NUCLEAR REGULATORY COMMISSION ISSUANCES

OPINIONS AND DECISIONS OF THE NUCLEAR REGULATORY COMMISSION WITH SELECTED ORDERS

January 1, 2012 – June 30, 2012

Volume 75
Pages 1 - 791

Prepared by the
Office of Administration
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
(301-415-0955)

COMMISSIONERS

Gregory B. Jaczko, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

R. William Borchardt, Executive Director for Operations

Stephen G. Burns, General Counsel
(January 1, 2012 to March 31, 2012)
Marian L. Zobler, Acting General Counsel
(April 1, 2012 to June 30, 2012)

E. Roy Hawkens, Chief Administrative Judge,
Atomic Safety & Licensing Board Panel

ATOMIC SAFETY AND LICENSING BOARD PANEL

E. Roy Hawkens,* *Chief Administrative Judge*
Paul S. Ryerson,* *Associate Chief Administrative Judge (Legal)*
Dr. Anthony J. Baratta,* *Associate Chief Administrative Judge (Technical)*

Members

Dr. Paul B. Abramson
Dr. Gary S. Arnold*
Dr. Mark O. Barnett
G. Paul Bollwerk, III*
Dr. William C. Burnett
Dr. Randall J. Charbeneau
Dr. Richard F. Cole*
Michael C. Farrar*
Dr. Larry Foulke
William J. Froehlich*
Dr. Michael O. Garcia
Michael M. Gibson*
Brian K. Hajek
Dr Yassin A. Hassan
Dr. Thomas J. Hirons
Dr. James F. Jackson
Dr. Jeffrey D.E. Jeffries
Alex S. Karlin*
Dr. William E. Kastenberg
Dr. Charles N. Kelber
Dr. Michael F. Kennedy*
Dr. Kaye D. Lathrop
Dr. R. Bruce Matthews
Lawrence G. McDade*
Dr. Alice C. Mignerey
Thomas S. Moore
Dr. Kenneth L. Mossman
Dr. William M. Murphy
Dr. Frederick W. Oliver
Dr. William H. Reed
Alan S. Rosenthal
Lester S. Rubenstein
Dr. William W. Sager
Ronald M. Spritzer*
Dr. Michael G. Stevenson
Nicholas G. Trikouros*
Dr. Richard E. Wardwell*
Dr. Craig M. White
Ann M. Young*

** Full-time panel members*

PREFACE

This is the seventy-fifth volume of issuances (1–791) of the Nuclear Regulatory Commission and its Atomic Safety and Licensing Boards, Administrative Law Judges, and Office Directors. It covers the period from January 1, 2012, to June 30, 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.

Available from

Superintendent of Documents
U.S. Government Printing Office
Mail Stop SSOP
Washington, DC 20402-0001

A year's subscription consists of 12 softbound issues,
4 indexes, and 2-4 hardbound editions for this publication.

Single copies of this publication
are available from
National Technical Information Service
Springfield, VA 22161-0002

Errors in this publication may be reported to the
Office of Administration
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
(301-415-0955)

