements; LBP-12-18, 76 NRC 127 (2012)

as an exercise of the Commission's inherent supervisory authority over agency proceedings, it need not address procedural issues that would merit further consideration in adjudications; CLI-12-16, 76 NRC 63 (2012)

PROXIMITY PRESUMPTION

in materials licensing matters, there is no predefined distance marking the area of potential offsite consequences on which to establish standing and thus this must be judged on a case-by-case basis; LBP-12-24, 76 NRC 503 (2012)

in reactor proceedings, the Commission applies a proximity presumption, whereby an individual's or organization's location within 50 miles of a reactor is sufficient to demonstrate the requisite threat of injury; LBP-12-24, 76 NRC 503 (2012)

petitioner in materials licensing actions is entitled to a presumption of standing if petitioner resides in the zone of reasonably foreseeable harm from the source of radioactivity and the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-12-24, 76 NRC 503 (2012)

representational standing associated with causation in power reactor license renewal proceedings is deemed fulfilled if a member of the organization resides or has significant contacts in an area within a 50-mile radius of the facility; LBP-12-15, 76 NRC 14 (2012)

standing criteria for federally recognized Indian tribes are less stringent, but only where the facility at issue is within the tribe's boundaries; LBP-12-24, 76 NRC 503 (2012)

PSYCHOLOGICAL EFFECTS

petitioner's assertion that continued operation of an independent spent fuel storage installation causes fear and anxiety among its members is not a valid claim under NEPA; LBP-12-24, 76 NRC 503 (2012)

PUBLIC COMMENTS

agency officials must, except where appropriate to protect confidentiality concerns of affected parties, provide the public with information about an undertaking and its effects on historic properties and seek public comment and input; LBP-12-23, 76 NRC 445 (2012)

environmental impact statements cannot fulfill their role of providing a springboard for public comment if they fail to evaluate significant issues such as measures that the agency's experts recommend to mitigate the consequences of a severe accident; LBP-12-18, 76 NRC 127 (2012)

public comment period is required for draft and supplemental environmental impact statements; CLI-12-16, 76 NRC 63 (2012)

public comment periods are beneficial only to the extent the public has meaningful information on which to comment; LBP-12-17, 76 NRC 71 (2012)

public comment will be afforded in advance on any generic waste confidence document that NRC issues on remand, be it a fresh rule, a policy statement, an environmental assessment, or an environmental impact statement; CLI-12-16, 76 NRC 63 (2012)

to the extent that intervenors' proposed contention is based on asserted deficiencies in NRC Staff's process for soliciting public participation pursuant to the National Historic Preservation Act, the contention fails to demonstrate a genuine dispute on a material issue of fact or law; LBP-12-23, 76 NRC 445 (2012)

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PUBLIC INTEREST

it is in the public interest for adjudications to proceed, except for contentions associated with waste confidence issues; CLI-12-16, 76 NRC 63 (2012)

PUBLIC MEETINGS

agencies shall plan for involving the public in the National Historic Preservation Act § 106 process but may use the agency's procedures for public involvement under NEPA if they provide adequate opportunities for public involvement; LBP-12-23, 76 NRC 445 (2012)

QUALITY ASSURANCE

effect of a pattern of quality assurance violations is not necessarily to show that particular safety-related information is false, but to erode confidence that NRC can reasonably have in, and create substantial uncertainty about the quality of, the work that is tainted by the alleged QA violations; LBP-12-23, 76 NRC 445 (2012)

QUALITY ASSURANCE PROGRAMS

license applicant may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, or any part thereof, but applicant retains responsibility for the program; LBP-12-23, 76 NRC 445 (2012)

licensees must establish measures to ensure that conditions adverse to quality are promptly identified and corrected; LBP-12-23, 76 NRC 445 (2012)

RADIOACTIVE EFFLUENTS

uranium enrichment facility licensee must survey radiation levels in unrestricted and controlled areas and radioactive materials in effluents released to unrestricted and controlled areas to demonstrate compliance with the dose limits for individual members of the public in section 20.1301; LBP-12-21, 76 NRC 218 (2012)

RADIOACTIVE RELEASES

independent spent fuel storage installation licensees must limit releases of radioactive materials to as low as is reasonably achievable, and establish operational limits to prevent doses to the public that exceed the limits of 10 C.F.R. 72.104(a)-(c); LBP-12-24, 76 NRC 503 (2012)

license amendment to eliminate numerous detailed procedures for monitoring routine radioactive releases from the technical specifications and transfer them to a licensee-controlled document would allow licensee to make future changes to the radiation monitoring procedures without going through another license amendment; LBP-12-25, 76 NRC 540 (2012)

loss of spent fuel confinement would produce a dose of 0.15 rem at the nearest site boundary, which is less than the 5-rem limit; LBP-12-24, 76 NRC 503 (2012)

uranium enrichment facility licensee must provide semiannual radiological release reports to NRC; LBP-12-21, 76 NRC 218 (2012)

RADIOACTIVE WASTE DISPOSAL

environmental report for application for land disposal may incorporate by reference information contained in the application or in any previous application, statement, or report filed with the Commission provided that such references are clear and specific; LBP-12-24, 76 NRC 503 (2012)

licensee must provide for ready retrieval of spent fuel from storage for further processing or disposal; LBP-12-24, 76 NRC 503 (2012)

RADIOACTIVE WASTE, LOW-LEVEL

depleted uranium and the other waste generated by uranium enrichment facilities are not spent fuel, transuranic waste, or 11e(2) byproduct material or specific kinds of wastes such as irradiated fuel and the liquid and solid wastes resulting from the processing of irradiated fuel, and thus are classified as low-level waste; LBP-12-21, 76 NRC 218 (2012)

LLRW traditionally has been defined by what it is not; LBP-12-21, 76 NRC 218 (2012)

RADIOACTIVE WASTE MANAGEMENT

if case-specific challenges to the waste confidence rule are appropriate for consideration, normal procedural rules will apply; CLI-12-16, 76 NRC 63 (2012)

to the extent NRC takes action with respect to waste confidence on a case-by-case basis, litigants can challenge such site-specific agency actions in the adjudicatory process; CLI-12-16, 76 NRC 63 (2012)

RADIOACTIVE WASTE, HIGH-LEVEL

NRC's current rule concerning the storage and disposal of high-level waste was remanded to the Commission to generate either a generic analysis that is forward looking and has enough breadth to

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support the Commission's conclusions or site-specific environmental impact statements in all relevant proceedings; LBP-12-21, 76 NRC 218 (2012)
relationship between the uranium enrichment facility's product and production of high-level waste is too attenuated to show the requirement of a reasonably close causal relationship required by NEPA; LBP-12-21, 76 NRC 218 (2012)

RADIOLOGICAL MONITORING

license amendment to eliminate numerous detailed procedures for monitoring routine radioactive releases from the technical specifications and transfer them to a licensee-controlled document would allow licensee to make future changes to the radiation monitoring procedures without going through another license amendment; LBP-12-25, 76 NRC 540 (2012)
petitioners' reliance on loss of future opportunities to challenge by adjudicatory intervention licensee-initiated changes in the low-level effluent monitoring details fell short of an admissible contention; LBP-12-25, 76 NRC 540 (2012)
uranium enrichment facility licensee must survey radiation levels in unrestricted and controlled areas and radioactive materials in effluents released to unrestricted and controlled areas to demonstrate compliance with the dose limits in section 20.1301 for individual members of the public; LBP-12-21, 76 NRC 218 (2012)
uranium enrichment facility licensee's radiological surveys must be as necessary and reasonable for compliance, and must include magnitude and extent of radiation levels, concentrations or quantities of radioactive material, and potential radiological hazards; LBP-12-21, 76 NRC 218 (2012)

REASONABLE ASSURANCE

uranium enrichment facility applicant's commitment to monitoring and the corrective action program provides reasonable assurance that public health and safety will be protected and applicant has a program in compliance with the regulations; LBP-12-21, 76 NRC 218 (2012)

RECORD OF DECISION

adjudicatory record and board decision and any Commission appellate decisions become, in effect, part of the final environmental impact statement; LBP-12-17, 76 NRC 71 (2012)
both the content of the draft environmental impact statement and the additional material submitted by the parties form part of the adjudicatory record; LBP-12-23, 76 NRC 445 (2012)
NRC must state whether the Commission has taken all practicable measures within its jurisdiction to avoid or minimize environmental harm from the alternative selected, and if not, to explain why those measures were not adopted; LBP-12-18, 76 NRC 127 (2012)
NRC must summarize any license conditions and monitoring programs adopted in connection with mitigation measures; LBP-12-18, 76 NRC 127 (2012)
NRC Staff's final environmental impact statement, in conjunction with the adjudicatory record, becomes the relevant record of decision for the environmental portion of the proceeding; LBP-12-17, 76 NRC 71 (2012)

REDUNDANCY

means to ensure that a redundant train of safe-shutdown cables and equipment is free of fire damage in instances in which redundant trains are located in the same fire area outside of primary containment are described; DD-12-3, 76 NRC 416 (2012)

REGULATIONS

contentions challenging existing NRC safety regulations are barred from consideration in adjudicatory proceedings; LBP-12-18, 76 NRC 127 (2012)
contentions may not challenge agency rules or regulations in any adjudicatory proceeding absent a waiver from the Commission; CLI-12-19, 76 NRC 377 (2012); LBP-12-24, 76 NRC 503 (2012)
contentions on Category 1 issues amount to a challenge to the regulation barring challenges to generic environmental findings; CLI-12-19, 76 NRC 377 (2012)
Council on Environmental Quality Guidance does not change or substitute for any law, regulation, or other legally binding requirement and is not legally enforceable, and some courts have declined to defer to it; LBP-12-23, 76 NRC 445 (2012)
Council on Environmental Quality regulations receive substantial deference from federal courts; LBP-12-17, 76 NRC 71 (2012)
NRC may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations as it determines are authorized by law and will not endanger

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life or property or the common defense and security and are otherwise in the public interest; LBP-12-21, 76 NRC 218 (2012)

NRC Staff granted an exemption from 10 C.F.R. 74.33(c)(5) subject to license conditions that require applicant to submit, for the Staff's prior review and approval, detailed analyses of such potentially credible diversion scenarios and the processes and management measures best suited to address them; LBP-12-21, 76 NRC 218 (2012)

NRC's original rule governing technical specifications, 10 C.F.R. 50.36, was promulgated in 1968 and lacked well-defined criteria as to what requirements need to be a technical specification and what provisions need not be in the license; LBP-12-25, 76 NRC 540 (2012)

plants licensed to operate before January 1, 1979, must meet fire safety regulations; DD-12-3, 76 NRC 416 (2012)

See also Amendment of Regulations; Rules of Practice; State Regulatory Requirements; Waste Confidence Rule

REGULATIONS, INTERPRETATION

courts give controlling weight to an agency's interpretation of its own regulation unless it is plainly erroneous or inconsistent with the regulation; LBP-12-19, 76 NRC 184 (2012)

degree to which 10 C.F.R. 50.59 applies is controlled not by how a modification is labeled but by whether the substance of the change brings that revision within the confines of this section; LBP-12-25, 76 NRC 540 (2012)

except where the Commission determines that a discretionary hearing is warranted, section 2.206 provides the means to challenge licensee actions under 10 C.F.R. 50.59; CLI-12-20, 76 NRC 437 (2012)

implication that any agency prerequisite with which applicant must comply to operate a plant during an extended term constitutes an "approval" under 10 C.F.R. 51.45(d) would entail an unreasonably strained definition of "approval"; LBP-12-15, 76 NRC 14 (2012)

in codifying the reopening requirements, the more neutral "exceptionally grave issue" language was chosen over the case law-based "sufficiently grave threat to public safety" phrasing; CLI-12-21, 76 NRC 491 (2012)

"new and significant information" requirement does not override, for purposes of litigating the issues in an adjudicatory proceeding, the exclusion of Category 1 issues in section 51.53(c)(3)(i) from site-specific review; CLI-12-19, 76 NRC 377 (2012)

scope of an admitted contention depends in large part on the bases set forth in the brief explanation of the basis for the contention required by 10 C.F.R. 2.309(f)(1)(ii); LBP-12-23, 76 NRC 445 (2012)

section 2.318(a) does not provide an exhaustive list of every situation where board jurisdiction lapses; CLI-12-17, 76 NRC 210 (2012); CLI-12-17, 76 NRC 207 (2012)

there are places in NRC rules where "party" is used not as a term of art, but rather as a substitute for "participant"; CLI-12-19, 76 NRC 377 (2012)

underlying purpose of 10 C.F.R. Part 50, Appendix R, § III.G is to ensure that the ability to achieve and maintain safe shutdown is preserved following a fire event; DD-12-3, 76 NRC 416 (2012)

REGULATORY OVERSIGHT PROCESS

NRC Staff will disposition violations as part of its ongoing reactor oversight process, and evidentiary hearings before NRC at the request of third parties are not a part of this process; DD-12-3, 76 NRC 416 (2012)

REINSTATEMENT OF LICENSE

if renewed license is set aside on appeal, the previous operating license would be reinstated; LBP-12-16, 76 NRC 44 (2012)

REMAND

Commission remands license renewal proceeding to the board for the limited purpose of considering a rule waiver petition; CLI-12-19, 76 NRC 377 (2012)

RENEWABLE ENERGY SOURCES

contention seeking full impacts analysis of the power supply alternative of wind, either alone or in combination with solar and storage, is inadmissible because it fails to adequately demonstrate the capacity to produce baseload power; LBP-12-15, 76 NRC 14 (2012)

demonstration that an alternative energy technology, although not commercially viable at the time of the application, is under development for large-scale use and is likely to be available during the period of extended operation has not been made; LBP-12-15, 76 NRC 14 (2012)

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for an electrical generation alternative to qualify for in-depth review, the alternative must be able to provide baseload power during the license renewal term; LBP-12-15, 76 NRC 14 (2012)

Maryland's renewable energy portfolio standard is discussed in the context of the consideration of alternatives under NEPA; LBP-12-17, 76 NRC 71 (2012)

REOPENING A RECORD

boards will reopen the record only when new evidence raises an exceptionally grave issue calling into question the safety of the licensed activity; LBP-12-16, 76 NRC 44 (2012)

combined license cannot be issued until the foreign ownership issue is properly corrected and then applicants may motion to reopen the record; LBP-12-19, 76 NRC 184 (2012)

"exceptionally grave" issues warranting reopening are limited to those affecting public safety; CLI-12-21, 76 NRC 491 (2012)

petitioners must reveal a seriously different picture of the environmental impact of a proposed project; LBP-12-16, 76 NRC 44 (2012)

reopening with respect to a specific issue would not have the effect of reopening the proceeding for adjudication on unrelated matters once a record is closed; CLI-12-17, 76 NRC 207 (2012)

See also Motions to Reopen

REPLY BRIEFS

parties may not raise new arguments that are outside the scope of their contentions, but may legitimately amplify arguments presented in support of the contention in order to fairly respond to arguments raised by the opposing party; LBP-12-23, 76 NRC 445 (2012)

REPORTING REQUIREMENTS

licensee determined that dry storage cask displacement and damage to the NUHOMS HD 32PTH caused by an earthquake exceeding the design basis were not reportable; DD-12-2, 76 NRC 391 (2012)

licensee is not required to list an enforcement order and its compliance with the order's terms in the environmental report supporting its operating license renewal application; LBP-12-15, 76 NRC 14 (2012)

to consider any or all of NRC Staff documents as "approvals" by reason of the fact that they request information that will be used to assess compliance with agency requirements would impose an unintended reporting encumbrance; LBP-12-15, 76 NRC 14 (2012)

uranium enrichment facility licensee must provide semiannual radiological release reports to NRC; LBP-12-21, 76 NRC 218 (2012)

uranium enrichment facility licensee must submit an annual update of the integrated safety analysis summary; LBP-12-21, 76 NRC 218 (2012)

uranium enrichment facility licensee must submit biannual reports to the NRC specifying the quantity of each of the principal radionuclides released to unrestricted areas in liquid and gaseous effluents during the previous 6 months of operation, and such other information as the Commission may require to estimate maximum potential annual radiation doses to the public resulting from effluent releases; LBP-12-21, 76 NRC 218 (2012)

uranium enrichment facility licensee's radiological surveys must be as necessary and reasonable for compliance, and must include magnitude and extent of radiation levels, concentrations or quantities of radioactive material, and potential radiological hazards; LBP-12-21, 76 NRC 218 (2012)

REQUEST FOR ACTION

any person may file a request to institute a proceeding to modify, suspend, or revoke a license, or for any other action as may be proper; CLI-12-20, 76 NRC 437 (2012)

except where the Commission determines that a discretionary hearing is warranted, section 2.206 provides the means to challenge licensee actions under 10 C.F.R. 50.59; CLI-12-20, 76 NRC 437 (2012)

hearing requests were dismissed as untimely and referred to the Executive Director for Operations for consideration under section 2.206; CLI-12-20, 76 NRC 437 (2012)

licensing boards are not the appropriate vehicles for reviewing 2.206 petitions; CLI-12-20, 76 NRC 437 (2012)

meaningfulness of section 2.206 petitions is discussed; LBP-12-24, 76 NRC 503 (2012)

petitioners who have been denied a hearing for raising an issue outside the scope of a proceeding could still raise the issue through a petition for enforcement under 10 C.F.R. 2.206; LBP-12-14, 76 NRC 1 (2012)

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record before the board falls far short of rebutting the presumption that a petition for license modification, suspension, or revocation is a meaningful avenue for seeking administrative relief; CLI-12-20, 76 NRC 437 (2012); LBP-12-14, 76 NRC 1 (2012)

referrals may be made when a petition does not satisfy the legal requirements for a hearing or intervention and it is determined that referral to the section 2.206 process is appropriate; CLI-12-20, 76 NRC 437 (2012)

request that NRC suspend the operating licenses until completion of a set of activities related to the effects of an earthquake that exceeded the plant's operating basis earthquake is granted in part and denied in part; DD-12-2, 76 NRC 391 (2012)

request that NRC take enforcement action to correct alleged noncompliance with fire protection regulations is granted; DD-12-3, 76 NRC 416 (2012)

the 2.206 process provides a forum for individuals to advance their concerns and to obtain full or partial relief, or written reasons why the requested relief is not warranted, and the Commission may then review the NRC Staff's findings on its own motion; CLI-12-20, 76 NRC 437 (2012)

to the extent petitioner seeks to have applicant implement safety measures in addition to those ordered, its recourse is to petition for rulemaking or to petition for license modification, suspension, or revocation; LBP-12-14, 76 NRC 1 (2012)

REQUEST FOR ADDITIONAL INFORMATION

asking questions and seeking additional information is an essential part of NRC's licensing process, and such questioning does not automatically give rise to an admissible contention; LBP-12-27, 76 NRC 583 (2012)

none of the post-Fukushima orders or information requests can be characterized as approvals that must be obtained in connection with renewal of an operating license; LBP-12-15, 76 NRC 14 (2012)

to consider any or all of NRC Staff documents as "approvals" by reason of the fact that they request information that will be used to assess compliance with agency requirements would impose an unintended reporting encumbrance; LBP-12-15, 76 NRC 14 (2012)

to the extent that applicant proposes modifications to the facility in response to a request for information, NEPA also requires the consideration of the effectiveness and relative costs of a range of alternatives for satisfying the NRC's concerns; LBP-12-15, 76 NRC 14 (2012)

RESTRICTED DATA

board determined that the oral portion of the proceeding should be closed to the public to allow for the free-ranging and thorough examination of witnesses and to ensure the effective safeguard and prevention from disclosure of restricted data; LBP-12-21, 76 NRC 218 (2012)

REVIEW

See Appellate Review; Environmental Review; NRC Staff Review; Standard of Review

REVIEW, DISCRETIONARY

Commission may at its discretion grant a party's request for interlocutory review of a board decision; CLI-12-18, 76 NRC 371 (2012)

petition for review will be granted at the Commission's discretion, giving due weight to the existence of a substantial question with respect to one or more of the considerations of 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-12-21, 76 NRC 491 (2012)

review is granted only where the party demonstrates that the issue for which it seeks review threatens it with immediate and serious irreparable impact which, as a practical matter, could not be alleviated through an appeal following the presiding officer's final decision or affects the basic structure of the proceeding in a pervasive or unusual manner; CLI-12-18, 76 NRC 371 (2012)

REVIEW, SUA SPONTE

the 2.206 process provides a forum for individuals to advance their concerns and to obtain full or partial relief, or written reasons why the requested relief is not warranted, and the Commission may then review the NRC Staff's findings on its own motion; CLI-12-20, 76 NRC 437 (2012)

RIPENESS

in determining whether an issue is ripe for judicial decision, a court must evaluate fitness of the issues for judicial decision and hardship to the parties of withholding court consideration; LBP-12-19, 76 NRC 184 (2012)

this doctrine designed to prevent Article III courts from premature judicial review of abstract controversies and to protect the agencies from judicial interference until an administrative decision has

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been formalized and its effects felt in a concrete way by the challenging parties; LBP-12-19, 76 NRC 184 (2012)

this doctrine is drawn both from Article III limitations on judicial power and from prudential reasons for refusing to exercise jurisdiction; LBP-12-19, 76 NRC 184 (2012)

RISK ASSESSMENT

applicant is required to evaluate and reduce the risk of events that could have significant impacts on workers or the public; LBP-12-21, 76 NRC 218 (2012)

high-consequence events are required to be highly unlikely and intermediate-consequence events to be unlikely; LBP-12-21, 76 NRC 218 (2012)

See also Probabilistic Risk Assessment

RISKS

continued operation and licensing activities post-Fukushima do not pose an imminent risk to public health and safety; LBP-12-18, 76 NRC 127 (2012)

NEPA is not intended to encompass every possible impact, and does not encompass potential losses due to individuals' perception of a risk; LBP-12-24, 76 NRC 503 (2012)

NRC has found, through its individual plant examination and individual plant examination for external events processes and other risk studies, that the severe accident risks are small for all U.S. licensed nuclear power plants; LBP-12-26, 76 NRC 559 (2012)

RULE OF REASON

agencies must only consider reasonably foreseeable impacts in its environmental impact statement, and need not address those that are remote and speculative or inconsequentially small; LBP-12-17, 76 NRC 71 (2012)

environmental reports for license renewal must address environmental impacts of the proposed action and compare those impacts to the impacts of alternative actions, but need only consider those alternatives that are reasonable; LBP-12-15, 76 NRC 14 (2012)

if an alternative is commercially feasible and capable of bringing about the ends of the proposed project, then Staff may not dismiss it merely because it is inconsistent with the preferences of interested parties, or for other reasons inconsistent with NEPA's rule of reason; LBP-12-17, 76 NRC 71 (2012)

NEPA's "hard look" requirement is tempered by a rule of reason; LBP-12-17, 76 NRC 71 (2012)

project goals determine the alternatives that are considered reasonable; LBP-12-17, 76 NRC 71 (2012)

RULEMAKING

any interested person may petition the Commission to issue, amend, or rescind any regulation; CLI-12-19, 76 NRC 377 (2012)

concerns about licensee's response to a prolonged station blackout are being addressed in a rulemaking; DD-12-2, 76 NRC 391 (2012)

licensing boards should not accept in individual license proceedings contentions which are or are about to become the subject of general rulemaking by the Commission; CLI-12-16, 76 NRC 63 (2012); LBP-12-24, 76 NRC 503 (2012)