CONTENTS

Issuances of the Nuclear Regulatory Commission

CROW BUTTE RESOURCES, INC.
(In Situ Leach Facility, Crawford, Nebraska)
Docket 40-8943
Memorandum and Order, CLI-12-4, February 22, 2012 154
DOMINION VIRGINIA POWER
(North Anna Power Station, Unit 3)
Docket 52-017-COL (Combined License Application)
Memorandum and Order, CLI-12-14, June 7, 2012 692
DUKE ENERGY CAROLINAS, LLC
(William States Lee III Nuclear Station, Units 1 and 2)
Dockets 52-018-COL, 52-019-COL
Memorandum and Order, CLI-12-7, March 16, 2012 379
ENERGY NORTHWEST
(Columbia Generating Station)
Docket 50-397-LR
Memorandum and Order, CLI-12-7, March 16, 2012 379
ENTERGY NUCLEAR GENERATION COMPANY
(Pilgrim Nuclear Power Station)
Docket 50-293-LR
Memorandum and Order, CLI-12-1, February 9, 2012 39
Memorandum and Order, CLI-12-3, February 22, 2012 132
Memorandum and Order, CLI-12-6, March 8, 2012 352
Memorandum and Order, CLI-12-10, March 30, 2012 479
Memorandum and Order, CLI-12-15, June 7, 2012 704
ENTERGY NUCLEAR OPERATIONS, INC.
(Pilgrim Nuclear Power Station)
Docket 50-293-LR
Memorandum and Order, CLI-12-1, February 9, 2012 39
Memorandum and Order, CLI-12-3, February 22, 2012 132
Memorandum and Order, CLI-12-6, March 8, 2012 352
Memorandum and Order, CLI-12-10, March 30, 2012 479
Memorandum and Order, CLI-12-15, June 7, 2012 704
FIRSTENERGY NUCLEAR OPERATING COMPANY
(Davis-Besse Nuclear Power Station, Unit 1)
Docket 50-346-LR
Memorandum and Order, CLI-12-8, March 27, 2012 393

LUMINANT GENERATION COMPANY, LLC
(Comanche Peak Nuclear Power Plant, Units 3 and 4)
Dockets 52-034-COL, 52-035-COL
Memorandum and Order, CLI-12-7, March 16, 2012 379
NEXTERA ENERGY SEABROOK, LLC
(Seabrook Station, Unit 1)
Docket 50-443-LR
Memorandum and Order, CLI-12-5, March 8, 2012 301
OLD DOMINION ELECTRIC COOPERATIVE
(North Anna Power Station, Unit 3)
Docket 52-017-COL (Combined License Application)
Memorandum and Order, CLI-12-14, June 7, 2012 692
PACIFIC GAS AND ELECTRIC COMPANY
(Diablo Canyon Nuclear Power Plant, Units 1 and 2)
Dockets 50-275-LR, 50-323-LR
Memorandum and Order, CLI-12-13, June 7, 2012 681
SOUTH CAROLINA ELECTRIC & GAS COMPANY
(Virgil C. Summer Nuclear Station, Units 2 and 3)
Dockets 52-027-COL, 52-028-COL
Memorandum and Order, CLI-12-9, March 30, 2012 421
SOUTH CAROLINA PUBLIC SERVICE AUTHORITY (also referred to as SANTEE COOPER)
(Virgil C. Summer Nuclear Station, Units 2 and 3)
Dockets 52-027-COL, 52-028-COL
Memorandum and Order, CLI-12-9, March 30, 2012 421
SOUTHERN NUCLEAR OPERATING COMPANY
(Vogtle Electric Generating Plant, Units 3 and 4)
Dockets 52-025-COL, 52-026-COL
Memorandum and Order, CLI-12-2, February 9, 2012 63
Memorandum and Order, CLI-12-7, March 16, 2012 379
Memorandum and Order, CLI-12-11, April 16, 2012 523
STRATA ENERGY, INC.
(Ross In Situ Uranium Recovery Project)
Docket 40-9091-MLA
Memorandum and Order, CLI-12-12, May 11, 2012 603
VIRGINIA ELECTRIC AND POWER COMPANY
(North Anna Power Station, Unit 3)
Docket 52-017-COL (Combined License Application)
Memorandum and Order, CLI-12-14, June 7, 2012 692