NRC's longstanding practice of considering environmental issues through general rulemaking in appropriate circumstances has been endorsed by higher courts; LBP-12-18, 76 NRC 127 (2012)

to the extent petitioner seeks to have applicant implement safety measures in addition to those ordered, its recourse is to petition for rulemaking or to petition for license modification, suspension, or revocation; LBP-12-14, 76 NRC 1 (2012)

RULES OF PRACTICE

absent error of law or abuse of discretion, the Commission generally defers to board contention admissibility rulings; CLI-12-19, 76 NRC 377 (2012)

admissible contentions must satisfy the six basic requirements of specificity, brief explanation, scope, materiality, concise statement of alleged facts or expert opinion, and genuine dispute; LBP-12-25, 76 NRC 540 (2012)

admissible contentions must satisfy the six pleading requirements of 10 C.F.R. 2.309(f)(1); LBP-12-18, 76 NRC 127 (2012)

all contentions must proffer an issue of law or fact that is material to the outcome of a licensing proceeding, meaning that the subject matter of the contention must impact the grant or denial of a pending license application; LBP-12-27, 76 NRC 583 (2012)

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all material facts set forth by summary disposition movant will be considered to be admitted unless controverted by the opposing party; LBP-12-26, 76 NRC 559 (2012)

any contention that falls outside the specified scope of the proceeding must be rejected; LBP-12-27, 76 NRC 583 (2012)

appeal as of right on the question whether a hearing request should have been wholly denied is allowed; CLI-12-19, 76 NRC 377 (2012)

attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support admission; LBP-12-15, 76 NRC 14 (2012)

boards have an independent obligation to determine whether petitioners meet the threshold criterion for intervention even if their standing is uncontested; LBP-12-24, 76 NRC 503 (2012)

boards look to judicial concepts of standing and determine whether petitioner is threatened with a concrete injury and the injury is fairly traceable to the licensing action and capable of being redressed by a favorable decision; LBP-12-24, 76 NRC 503 (2012)

boards may appropriately view petitioner's supporting information in a light favorable to petitioner, but failure to provide such information requires rejection of the contention; LBP-12-15, 76 NRC 14 (2012)

boards must view the record in the light most favorable to the summary disposition opponent; LBP-12-19, 76 NRC 184 (2012)

burden is on intervenors to demonstrate that a balancing of the factors of 10 C.F.R. 2.309(c)(i)-(viii) weighs in favor of granting a late-filed petition; LBP-12-27, 76 NRC 583 (2012)

contemporaneous judicial standing concepts are applied in NRC proceedings; LBP-12-15, 76 NRC 14 (2012)

contention alleging deficiencies or errors in an application also must indicate some significant link between the claimed deficiency and either the health and safety of the public or the environment; LBP-12-27, 76 NRC 583 (2012)

contention or amendment or supplement to a contention is considered timely if filed 60 days of the date when the material information on which it is based first becomes available to the moving party through service, publication, or any other means; LBP-12-27, 76 NRC 583 (2012)

contention that challenges the legal sufficiency of the final environmental impact statement for a combined license is within the scope of the proceeding; LBP-12-18, 76 NRC 127 (2012)

contention that fails to raise a material issue is inadmissible; LBP-12-25, 76 NRC 540 (2012)

contention that falls outside the specified scope of the proceeding must be rejected; LBP-12-15, 76 NRC 14 (2012); LBP-12-18, 76 NRC 127 (2012)

contentions may not challenge agency rules or regulations in any adjudicatory proceeding absent a waiver from the Commission; CLI-12-19, 76 NRC 377 (2012)

contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and directive referring the proceeding to the licensing board; LBP-12-15, 76 NRC 14 (2012); LBP-12-27, 76 NRC 583 (2012)

contentions must focus on the license application, including the safety analysis report/technical report and the environmental report, challenging either specific portions or alleged omissions so as to establish a genuine dispute on a material issue of law or fact; LBP-12-15, 76 NRC 14 (2012)

contentions must meet the six admissibility requirements of 10 C.F.R. 2.309(f)(1); LBP-12-23, 76 NRC 445 (2012); LBP-12-24, 76 NRC 503 (2012)

contentions must provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact, including references to specific portions of the application that petitioner disputes; LBP-12-24, 76 NRC 503 (2012)

contentions submitted after the initial filing period for receipt of petitions to intervene must be based on information not previously available and materially different than information previously available and must be submitted in a timely fashion based on availability of the new information; LBP-12-27, 76 NRC 583 (2012)

contentions that fail to directly controvert the application or that mistakenly assert that the application does not address a relevant issue will be dismissed; LBP-12-15, 76 NRC 14 (2012); LBP-12-27, 76 NRC 583 (2012)

eight-factor balancing test is applied to determine whether nontimely contentions should be admitted; LBP-12-27, 76 NRC 583 (2012)

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exception to the timeliness requirement for motions to reopen is provided to consider an exceptionally grave issue even if it is untimely presented; CLI-12-21, 76 NRC 491 (2012)

failure to comply with any of the six pleading requirements of 10 C.F.R. 2.309(f)(1) is grounds for dismissal of a contention; LBP-12-15, 76 NRC 14 (2012); LBP-12-24, 76 NRC 503 (2012); LBP-12-25, 76 NRC 540 (2012); LBP-12-27, 76 NRC 583 (2012)

failure to provide sufficient factual or expert support for claims in a contention in contravention of section 2.309(f)(1)(v) also may have failed to show a genuine dispute with the application as required under section 2.309(f)(1)(vi); LBP-12-15, 76 NRC 14 (2012)

for an individual or organization to be deemed a “person whose interest may be affected by the proceeding,” so as to have standing as of right such that party status can be granted in an agency adjudicatory proceeding, the intervention petition must comply with 10 C.F.R. 2.309(d)(1)(i)-(iv); LBP-12-15, 76 NRC 14 (2012)

four-factor test for showing of special circumstances demonstrating that application of a rule would not serve the purpose for which it was adopted is outlined; CLI-12-19, 76 NRC 377 (2012)

general requirements for admissibility for all contentions are set forth in 10 C.F.R. 2.309(f)(1)(i)-(vi); LBP-12-27, 76 NRC 583 (2012)

good cause for the failure to file on time is afforded the most weight in the balancing of the eight late-filing factors of 10 C.F.R. 2.309(c)(i)-(viii); LBP-12-27, 76 NRC 583 (2012)

if a contention satisfies the timeliness requirement of 10 C.F.R. 2.309(f)(2)(iii), then, by definition, it is not subject to 10 C.F.R. 2.309(c) which specifically applies to nontimely filings; LBP-12-18, 76 NRC 127 (2012)

if a new contention is deemed untimely under section 2.309(f)(2)(iii), it will be evaluated under section 2.309(c)(1), which provides that a board presented with a nontimely contention shall balance eight factors to determine whether to admit the contention; LBP-12-23, 76 NRC 445 (2012)

if applicants believe that their actions render a contention moot, then they should promptly file a motion for summary disposition; LBP-12-19, 76 NRC 184 (2012)

if intervenors raise issues that are not within the scope of an admitted contention and have not sought to amend the contention to include those issues, the board will not consider the issues; LBP-12-23, 76 NRC 445 (2012)

if leave to file a motion for reconsideration is granted, the motion must demonstrate a compelling circumstance, such as the existence of a clear and material error in a decision, which could not have reasonably been anticipated, which renders the decision invalid; CLI-12-17, 76 NRC 207 (2012)

if no answer to a summary disposition motion is filed, the decision sought, if appropriate, must be rendered; LBP-12-26, 76 NRC 559 (2012)

if petitioner neglects to provide the requisite support for its contentions, it is not within the board’s power to make assumptions or draw inferences that favor petitioner, nor may the board supply information that is lacking; LBP-12-27, 76 NRC 583 (2012)

if summary disposition movant fails to meet its burden, then the board must deny the motion even if opponent chooses not to respond or its response is inadequate; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)

if summary disposition movant meets its burden, opponent must set forth specific facts showing that there is a genuine issue and may not rely on mere allegations or denials; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)

in codifying the reopening requirements, the more neutral “exceptionally grave issue” language was chosen over the case law-based “sufficiently grave threat to public safety” phrasing; CLI-12-21, 76 NRC 491 (2012)

in materials licensing matters, there is no predefined distance marking the area of potential offsite consequences on which to establish standing and thus this must be judged on a case-by-case basis; LBP-12-24, 76 NRC 503 (2012)

in reactor proceedings, the Commission applies a proximity presumption, whereby an individual’s or organization’s location within 50 miles of a reactor is sufficient to demonstrate the requisite threat of injury; LBP-12-24, 76 NRC 503 (2012)

intervenors must provide a concise statement of the facts or expert opinions that support their position and upon which they intend to rely at the hearing; LBP-12-18, 76 NRC 127 (2012)

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intervention petitioner can justify filing a petition after the initial deadline has expired by showing that the contention is based on new information and that the petition was filed promptly after the new information became available; LBP-12-25, 76 NRC 540 (2012)

intervention petitioner must either file its petition by the date specified in the *Federal Register* notice or show good cause for filing after the deadline; LBP-12-25, 76 NRC 540 (2012)

intervention petitioner must establish standing and propose at least one admissible contention; LBP-12-25, 76 NRC 540 (2012)

intervention petitioners must establish standing by demonstrating the nature of their right under the Atomic Energy Act to be made a party to the proceeding, nature and extent of their interest in the proceeding, and possible effect of any decision in the proceeding on their interest; LBP-12-24, 76 NRC 503 (2012)

intervention petitions must include a statement of petitioner's name, address, and telephone contact information, nature of petitioner's right under the AEA to be made a party, nature of petitioner's interest in the proceeding, whether property, financial or otherwise, and possible effect of any decision or order that might be issued in the proceeding on the petitioner's interest; LBP-12-15, 76 NRC 14 (2012)

lateness is a sufficient ground on which to deny a motion for reconsideration; CLI-12-17, 76 NRC 207 (2012)

licensing boards are to apply the same standards for granting or denying summary disposition as would be applied in Subpart G proceedings, as set forth in 10 C.F.R. 2.710; LBP-12-19, 76 NRC 184 (2012)

licensing boards in Subpart L proceedings must apply the summary disposition standard for Subpart G proceedings found in 10 C.F.R. 2.710; LBP-12-23, 76 NRC 445 (2012)

licensing boards must examine the record in the light most favorable to the opponent of summary disposition and draw all justifiable inferences in favor of that party; LBP-12-23, 76 NRC 445 (2012)

materiality requirement for contention admission often dictates that allegations of deficiencies or errors in an application also indicate some significant link between the claimed deficiency and either the public health and safety or the environment; LBP-12-15, 76 NRC 14 (2012)

motion for reconsideration is denied for failure to meet the high standard of 10 C.F.R. 2.323(e); LBP-12-26, 76 NRC 559 (2012)

motions must be rejected if they do not include a certification by the attorney or representative of the moving party that movant has made a sincere effort to contact other parties in the proceeding and resolve the issue(s) raised in the motion, and that movant's efforts to resolve the issue(s) have been unsuccessful; LBP-12-27, 76 NRC 583 (2012)

motions to amend a contention must be based on new information that is materially different from information previously available and must be submitted in a timely fashion; LBP-12-27, 76 NRC 583 (2012)

motions to reopen to admit a new contention must be submitted in a timely fashion, based on new information that is materially different from information previously available or a balancing of the factors in 10 C.F.R. 2.326 must weigh in favor of admitting the contention; CLI-12-21, 76 NRC 491 (2012); LBP-12-16, 76 NRC 44 (2012)

movant is entitled to summary disposition if filings in the proceeding together with statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that movant is entitled to a decision as a matter of law; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)

neither mere speculation nor bare or conclusory assertions, even by an expert, alleging that a matter should be considered will suffice to allow admission of a proffered contention; LBP-12-15, 76 NRC 14 (2012); LBP-12-27, 76 NRC 583 (2012)

new contention filed after the record has closed must also satisfy general contention admissibility requirements of 10 C.F.R. 2.309(f)(1)(i)-(vi); LBP-12-16, 76 NRC 44 (2012)

no defense to an insufficient showing for summary disposition is required; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)

no NRC rule or regulation is subject to attack in any adjudicatory proceeding; LBP-12-24, 76 NRC 503 (2012)

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nontimely contentions might be admissible if petitioner can show that the contention is based on new information and was filed promptly after the new information became available; LBP-12-27, 76 NRC 583 (2012)

NRC's strict contention rule is designed to avoid resource-intensive hearings where petitioners have not provided sufficient support for their technical claims, and do not demonstrate a potential to meaningfully participate and inform a hearing; LBP-12-27, 76 NRC 583 (2012)

one fundamental purpose of the prehearing conference and the scheduling order is expediting the disposition of the proceeding; LBP-12-19, 76 NRC 184 (2012)

only relevant, material, and reliable evidence that is not unduly repetitious will be admitted; LBP-12-21, 76 NRC 218 (2012)

organization seeking standing as a party must show either a discrete injury to its own institutional interests or authorization to represent an individual who would have standing in his or her own right; LBP-12-24, 76 NRC 503 (2012)

parties may not raise new arguments that are outside the scope of their contentions, but may legitimately amplify arguments presented in support of the contention in order to fairly respond to arguments raised by the opposing party; LBP-12-23, 76 NRC 445 (2012)

petition for review will be granted at the Commission's discretion, giving due weight to the existence of a substantial question with respect to one or more of the considerations of 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-12-21, 76 NRC 491 (2012)

petitioner can justify missing a contention filing deadline by showing that the delay was caused by factors such as a weather event or unexpected health issues; LBP-12-27, 76 NRC 583 (2012)

petitioner in materials licensing actions is entitled to a presumption of standing if petitioner resides in the zone of reasonably foreseeable harm from the source of radioactivity and the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-12-24, 76 NRC 503 (2012)

petitioner is required to present the factual allegations and/or expert opinion necessary to support its contention; LBP-12-15, 76 NRC 14 (2012); LBP-12-27, 76 NRC 583 (2012)

petitioner must demonstrate that a contention asserts an issue of law or fact that is material to the findings the NRC must make to support the action that is involved in the proceeding; LBP-12-18, 76 NRC 127 (2012)

petitioner who seeks to demonstrate standing to intervene on behalf of its members must show that an individual member can fulfill all necessary standing elements and has authorized petitioner to represent his or her interests; LBP-12-15, 76 NRC 14 (2012)

petitioners may seek waiver of a regulation by demonstrating both special circumstances and that the regulation would not serve the purposes for which it was adopted; LBP-12-24, 76 NRC 503 (2012)

petitioners who have not shown good cause for their late filing must demonstrate that the balance of the remaining factors weighs in their favor; CLI-12-21, 76 NRC 491 (2012)

petitions for reconsideration may not be filed except upon leave of the adjudicatory body that rendered the decision and that procedural deficiency is reason enough to deny the request; CLI-12-17, 76 NRC 207 (2012)

petitions for review must be filed within 15 days; CLI-12-17, 76 NRC 207 (2012)

presiding officer's jurisdiction terminates when the time period for the Commission to direct certification expires, when the Commission renders a final decision, and when the presiding officer withdraws from the case upon disqualifying himself; CLI-12-17, 76 NRC 207 (2012)

procedure for obtaining a rule waiver is set out in 10 C.F.R. 2.335(a)-(d); CLI-12-19, 76 NRC 377 (2012)

properly formulated contentions must focus on the license application in question, challenging either specific portions of, or alleged omissions from, the application (including the safety analysis report/technical report and the ER) so as to establish that a genuine dispute exists with the applicant on a material issue of law or fact; LBP-12-27, 76 NRC 583 (2012)

proposed new or amended contentions shall be deemed timely if filed within 30 days of the date when the new and material information on which it is based first becomes available; LBP-12-23, 76 NRC 445 (2012)

purpose of contention pleading requirements is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-12-25, 76 NRC 540 (2012)

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reconsideration motions must be filed within 10 days of the action for which reconsideration is requested; CLI-12-17, 76 NRC 207 (2012)

representational standing associated with causation in power reactor license renewal proceedings is deemed fulfilled if a member of the organization resides or has significant contacts in an area within a 50-mile radius of the facility; LBP-12-15, 76 NRC 14 (2012)

revised rules no longer require leave from the presiding officer to amend a contention or file a new contentions; LBP-12-27, 76 NRC 583 (2012)

rules on contention admissibility are strict by design; LBP-12-25, 76 NRC 540 (2012)

section 2.318(a) does not provide an exhaustive list of every situation where board jurisdiction lapses; CLI-12-17, 76 NRC 210 (2012); CLI-12-17, 76 NRC 207 (2012)

showing of special circumstances demonstrating that application of the rule would not serve the purpose for which it was adopted is required for rule waiver; CLI-12-19, 76 NRC 377 (2012)

simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support the admission of the contention; LBP-12-27, 76 NRC 583 (2012)

standing criteria for federally recognized Indian tribes are less stringent, but only where the facility at issue is within the tribe's boundaries; LBP-12-24, 76 NRC 503 (2012)

strict rules of evidence do not apply to written submissions; LBP-12-21, 76 NRC 218 (2012)

subject matter of contentions must impact the grant or denial of a pending license application; LBP-12-15, 76 NRC 14 (2012)

summary disposition movant bears the initial burden of showing the absence of a genuine issue as to any material fact and that it is entitled to judgment as a matter of law; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)

summary disposition opponent need not demonstrate that it would prevail on the issues at hand, but it must at least show that there is a genuine dispute of material fact to be tried; LBP-12-19, 76 NRC 184 (2012)

summary disposition proponent bears the burden of establishing that no facts remain in dispute, even if the motion is unopposed; LBP-12-26, 76 NRC 559 (2012)

summary disposition shall be granted if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-12-26, 76 NRC 559 (2012)

to reopen a closed proceeding, intervenors must file a motion demonstrating, among other things, that a materially different result would be or would have been likely had the newly proffered evidence been considered initially; LBP-12-19, 76 NRC 184 (2012)

to trigger a full adjudicatory hearing, petitioners must be able to proffer at least some minimal factual and legal foundation in support of their contentions; LBP-12-27, 76 NRC 583 (2012)

untimeliness constitutes sufficient grounds on its own for denying a motion to reopen and thus the board need not consider other subsections under sections 2.326 and 2.309; LBP-12-16, 76 NRC 44 (2012)

when determining whether a new contention is timely for purpose of reopening a record, the Commission looks to whether the information on which it is based was previously available or whether it is materially different from what was previously available, and whether it has been submitted in a timely fashion based on the information's availability; CLI-12-21, 76 NRC 491 (2012)

when ruling on summary disposition motions, the Commission applies standards analogous to those used by federal courts when ruling on motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; LBP-12-23, 76 NRC 445 (2012)

where an issue arises over the scope of an admitted contention, NRC opinions have long referred back to the bases set forth in support of the contention; LBP-12-23, 76 NRC 445 (2012)

withdrawal of an application after issuance of a notice of hearing shall be on such terms as the presiding officer may prescribe; LBP-12-20, 76 NRC 215 (2012)

RULES OF PROCEDURE

if case-specific challenges to the waste confidence rule are appropriate for consideration, normal procedural rules will apply; CLI-12-16, 76 NRC 63 (2012)

See also Federal Rules of Civil Procedure; Hearing Procedures

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SAFE SHUTDOWN SYSTEMS

licensee cited for violations for use of unapproved operator manual actions to mitigate safe shutdown equipment malfunctions caused by a fire-induced single spurious actuation in lieu of protecting the equipment; DD-12-3, 76 NRC 416 (2012)

means to ensure that a redundant train of safe-shutdown cables and equipment is free of fire damage in instances in which redundant trains are located in the same fire area outside of primary containment are described; DD-12-3, 76 NRC 416 (2012)

underlying purpose of 10 C.F.R. Part 50, Appendix R, § III.G is to ensure that the ability to achieve and maintain safe shutdown is preserved following a fire event; DD-12-3, 76 NRC 416 (2012)

SAFETY

“exceptionally grave” issues warranting reopening of a record are limited to those affecting public safety; CLI-12-21, 76 NRC 491 (2012)

spent nuclear fuel can be stored safely at licensed nuclear facilities until such time as a long-term geologic storage facility is constructed; LBP-12-24, 76 NRC 503 (2012)

SAFETY ANALYSIS

NRC cannot look to the sufficiency of safety standards enacted under the Atomic Energy Act to avoid its NEPA obligations; LBP-12-18, 76 NRC 127 (2012)

See also Integrated Safety Analysis

SAFETY CULTURE

broad-based issues akin to safety culture such as operational history, quality assurance, quality control, management competence, and human factors are outside the scope of license renewal because they raise issues that are relevant to current plant operation; LBP-12-27, 76 NRC 583 (2012)

SAFETY ISSUES

almost every item originally contained in technical specifications has some conceivable connection to safety, but this general premise is insufficient, by itself, as a ground for intervention; LBP-12-25, 76 NRC 540 (2012)

although safety issues are reviewed under the adequacy and sufficiency standard, licensing boards conducting mandatory hearings must independently consider the final balance among the conflicting costs and benefits when reviewing National Environmental Policy Act issues; LBP-12-21, 76 NRC 218 (2012)

contentions challenging existing NRC safety regulations are barred from consideration in adjudicatory proceedings; LBP-12-18, 76 NRC 127 (2012)

current safety issues are beyond the scope of a license renewal proceeding; LBP-12-27, 76 NRC 583 (2012)

impact of a proposed action on public safety is an issue that must be considered under the National Environmental Policy Act as well as the Atomic Energy Act; LBP-12-18, 76 NRC 127 (2012)

See also Health and Safety

SAFETY-RELATED

all credible accident sequences must be identified in the integrated safety analysis summary as well as items relied on for safety and necessary safety controls; LBP-12-21, 76 NRC 218 (2012)

uranium enrichment facility applications must identify radiological and chemical hazards, facility hazards that could affect safety of licensed materials, potential accident sequences and their consequences and likelihood of occurrence, and each item relied on for safety; LBP-12-21, 76 NRC 218 (2012)

SCHEDULE, BRIEFING

unless a deadline has been specified in the scheduling order for the proceeding, the determination of timeliness is subject to a reasonableness standard that depends on the facts and circumstances in the case; LBP-12-27, 76 NRC 583 (2012)

SCHEDULING

one fundamental purpose of the prehearing conference and the scheduling order is expediting the disposition of the proceeding; LBP-12-19, 76 NRC 184 (2012)

SECURITY PLANS

NRC Staff granted an exemption from 10 C.F.R. 74.33(c)(5) subject to license conditions that require applicant to submit, for NRC Staff's prior review and approval, detailed analyses of such potentially

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credible diversion scenarios and the processes and management measures best suited to address them;
LBP-12-21, 76 NRC 218 (2012)

See also Physical Security

SEISMIC ANALYSIS

modernization plans for seismic instrumentation following failure of an annunciation panel in the main control room are discussed; DD-12-2, 76 NRC 391 (2012)

SENSITIVE UNCLASSIFIED NONSAFEGUARDS INFORMATION

boards have closed their hearings even when they were concerned with less sensitive (i.e., nonpublic but unclassified) types of information; LBP-12-21, 76 NRC 218 (2012)

SEVERE ACCIDENT MITIGATION ALTERNATIVES

Category 2 issues focus on severe accident mitigation, to further reduce severe accident risk (probability or consequences); CLI-12-19, 76 NRC 377 (2012)

extensive damage mitigation guidelines are intended to guide onsite emergency actions and they include guidance and strategies intended to maintain or restore core cooling and containment and spent fuel pool cooling capabilities under the circumstances associated with the loss of large areas of the plant due to fire or explosion; LBP-12-18, 76 NRC 127 (2012)

in a combined license proceeding, NRC may require implementation of mitigation measures it deems necessary and appropriate by imposing conditions in the license; LBP-12-18, 76 NRC 127 (2012)

SAMAs are category 2 items under 10 C.F.R. Part 51, Subpart A, App. B; CLI-12-19, 76 NRC 377 (2012); LBP-12-15, 76 NRC 14 (2012)

SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS

absent a valid regulation limiting NRC's NEPA obligations, the consideration of alternative severe accident mitigation measures may not be excluded from the agency's NEPA reviews; LBP-12-18, 76 NRC 127 (2012)

although a contention might have been more detailed or otherwise better supported, petitioners have done enough to raise a question about the adequacy of the probability figures used in applicant's SAMA analysis, namely, whether they should have incorporated or otherwise acknowledged information from a Sandia study; LBP-12-18, 76 NRC 127 (2012)

although NEPA does not mention mitigation, by administrative practice and regulation, mitigation plays an important role in the discharge by federal agencies of their procedural duty under NEPA to prepare an EIS; LBP-12-18, 76 NRC 127 (2012)

although NRC has found that severe accident risks are small for all U.S. licensed nuclear power plants, NRC Staff is required under NEPA to consider mitigation alternatives during its license renewal review; LBP-12-26, 76 NRC 559 (2012)

applicant's use of the MAAP code to generate fission product source terms for use in its severe accident mitigation alternatives analysis is reasonable under NEPA; LBP-12-26, 76 NRC 559 (2012)

CEQ regulations require that agencies discuss possible mitigation measures in defining the scope of the EIS, in discussing alternatives to the proposed action and consequences of that action, and in explaining its ultimate decision; LBP-12-18, 76 NRC 127 (2012)

contention proposing alternative inputs or methodologies for SAMA analysis must present some factual or expert basis for why the proposed changes in the analysis are warranted; LBP-12-26, 76 NRC 559 (2012)

discussion of steps that can be taken to mitigate adverse environmental consequences plays an important role in the environmental analysis under NEPA; LBP-12-18, 76 NRC 127 (2012)

draft environmental impact statements must include a preliminary analysis that considers and weighs alternatives available for reducing or avoiding adverse environmental effects; LBP-12-18, 76 NRC 127 (2012)

environmental impact statements cannot fulfill their role of providing a springboard for public comment if they fail to evaluate significant issues such as measures that the agency's experts recommend to mitigate the consequences of a severe accident; LBP-12-18, 76 NRC 127 (2012)

environmental impact statements must include a reasonably complete discussion of possible mitigation measures; LBP-12-18, 76 NRC 127 (2012)

following the Three Mile Island accident NRC set safety goals with respect to severe accidents;
LBP-12-18, 76 NRC 127 (2012)

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implicit in NEPA's demand that an agency prepare a detailed environmental impact statement is an understanding that the EIS will discuss the extent to which adverse effects can be avoided; LBP-12-18, 76 NRC 127 (2012)

license renewal applicant's environmental report must include a consideration of alternatives to mitigate severe accidents if NRC Staff has not previously considered them for applicant's plant in an environmental impact statement or related supplement or in an environmental assessment; CLI-12-19, 76 NRC 377 (2012)

licensing boards must admit an adequately supported contention alleging that the agency's NEPA analysis of severe accident mitigation alternatives is deficient; LBP-12-18, 76 NRC 127 (2012)

mitigation must be discussed in sufficient detail in an environmental impact statement to ensure that environmental consequences have been fairly evaluated; LBP-12-18, 76 NRC 127 (2012)

NEPA regulations require consideration of SAMAs in environmental impact statements and supplements thereto at the operating license stage; LBP-12-15, 76 NRC 14 (2012)

NEPA requires a hard look at severe accident mitigation measures; LBP-12-26, 76 NRC 559 (2012)

NEPA requires that agencies provide a reasonably complete discussion of possible severe accident mitigation measures; LBP-12-18, 76 NRC 127 (2012)

NEPA severe accident mitigation alternatives analysis need not reflect the most conservative, or worst-case, analysis; LBP-12-26, 76 NRC 559 (2012)

NRC generally reviews severe accident mitigation alternatives using a cost-benefit analysis, and SAMAs that are not cost-beneficial need not be implemented by licensee; LBP-12-18, 76 NRC 127 (2012)

NRC policy statement is not a sufficient vehicle to preclude consideration of severe accident mitigation design alternatives, and NRC must take the requisite hard look at them, giving them the careful consideration and disclosure required by the National Environmental Policy Act; CLI-12-19, 76 NRC 377 (2012)

NRC's obligation to evaluate new recommendations for enhanced accident mitigation does not depend upon whether intervenors have identified unique characteristics of the site or the proposed new reactor; LBP-12-18, 76 NRC 127 (2012)

record of decision for the license must state whether NRC has taken all practicable measures within its jurisdiction to avoid or minimize environmental harm from the alternative selected, and if not, to explain why those measures were not adopted; LBP-12-18, 76 NRC 127 (2012)

record of decision must also summarize any license conditions and monitoring programs adopted in connection with mitigation measures; LBP-12-18, 76 NRC 127 (2012)

SAMA analysis for relicensing must be performed by licensee and included in the license renewal application; LBP-12-26, 76 NRC 559 (2012)

unless a contention, submitted with adequate factual, documentary, or expert support, raises a potentially significant deficiency in the SAMA analysis, a SAMA-related dispute will not be material to the licensing decision and is not appropriate for litigation in NRC proceedings; LBP-12-26, 76 NRC 559 (2012)

SHIELD BUILDING

intervenors must point to the specific ways in which the shield building monitoring aging management plan is wrong or inadequate to raise a genuine dispute with applicant's license renewal application; LBP-12-27, 76 NRC 583 (2012)

SHUTDOWN

following an earthquake exceeding the design basis, the plant must remain shut down until licensee demonstrates to NRC that no functional damage occurred to those features necessary for continued operation without undue risk to the health and safety of the public; DD-12-2, 76 NRC 391 (2012)

licensee is required to shut down a nuclear power plant when the vibratory ground motion exceeds that of the operating basis earthquake; DD-12-2, 76 NRC 391 (2012)

SOLAR POWER

contention seeking full impacts analysis of the power supply alternative of wind, either alone or in combination with solar and storage, is inadmissible because it fails to adequately demonstrate the capacity to produce baseload power; LBP-12-15, 76 NRC 14 (2012)

technologies available for utility-scale plants are discussed; LBP-12-17, 76 NRC 71 (2012)

SUBJECT INDEX

SOURCE MATERIALS LICENSES

application may incorporate information contained in previous applications, statements or reports filed with the Commission, provided that the reference is clear and specific; LBP-12-24, 76 NRC 503 (2012)

SOURCE TERM

applicant's use of the MAAP code to generate fission product source terms for use in its severe accident mitigation alternatives analysis is reasonable under NEPA; LBP-12-26, 76 NRC 559 (2012)

SPECIAL NUCLEAR MATERIALS

technical specifications must include information on the amount, kind, and source of special nuclear material, the place of use, and the particular characteristics of the facility; LBP-12-25, 76 NRC 540 (2012)

SPECIAL NUCLEAR MATERIALS LICENSES

applications may incorporate by reference information contained in previous applications, statements, or reports filed with the Commission if the references are clear and specific; LBP-12-24, 76 NRC 503 (2012)

SPENT FUEL COOLING SYSTEM

extensive damage mitigation guidelines are intended to guide onsite emergency actions and they include guidance and strategies intended to maintain or restore core cooling and containment and spent fuel pool cooling capabilities under the circumstances associated with the loss of large areas of the plant due to fire or explosion; LBP-12-18, 76 NRC 127 (2012)

revision of 10 C.F.R. 50.63 to expand the coping capability to include cooling the spent fuel, preventing a loss-of-coolant accident, and preventing containment failure would be a significant benefit; LBP-12-18, 76 NRC 127 (2012)

SPENT FUEL POOLS

contention concerning need under NEPA to include a discussion of the environmental impacts of spent fuel pool leakage, SFP fires, and the lack of a spent fuel repository is held in abeyance; LBP-12-26, 76 NRC 559 (2012)

SPENT FUEL STORAGE

contention concerning need under NEPA to include a discussion of the environmental impacts of spent fuel pool leakage, SFP fires, and the lack of a spent fuel repository is held in abeyance; LBP-12-26, 76 NRC 559 (2012)

in light of the dim prospects for moving forward with a geologic repository in the contemporary political environment, NRC must consider the environmental effects of storing waste in spent fuel pools or casks for extended periods; LBP-12-24, 76 NRC 503 (2012)

in light of the vacatur of the Waste Confidence Decision and Temporary Storage Rule, environmental reports must consider the reasonably foreseeable impacts of permanent storage of spent fuel, and contentions concerning the failure of the ER to do so must be held in abeyance; LBP-12-24, 76 NRC 503 (2012)

license applicants were permitted to omit any discussion of any environmental impact of spent fuel storage in independent spent fuel storage installations for the period following the term of the initial ISFSI license in any environmental report, environmental impact statement, environmental assessment, or other analysis; LBP-12-24, 76 NRC 503 (2012)

licensee determined that dry storage cask displacement and damage to the NUHOMS HD 32PTH caused by an earthquake exceeding the design basis were not reportable; DD-12-2, 76 NRC 391 (2012)

licensee must protect spent fuel cladding from degradation during storage or confine the fuel in such a way that degradation does not cause operational problems when removed from storage; LBP-12-24, 76 NRC 503 (2012)

licensee must provide for ready retrieval of spent fuel from storage for further processing or disposal; LBP-12-24, 76 NRC 503 (2012)

licensee's assessment of the structural integrity and radiation shielding capability of both the TN-32 cask and NUHOMS HD dry cask storage systems following an earthquake exceeding the plant's design basis is described; DD-12-2, 76 NRC 391 (2012)

spent nuclear fuel can be stored safely at licensed nuclear facilities until such time as a long-term geologic storage facility is constructed; LBP-12-24, 76 NRC 503 (2012)

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SPENT FUEL STORAGE CASKS

loss of spent fuel confinement would produce a dose of 0.15 rem at the nearest site boundary, which is less than the 5-rem limit; LBP-12-24, 76 NRC 503 (2012)

STANDARD OF PROOF

applicant in a licensing proceeding bears the burden of proof by a preponderance of the evidence on safety issues that it is entitled to the applied-for license; LBP-12-17, 76 NRC 71 (2012)

STANDARD OF REVIEW

absence of an error of law or abuse of discretion, the Commission generally defers to board contention admissibility rulings; CLI-12-19, 76 NRC 377 (2012)

although safety issues are reviewed under the adequacy and sufficiency standard, licensing boards conducting mandatory hearings must independently consider the final balance among the conflicting costs and benefits when reviewing NEPA issues; LBP-12-21, 76 NRC 218 (2012)

boards conducting mandatory hearings should not second-guess the underlying technical or factual findings by the NRC Staff; LBP-12-21, 76 NRC 218 (2012)

discretionary interlocutory review is granted only where the party demonstrates that the issue for which it seeks review threatens it with immediate and serious irreparable impact which, as a practical matter, could not be alleviated through an appeal following the presiding officer's final decision or affects the basic structure of the proceeding in a pervasive or unusual manner; CLI-12-18, 76 NRC 371 (2012)

giving appropriate deference to NRC Staff technical expertise, boards are to probe the logic and evidence supporting NRC Staff findings and decide whether those findings are sufficient to support license issuance; LBP-12-21, 76 NRC 218 (2012)

licensing boards conducting mandatory hearings on uncontested issues should conduct a simple sufficiency review of uncontested issues, not a de novo review; LBP-12-21, 76 NRC 218 (2012)

STANDARD REVIEW PLANS

guidance documents do not have the force of law, but the SRP for the Review of a License Application for a Fuel Cycle Facility has benefited from extensive consideration within the agency, with which the Commission has never expressed disagreement; LBP-12-21, 76 NRC 218 (2012)

STANDING TO INTERVENE

boards have an independent obligation to determine whether petitioners meet the threshold criteria for intervention even if their standing is uncontested; LBP-12-24, 76 NRC 503 (2012)

boards look to judicial concepts of standing and determine whether petitioner is threatened with a concrete injury and the injury is fairly traceable to the licensing action and capable of being redressed by a favorable decision; LBP-12-15, 76 NRC 14 (2012); LBP-12-24, 76 NRC 503 (2012)

for an individual or organization to be deemed a "person whose interest may be affected by the proceeding," so as to have standing as of right such that party status can be granted in an agency adjudicatory proceeding, the intervention petition must comply with 10 C.F.R. 2.309(d)(1)(i)-(iv); LBP-12-15, 76 NRC 14 (2012)

in materials licensing matters, there is no predefined distance marking the area of potential offsite consequences on which to establish standing and thus this must be judged on a case-by-case basis; LBP-12-24, 76 NRC 503 (2012)

in reactor proceedings, the Commission applies a proximity presumption, whereby an individual's or organization's location within 50 miles of a reactor is sufficient to demonstrate the requisite threat of injury; LBP-12-24, 76 NRC 503 (2012)

intervention petitions must include a statement of petitioner's name, address, and telephone contact information, nature of petitioner's right under the AEA to be made a party, nature of petitioner's interest in the proceeding, whether property, financial or otherwise, and possible effect of any decision or order that might be issued in the proceeding on the petitioner's interest; LBP-12-15, 76 NRC 14 (2012)

petitioner in materials licensing actions is entitled to a presumption of standing if petitioner resides in the zone of reasonably foreseeable harm from the source of radioactivity and the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-12-24, 76 NRC 503 (2012)

petitioners must establish standing by demonstrating the nature of their right under the Atomic Energy Act to be made a party to the proceeding, nature and extent of their interest in the proceeding, and possible effect of any decision in the proceeding on their interest; LBP-12-24, 76 NRC 503 (2012)

SUBJECT INDEX

- proximity presumption of standing in an license renewal proceeding has not been explicitly endorsed by the Commission, but has been cited favorably for renewals in the context of a combined license hearing; LBP-12-15, 76 NRC 14 (2012)
- standing criteria for federally recognized Indian tribes are less stringent, but only where the facility at issue is within the tribe's boundaries; LBP-12-24, 76 NRC 503 (2012)
- STANDING TO INTERVENE, ORGANIZATIONAL
- organization must show either a discrete injury to its own institutional interests or authorization to represent an individual who would have standing in his or her own right; LBP-12-24, 76 NRC 503 (2012)
- STANDING TO INTERVENE, REPRESENTATIONAL
- petitioner must show that an individual member can fulfill all necessary standing elements and has authorized petitioner to represent his or her interests; LBP-12-15, 76 NRC 14 (2012); LBP-12-24, 76 NRC 503 (2012)
- representational standing associated with causation in power reactor license renewal proceedings is deemed fulfilled if a member of the organization resides or has significant contacts in an area within a 50-mile radius of the facility; LBP-12-15, 76 NRC 14 (2012)
- STATE GOVERNMENT
- intervenors may question whether the draft environmental impact statement includes a sufficient justification for its reliance upon future actions of a state agency; LBP-12-23, 76 NRC 445 (2012)
- STATE REGULATORY REQUIREMENTS
- it is unlawful for any person to harvest, possess, or sell river herring in the Commonwealth of Massachusetts or in waters under its jurisdiction; LBP-12-16, 76 NRC 44 (2012)
- NRC adjudication is not the appropriate forum for a challenge to a decision by a state regulatory agency; LBP-12-23, 76 NRC 445 (2012)
- STATION BLACKOUT
- concerns about licensee's response to a prolonged station blackout are being addressed in a rulemaking; DD-12-2, 76 NRC 391 (2012)
- each nuclear power plant must be able to cool the reactor core and maintain containment integrity in the event of a station blackout of a specified duration; LBP-12-18, 76 NRC 127 (2012)
- fire detection systems shall be automatic and capable of operating with or without offsite power; DD-12-3, 76 NRC 416 (2012)
- station blackout is a beyond-design-basis event and therefore regulations requiring emergency operating procedures do not apply, and so operators would follow a set of procedures required by 10 C.F.R. 50.63(c)(ii) & (iii); LBP-12-18, 76 NRC 127 (2012)
- STATUTORY CONSTRUCTION
- connection of the three prohibitions on foreign ownership with the conjunction "or" rather than "and" shows that a license may not be granted if *any* of the three prohibitions is violated; LBP-12-19, 76 NRC 184 (2012)
- court is hesitant to adopt an interpretation of a congressional enactment that renders superfluous another portion of that same law; LBP-12-19, 76 NRC 184 (2012)
- courts must give effect, if possible, to every clause and word of a statute to avoid any construction that implies that the legislature was ignorant of the meaning of the language it employed; LBP-12-19, 76 NRC 184 (2012)
- it would be impermissible to construe the prohibition of foreign ownership so as to make it redundant or otherwise deprive it of operative effect; LBP-12-19, 76 NRC 184 (2012)
- language of NEPA indicates that Congress did not intend that it be precluded by the Atomic Energy Act; LBP-12-18, 76 NRC 127 (2012)
- legislative history and case law require compliance with NEPA unless compliance is impossible, or another statute specifically prohibits compliance with NEPA; LBP-12-18, 76 NRC 127 (2012)
- no provision of a statute should be construed to be entirely redundant; LBP-12-19, 76 NRC 184 (2012)
- statutes must, if possible, be construed so that every word has operative effect; LBP-12-19, 76 NRC 184 (2012)
- SUBPART L PROCEEDINGS
- complexity and number of issues in a proceeding do not per se lead ineluctably to the conclusion that cross-examination is necessary to ensure a fair and adequate hearing; CLI-12-18, 76 NRC 371 (2012)

SUBJECT INDEX

licensing boards are to apply the same standards for granting or denying summary disposition as would be applied in Subpart G proceedings, as set forth in 10 C.F.R. 2.710; LBP-12-19, 76 NRC 184 (2012)
licensing boards in Subpart L proceedings must apply the summary disposition standard for Subpart G proceedings found in 10 C.F.R. 2.710; LBP-12-23, 76 NRC 445 (2012)

where parties have provided prefired direct testimony in Subpart L cases and submitted a list of confidential proposed questions for the board to ask the witnesses, the need for cross-examination by parties should be a rare circumstance, except where questions of witness credibility, motive, or intent are at issue; CLI-12-18, 76 NRC 371 (2012)

SUMMARY DISPOSITION

all material facts set forth by summary disposition movant will be considered to be admitted unless controverted by the opposing party; LBP-12-26, 76 NRC 559 (2012)

boards apply a two-part test in determining whether to grant summary disposition; LBP-12-26, 76 NRC 559 (2012)

boards must view the record in the light most favorable to the summary disposition opponent; LBP-12-19, 76 NRC 184 (2012)

even where no factual dispute exists, summary disposition may only be granted if movant is entitled to judgment as a matter of law; LBP-12-26, 76 NRC 559 (2012)

if a board grants summary disposition of a foreign ownership contention, it could terminate the proceeding or move ahead with a pending environmental contention; LBP-12-19, 76 NRC 184 (2012)

if applicants believe that their actions render a contention moot, then they should promptly file a motion for summary disposition; LBP-12-19, 76 NRC 184 (2012)

if movant fails to meet its burden, then the board must deny the motion even if opponent chooses not to respond or its response is inadequate; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)

if movant meets its burden, opponent must set forth specific facts showing that there is a genuine issue and may not rely on mere allegations or denials; LBP-12-19, 76 NRC 184 (2012)

if no answer to a summary disposition motion is filed, the decision sought, if appropriate, must be rendered; LBP-12-26, 76 NRC 559 (2012)

if proponent meets its burden, opponent must counter each adequately supported material fact with its own statement of material facts in dispute and supporting documentation and cannot rely on mere allegations or denials, or the facts in controversy will be deemed admitted; LBP-12-23, 76 NRC 445 (2012)

if reasonable minds could differ as to the import of the evidence, summary disposition is not appropriate; LBP-12-23, 76 NRC 445 (2012)

if, after considering all arguments and facts proffered by the parties, no genuine issue of material fact exists, the Board may dispose of all arguments based on the pleadings; LBP-12-19, 76 NRC 184 (2012)

judgment should be granted only where the truth is clear; LBP-12-23, 76 NRC 445 (2012)

licensing boards in Subpart L proceedings must apply the summary disposition standard for Subpart G proceedings found in 10 C.F.R. 2.710; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)

licensing boards must examine the record in the light most favorable to the opponent of summary disposition and draw all justifiable inferences in favor of that party; LBP-12-23, 76 NRC 445 (2012)

licensing boards or presiding officers should not conduct a trial on affidavits; LBP-12-23, 76 NRC 445 (2012)

movant bears the initial burden of showing the absence of a genuine issue as to any material fact and that it is entitled to judgment as a matter of law; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)

movant is entitled to summary disposition if filings in the proceeding together with statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that movant is entitled to a decision as a matter of law; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)

no defense to an insufficient showing by movant is required; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)

NRC applies summary disposition standards analogous to the standards used by the federal courts when ruling on motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; LBP-12-19, 76 NRC 184 (2012)

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opponent need not demonstrate that it would prevail on the issues at hand, but it must at least show that there is a genuine dispute of material fact to be tried; LBP-12-19, 76 NRC 184 (2012)

purely legal disputes can be appropriately resolved by summary disposition; LBP-12-26, 76 NRC 559 (2012)

regardless of the level of the dispute, at the summary disposition stage, it is not proper for a board to choose which expert has the better of the argument; LBP-12-23, 76 NRC 445 (2012)

summary disposition proponent bears the burden of establishing that no facts remain in dispute, even if the motion is unopposed; LBP-12-26, 76 NRC 559 (2012)

summary disposition shall be granted if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-12-26, 76 NRC 559 (2012)

to avoid summary disposition, intervenors must present contrary evidence so significantly probative that it creates a material factual issue; LBP-12-19, 76 NRC 184 (2012)

when considering a motion for summary disposition, the function of the board is not to weigh the evidence and determine the truth of the matter but to determine whether there is a genuine issue for hearing; LBP-12-23, 76 NRC 445 (2012)

when presented with conflicting expert opinions, licensing boards should be mindful that summary disposition is rarely proper; LBP-12-23, 76 NRC 445 (2012)

when ruling on summary disposition motions, the Commission applies standards analogous to those used by federal courts when ruling on motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; LBP-12-23, 76 NRC 445 (2012)

SUMMARY JUDGMENT

movant bears the initial burden of demonstrating that no genuine issue as to any material fact exists and that it is entitled to judgment as a matter of law; LBP-12-23, 76 NRC 445 (2012)

NRC applies summary disposition standards analogous to the standards used by the federal courts when ruling on motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; LBP-12-19, 76 NRC 184 (2012); LBP-12-23, 76 NRC 445 (2012)

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

agencies need not supplement an EIS every time new information comes to light after the EIS is finalized because it would render agency decisionmaking intractable; LBP-12-18, 76 NRC 127 (2012)

Fukushima-related environmental impacts are not so significant as to satisfy the Commission's criterion for supplementing an environmental impact statement; LBP-12-18, 76 NRC 127 (2012)

if after preparation of the EIS, the agency is presented with new information or changed circumstances and there remains major federal action to occur, and if the new information is sufficient to show that the remaining action will affect the quality of the human environment in a significant manner or to a significant extent not already considered, an SEIS must be prepared; LBP-12-18, 76 NRC 127 (2012)

license renewal applicant need not include analyses of the environmental impacts of Category 1 issues in its environmental report because NRC Staff incorporates the GEIS analysis of Category 1 issues as part of the overall cost-benefit balance in the supplemental environmental impact statement for license renewal; CLI-12-19, 76 NRC 377 (2012)

NEPA imposes a nondiscretionary duty on the NRC to amend an environmental impact statement if new and significant information comes to light; LBP-12-18, 76 NRC 127 (2012)

NEPA regulations require consideration of severe mitigation alternatives in its EISs and supplements thereto at the operating license stage; LBP-12-15, 76 NRC 14 (2012)

NRC Staff must prepare supplemental environmental review documents when there are 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; LBP-12-18, 76 NRC 127 (2012)

public comment period is required for draft and supplemental EIS; CLI-12-16, 76 NRC 63 (2012)

subject of postdecision SEIS is not expressly addressed in NEPA; LBP-12-18, 76 NRC 127 (2012)

supplementing an EIS is not necessary unless new information presents a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; LBP-12-18, 76 NRC 127 (2012)

SUBJECT INDEX

to satisfy the hard-look requirement, NRC must provide detailed analysis of new information and a reasonable explanation of the agency's decision concerning supplementation, not merely a conclusory assertion that the agency has reviewed the new information and concluded that no supplement is required; LBP-12-18, 76 NRC 127 (2012)

SUSPENSION OF LICENSE

request that NRC suspend the operating licenses until completion of a set of activities related to the effects of an earthquake that exceeded the plant's operating basis earthquake is granted in part and denied in part; DD-12-2, 76 NRC 391 (2012)

SUSPENSION OF PROCEEDING

no imminent risk to public health and safety or to the common defense and security post-Fukushima necessitates suspensions; LBP-12-18, 76 NRC 127 (2012)

request to suspend licensing and rulemaking activities pending completion of the NRC Task Force's evaluation of the implications of the Fukushima accident and issuance of any proposed regulatory decisions and/or environmental analyses is denied; LBP-12-18, 76 NRC 127 (2012)

TECHNICAL SPECIFICATIONS

almost every item originally contained in technical specifications has some conceivable connection to safety, but this general premise is insufficient, by itself, as a ground for intervention; LBP-12-25, 76 NRC 540 (2012)

contention challenging removal of details from licensee's technical specifications to a licensee-controlled document was rejected; LBP-12-25, 76 NRC 540 (2012)

every license to operate a nuclear power reactor must contain a list of technical specifications necessary for adequate protection of public health and safety; LBP-12-25, 76 NRC 540 (2012)

information on the amount, kind, and source of special nuclear material, the place of use, and the particular characteristics of the facility must be included; LBP-12-25, 76 NRC 540 (2012)

license amendment to eliminate numerous detailed procedures for monitoring routine radioactive releases from the technical specifications and transfer them to a licensee-controlled document would allow licensee to make future changes to the radiation monitoring procedures without going through another license amendment; LBP-12-25, 76 NRC 540 (2012)

NRC has authority to determine, and to prescribe by rule or regulation, what additional information should be included in technical specifications to ensure public health and safety; LBP-12-25, 76 NRC 540 (2012)

NRC revised 10 C.F.R. 50.36 in 1995 and established clearer criteria as to what constitutes a technical specification that must be in the license; LBP-12-25, 76 NRC 540 (2012)

NRC's original rule governing technical specifications, 10 C.F.R. 50.36, was promulgated in 1968 and lacked well-defined criteria as to what requirements need to be a technical specification and what provisions need not be in the license; LBP-12-25, 76 NRC 540 (2012)

petitioner must explain, with specificity, particular safety or legal reasons why moving a requirement from the license into a licensee-controlled document would be improper; LBP-12-25, 76 NRC 540 (2012)

petitioners' reliance on loss of future opportunities to challenge by adjudicatory intervention licensee-initiated changes in the low-level effluent monitoring details fell short of an admissible contention; LBP-12-25, 76 NRC 540 (2012)

technical requirements that are incorporated in an NRC license are the technical specifications; LBP-12-25, 76 NRC 540 (2012)

TERMINATION OF PROCEEDING

if a board grants summary disposition of a foreign ownership contention, it could terminate the proceeding or move ahead with a pending environmental contention; LBP-12-19, 76 NRC 184 (2012)
once all contentions have been decided, the contested proceeding is terminated; LBP-12-19, 76 NRC 184 (2012)

proceeding is terminated because applicants have failed to provide information to show that they have changed their ownership situation so as to satisfy foreign ownership, control, and domination requirements; LBP-12-22, 76 NRC 443 (2012)

TERRORISM

issues are dependent upon the actions and decisions of the President, Congress, international organizations, and officials of other nations, and constitute issues of international policy unrelated to NRC's licensing criteria; LBP-12-21, 76 NRC 218 (2012)

SUBJECT INDEX

NRC is required to analyze potential terrorist attacks as part of its NEPA review with regard to facilities located in the Ninth Circuit; LBP-12-21, 76 NRC 218 (2012)
the Commission has determined that there is no relationship between NRC licensing actions and terrorism; LBP-12-21, 76 NRC 218 (2012)

TESTIMONY

at the request of any party a court must order witnesses excluded so that they cannot hear other witnesses' testimony; LBP-12-21, 76 NRC 218 (2012)
courts exclude witnesses prior to their testimony to discourage or expose outright fabrication and restrain the natural tendency of witnesses to tailor their testimony to that of earlier witnesses; LBP-12-21, 76 NRC 218 (2012)
written prefiled testimony and exhibits are typically submitted well in advance of the evidentiary hearing, and in most common types of hearings, licensing boards themselves, not the parties, orally examine the witnesses; LBP-12-21, 76 NRC 218 (2012)

THREE MILE ISLAND ACCIDENT

following the accident NRC set safety goals with respect to severe accidents; LBP-12-18, 76 NRC 127 (2012)

TRANSMISSION SERVICES

member transmission providers are owners of transmission facilities, with the regional transmission organization exercising functional control over those facilities, calculating available transmission capability, and receiving, approving, and scheduling transmission service; LBP-12-15, 76 NRC 14 (2012)
regional transmission organization status was granted to provide open access to an electricity transmission system to all member utilities in 15 Midwestern states and one Canadian province; LBP-12-15, 76 NRC 14 (2012)

TRUST RELATIONSHIP DOCTRINE

applicant is not required to discuss the federal government's trust responsibility to Indian tribes in its environmental report; LBP-12-24, 76 NRC 503 (2012)
federal government owes a trust responsibility to Indian tribes; LBP-12-24, 76 NRC 503 (2012)
federal trust responsibility to Indian tribes extends not just to the Interior Department, but attaches to the federal government as a whole; LBP-12-24, 76 NRC 503 (2012)
federal trust responsibility to Indian tribes rests solely with the federal government and cannot be discharged by applicants; LBP-12-24, 76 NRC 503 (2012)

URANIUM ENRICHMENT FACILITIES

all credible accident sequences must be identified in the ISA Summary as well as items relied on for safety and necessary safety controls; LBP-12-21, 76 NRC 218 (2012)
applicant is required to evaluate and reduce the risk of events that could have significant impacts on workers or the public; LBP-12-21, 76 NRC 218 (2012)
applicant is required to prepare an environmental report; LBP-12-21, 76 NRC 218 (2012)
applicant must establish and maintain a configuration management system to evaluate, implement, and track changes to the site, structures, processes, systems, equipment, components, computer programs, and activities of personnel; LBP-12-21, 76 NRC 218 (2012)
applicant's commitment to monitoring and the corrective action program provides reasonable assurance that public health and safety will be protected and applicant has a program in compliance with the regulations; LBP-12-21, 76 NRC 218 (2012)
applications must identify radiological and chemical hazards, facility hazards that could affect safety of licensed materials, potential accident sequences and their consequences and likelihood of occurrence, and each item relied on for safety; LBP-12-21, 76 NRC 218 (2012)
change requests are reviewed against the criteria in the license application and the criteria in 10 C.F.R. 70.72 to determine whether NRC approval is required prior to implementing the change; LBP-12-21, 76 NRC 218 (2012)
depleted uranium and the other waste generated by uranium enrichment facilities are not spent fuel, transuranic waste, or 11e(2) byproduct material or specific kinds of wastes such as irradiated fuel and the liquid and solid wastes resulting from the processing of irradiated fuel, and thus are classified as low-level waste; LBP-12-21, 76 NRC 218 (2012)

SUBJECT INDEX

design of new facilities must provide for adequate protection against natural phenomena, fires and explosions, chemical risks produced from licensed material, facility conditions, and hazardous chemicals produced from licensed material; LBP-12-21, 76 NRC 218 (2012)

deviations from the original design must be evaluated against the criteria in 10 C.F.R. 70.72 to determine if a license amendment is required or if applicant could make the change without NRC approval; LBP-12-21, 76 NRC 218 (2012)

facilities are to be licensed pursuant to Atomic Energy Act §§ 53 and 63; LBP-12-21, 76 NRC 218 (2012)

guidance documents do not have the force of law, but the Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility has benefited from extensive consideration within the agency, with which the Commission has never expressed disagreement; LBP-12-21, 76 NRC 218 (2012)

high-consequence events are required to be highly unlikely and intermediate-consequence events to be unlikely; LBP-12-21, 76 NRC 218 (2012)

integrated safety analysis requirements for licensing are detailed; LBP-12-21, 76 NRC 218 (2012)

integrated safety analysis summary must accompany the license application and contain a general description of the site and the facility with emphasis on factors that could affect safety and description of each process analyzed in the ISA; LBP-12-21, 76 NRC 218 (2012)

license applications must contain the place at which the activity is to be performed and the general plan for carrying out the activity as well as a description of equipment and facilities that will be used by applicant to protect health and minimize danger to life or property; LBP-12-21, 76 NRC 218 (2012)

licensee must provide semiannual radiological release reports to NRC; LBP-12-21, 76 NRC 218 (2012)

licensee must submit an annual update of the integrated safety analysis summary; LBP-12-21, 76 NRC 218 (2012)

licensee must submit biannual reports to the NRC specifying the quantity of each of the principal radionuclides released to unrestricted areas in liquid and gaseous effluents during the previous 6 months of operation, and such other information as the Commission may require to estimate maximum potential annual radiation doses to the public resulting from effluent releases; LBP-12-21, 76 NRC 218 (2012)

licensee must survey radiation levels in unrestricted and controlled areas and radioactive materials in effluents released to unrestricted and controlled areas to demonstrate compliance with the dose limits for individual members of the public in section 20.1301; LBP-12-21, 76 NRC 218 (2012)

licensee's radiological surveys must be as necessary and reasonable for compliance, and must include magnitude and extent of radiation levels, concentrations or quantities of radioactive material, and potential radiological hazards; LBP-12-21, 76 NRC 218 (2012)

NRC is required to verify through inspection that the facility has been constructed in accordance with the requirements of the license; LBP-12-21, 76 NRC 218 (2012)

NRC Staff granted an exemption from 10 C.F.R. 74.33(c)(5) subject to license conditions that require applicant to submit, for the Staff's prior review and approval, detailed analyses of such potentially credible diversion scenarios and the processes and management measures best suited to address them; LBP-12-21, 76 NRC 218 (2012)

qualitative benefits and costs in the cost-benefit analysis for the uranium enrichment facility are estimated to be small, moderate, or large, using the same general definitions found in the regulations of Part 51; LBP-12-21, 76 NRC 218 (2012)

relationship between the uranium enrichment facility's product and production of high-level waste is too attenuated to show the requirement of a reasonably close causal relationship required by NEPA; LBP-12-21, 76 NRC 218 (2012)

Waste Confidence Rule on its face does not apply to uranium enrichment facilities; LBP-12-21, 76 NRC 218 (2012)

URANIUM ENRICHMENT FACILITY PROCEEDINGS

after a licensing board in an uncontested proceeding determines that Staff's NEPA review is adequate, it must then independently consider the final balance among conflicting factors that is struck in the Staff's recommendation; LBP-12-21, 76 NRC 218 (2012)

although safety issues are reviewed under the adequacy and sufficiency standard, licensing boards conducting mandatory hearings must independently consider the final balance among the conflicting costs and benefits when reviewing NEPA issues; LBP-12-21, 76 NRC 218 (2012)

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giving appropriate deference to NRC Staff technical expertise, boards are to probe the logic and evidence supporting NRC Staff findings and decide whether those findings are sufficient to support license issuance; LBP-12-21, 76 NRC 218 (2012)

level of detail required for a licensing decision does not require a final facility design or an absolutely complete identification of all items relied on for safety and accident sequences, but instead sufficient information must be provided to understand the process and functions of items relied on for safety and to afford reasonable assurance that the integrated safety analysis is complete; LBP-12-21, 76 NRC 218 (2012)

licensing boards conducting mandatory hearings on uncontested issues are expected to take an independent hard look at NRC Staff safety and environmental findings but are not to replicate NRC Staff work; LBP-12-21, 76 NRC 218 (2012)

licensing boards conducting mandatory hearings on uncontested issues should conduct a simple sufficiency review of uncontested issues, not a de novo review; LBP-12-21, 76 NRC 218 (2012)

NRC shall conduct a single adjudicatory hearing on the record with regard to the licensing of the construction and operation of a uranium enrichment facility; LBP-12-21, 76 NRC 218 (2012)

NRC will hold a hearing under 10 C.F.R. Part 2, Subparts A, C, G, and I, on each application for issuance of a license for construction and operation of a uranium enrichment facility and will publish public notice of the hearing in the Federal Register at least 30 days before the hearing; LBP-12-21, 76 NRC 218 (2012)

nuclear nonproliferation issues span a host of factors far removed from and far afield from the NRC's decision whether to license a uranium enrichment facility; LBP-12-21, 76 NRC 218 (2012)

terrorism and nuclear nonproliferation issues are dependent upon the actions and decisions of the President, Congress, international organizations, and officials of other nations, and constitute issues of international policy unrelated to NRC's licensing criteria; LBP-12-21, 76 NRC 218 (2012)

VIOLATIONS

agencies violate NEPA when their EIS fails to adequately respond to the critical opinions of their own experts; LBP-12-18, 76 NRC 127 (2012)

allowing agencies to avoid a NEPA violation through a subsequent, conclusory statement that it would not have reached a different result even with the proper analysis would significantly undermine the statutory scheme; LBP-12-17, 76 NRC 71 (2012)

effect of a pattern of quality assurance violations is not necessarily to show that particular safety-related information is false, but to erode confidence that NRC can reasonably have in, and create substantial uncertainty about the quality of, the work that is tainted by the alleged QA violations; LBP-12-23, 76 NRC 445 (2012)

licensee is cited for use of unapproved operator manual actions to mitigate safe shutdown equipment malfunctions caused by a fire-induced single spurious actuation in lieu of protecting the equipment; DD-12-3, 76 NRC 416 (2012)

NRC has discretion in specifying the level of foreign ownership that would constitute a violation of the Atomic Energy Act; LBP-12-19, 76 NRC 184 (2012)

NRC Staff will disposition violations as part of its ongoing reactor oversight process, and evidentiary hearings before NRC at the request of third parties are not a part of this process; DD-12-3, 76 NRC 416 (2012)

NRC violated the National Environmental Policy Act in issuing its 2010 update to the Waste Confidence Decision and accompanying Temporary Storage Rule; CLI-12-16, 76 NRC 63 (2012)

WAIVER OF OBJECTION

Category 1 issues in section 51.53(c)(3)(i) are excluded from site-specific review absent a waiver of the rule; CLI-12-19, 76 NRC 377 (2012)

WAIVER OF RULE

Commission remands license renewal proceeding to the board for the limited purpose of considering a rule waiver petition; CLI-12-19, 76 NRC 377 (2012)

contentions may not challenge agency rules or regulations in any adjudicatory proceeding absent a waiver from the Commission; CLI-12-19, 76 NRC 377 (2012)

four-factor test for showing of special circumstances demonstrating that application of a rule would not serve the purpose for which it was adopted is outlined; CLI-12-19, 76 NRC 377 (2012)

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petitioners, not just parties, may request a rule waiver in NRC adjudicatory proceedings; CLI-12-19, 76 NRC 377 (2012)

procedure for obtaining a rule waiver is set out in 10 C.F.R. 2.335(a)-(d); CLI-12-19, 76 NRC 377 (2012)

ruling on petitions for waiver of application of the waste confidence rule in independent spent fuel storage installation license renewal proceeding is deferred and held it in abeyance; LBP-12-24, 76 NRC 503 (2012)

showing of special circumstances demonstrating that application of the rule would not serve the purpose for which it was adopted is required for rule waiver; CLI-12-19, 76 NRC 377 (2012); LBP-12-24, 76 NRC 503 (2012)

waiver should be granted only if the rule's strict application would not serve the purposes for which it was adopted, movant has alleged special circumstances that were not considered either explicitly or by necessary implication in the rulemaking proceeding, those circumstances are unique to the facility rather than common to a large class of facilities, and waiver is necessary to reach a significant safety problem; LBP-12-24, 76 NRC 503 (2012)

WASTE CONFIDENCE RULE

as an exercise of its inherent supervisory authority over adjudications, the Commission directed that waste confidence contentions and any related contentions that may be filed in the near term be held in abeyance pending further order; LBP-12-24, 76 NRC 503 (2012)

in light of the vacatur of the Waste Confidence Decision and Temporary Storage Rule, environmental reports consider the reasonably foreseeable impacts of permanent storage of spent fuel, and contentions concerning the failure of the ER to do so must be held in abeyance; LBP-12-24, 76 NRC 503 (2012)

it is in the public interest for adjudications to proceed, except for contentions associated with waste confidence issues; CLI-12-16, 76 NRC 63 (2012)

NRC violated the National Environmental Policy Act in issuing its 2010 update to the Waste Confidence Decision and accompanying Temporary Storage Rule; CLI-12-16, 76 NRC 63 (2012)

NRC will not issue final licenses dependent upon the Waste Confidence Rule until the court's remand is appropriately addressed; CLI-12-17, 76 NRC 207 (2012); LBP-12-21, 76 NRC 218 (2012)

NRC's current rule concerning the storage and disposal of high-level waste was remanded to the Commission to generate either a generic analysis that is forward looking and has enough breadth to support the Commission's conclusions or site-specific environmental impact statements in all relevant proceedings; LBP-12-21, 76 NRC 218 (2012)

on its face, the rule does not apply to uranium enrichment facilities; LBP-12-21, 76 NRC 218 (2012)

public comment will be afforded in advance on any generic waste confidence document that NRC issues on remand, be it a fresh rule, a policy statement, an environmental assessment, or an environmental impact statement; CLI-12-16, 76 NRC 63 (2012)

ruling on petitions for waiver of application of the waste confidence rule in independent spent fuel storage installation license renewal proceeding is deferred and held it in abeyance; LBP-12-24, 76 NRC 503 (2012)

waste confidence undergirds certain agency licensing decisions, in particular new reactor licensing and reactor license renewal; CLI-12-16, 76 NRC 63 (2012)

WASTE PROCESSING

licensee must provide for ready retrieval of spent fuel from storage for further processing or disposal; LBP-12-24, 76 NRC 503 (2012)

WATER POLLUTION

applicant for a federal discharge permit must provide a certification from the state that the proposed activity will not violate state water pollution control standards; LBP-12-16, 76 NRC 44 (2012)

license renewal applicants must submit documentation of compliance with sections 316(a) and (b) of the Clean Water Act concerning thermal discharges; LBP-12-16, 76 NRC 44 (2012)

See also National Pollutant Discharge Elimination System Permit

WATER QUALITY

in areas with a designated use as aquatic habitat, cooling water intake structures hinder the attainment of water quality standards; LBP-12-16, 76 NRC 44 (2012)

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WATER USE

another permitting regime for discharges does not foreclose the department from developing compatible methods of regulating water intakes at cooling water intake structures; LBP-12-16, 76 NRC 44 (2012)
in areas with a designated use as aquatic habitat, cooling water intake structures hinder the attainment of water quality standards; LBP-12-16, 76 NRC 44 (2012)

WIND ENERGY

contention seeking full impacts analysis of the power supply alternative of wind, either alone or in combination with solar and storage, is inadmissible because it fails to adequately demonstrate the capacity to produce baseload power; LBP-12-15, 76 NRC 14 (2012)
technologies as a component of a baseload energy source in combination with compressed air energy storage facility, a natural gas plant, or both, are discussed; LBP-12-17, 76 NRC 71 (2012)

WITHDRAWAL

See Motions to Withdraw

WITNESSES

at the request of any party a court must order witnesses excluded so that they cannot hear other witnesses' testimony; LBP-12-21, 76 NRC 218 (2012)
courts exclude witnesses prior to their testimony to discourage or expose outright fabrication and restrain the natural tendency of witnesses to tailor their testimony to that of earlier witnesses; LBP-12-21, 76 NRC 218 (2012)
written prefiled testimony and exhibits are typically submitted well in advance of the evidentiary hearing, and in most common types of hearings, licensing boards themselves, not the parties, orally examine the witnesses; LBP-12-21, 76 NRC 218 (2012)

WITNESSES, EXPERT

neither speculation nor conclusory assertions, even by an expert, alleging that a matter fails to satisfy the Atomic Energy Act or National Environmental Policy Act will suffice to allow admission of a contention; LBP-12-15, 76 NRC 14 (2012); LBP-12-27, 76 NRC 583 (2012)
petitioner is obliged to present factual allegations and/or expert opinion necessary to support its contention; LBP-12-27, 76 NRC 583 (2012)

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COMBINED LICENSE; August 30, 2012; ORDER (Ruling on Joint Intervenor's Proposed New Contention 11); LBP-12-18, 76 NRC 127 (2012)

COMBINED LICENSE; August 30, 2012; ORDER (Granting Summary Disposition of Contention 1); LBP-12-19, 76 NRC 184 (2012)

COMBINED LICENSE; November 1, 2012; ORDER (Terminating the Adjudicatory Proceeding); LBP-12-22, 76 NRC 443 (2012)

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 LICENSE RENEWAL; December 28, 2012; MEMORANDUM AND ORDER (Ruling on Motion for Summary Disposition of Contention 4); LBP-12-26, 76 NRC 559 (2012)
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DIABLO CANYON NUCLEAR POWER PLANT, Units 1 and 2; Docket Nos. 50-275-LR, 50-323-LR
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FERMI NUCLEAR POWER PLANT, Unit 3; Docket No. 52-033-COL
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