DETROIT EDISON COMPANY
(Fermi Nuclear Power Plant, Unit 3)
Docket 52-033-COL
Memorandum and Order, LBP-12-12, June 21, 2012 742
ENTERGY NUCLEAR GENERATION COMPANY
(Pilgrim Nuclear Power Station)
Docket 50-293-LR
Memorandum and Order, LBP-12-1, January 11, 2012 1
Memorandum and Order, LBP-12-10, May 24, 2012 633
Memorandum and Order, LBP-12-11, June 18, 2012 731
ENTERGY NUCLEAR OPERATIONS, INC.
(Pilgrim Nuclear Power Station)
Docket 50-293-LR
Memorandum and Order, LBP-12-1, January 11, 2012 1
Memorandum and Order, LBP-12-10, May 24, 2012 633
Memorandum and Order, LBP-12-11, June 18, 2012 731
EXELON GENERATION COMPANY, LLC
(Limerick Generating Station, Units 1 and 2)
Dockets 50-352-LR, 50-353-LR
Memorandum and Order, LBP-12-8, April 4, 2012 539
FLORIDA POWER & LIGHT COMPANY
(Turkey Point Nuclear Generating Plant, Units 6 and 7)
Dockets 52-040-COL, 52-041-COL
Memorandum and Order, LBP-12-4, February 28, 2012 213
Memorandum and Order, LBP-12-7, March 29, 2012 503
Memorandum and Order, LBP-12-9, May 2, 2012 615
HONEYWELL INTERNATIONAL, INC.
(Metropolis Works Uranium Conversion Facility)
Docket 40-3392-MLA
Initial Decision, LBP-12-6, February 29, 2012 256
NUCLEAR INNOVATION NORTH AMERICA LLC
(South Texas Project, Units 3 and 4)
Dockets 52-12-COL, 52-13-COL
Second Partial Initial Decision, LBP-12-5, February 29, 2012 227
PACIFIC GAS AND ELECTRIC COMPANY
(Diablo Canyon Nuclear Power Plant, Units 1 and 2)
Dockets 50-275-LR, 50-323-LR
Memorandum and Order, LBP-12-13, June 27, 2012 784

SHAW AREVA MOX SERVICES
(Mixed Oxide Fuel Fabrication Facility)
Docket 70-3098-MLA
Memorandum and Order, LBP-12-2, February 9, 2012 159
STRATA ENERGY, INC.
(Ross In Situ Recovery Uranium Project)
Docket 40-9091-MLA
Memorandum and Order, LBP-12-3, February 10, 2012 164

Issuance of Director's Decision

VIRGINIA ELECTRIC AND POWER COMPANY
(North Anna Power Station, Units 1 and 2)
Dockets 50-338, 50-339
Director's Decision, DD-12-1, April 26, 2012 573

Indexes

Case Name Index I-1
Legal Citations Index I-5
Cases I-5
Regulations I-53
Statutes I-79
Others I-83
Subject Index I-85
Facility Index I-189

Cite as 75 NRC 1 (2012) **LBP-12-1**

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. 06-848-02-LR)

ENTERGY NUCLEAR GENERATION COMPANY and ENTERGY NUCLEAR OPERATIONS, INC.
(Pilgrim Nuclear Power Station) **January 11, 2012**

This proceeding concerns the application of Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc. for renewal of the operating license for its Pilgrim Nuclear Power Station, located in Plymouth, Massachusetts. After the Board disposed of a limited issue on remand from the Commission, but before disposing of several hearing requests filed while the remanded issue was pending, Intervenor Pilgrim Watch filed a request for hearing on a proposed new contention concerning the accident at the Fukushima Dai-ichi Nuclear Power Plant in Japan. In this Order, a majority of the Licensing Board denies the hearing request.

REOPENING

Because the evidentiary record in this proceeding had been previously closed, the Commission's demanding requirements for reopening the record must be satisfied in order for the hearing request to be granted.

MOTIONS TO REOPEN

Regarding the requirements of 10 C.F.R. § 2.326(a)(1) that the motion be timely, the motion must be based on new information, relevant to the application and the plant at issue, that is materially different from information previously available.

MOTIONS TO REOPEN

A contention based on the Fukushima accident must be relevant to the present proceeding, and must link the events at Fukushima to the risk of a severe accident at the site that is the subject of the proceeding.

REOPENING

A nontimely contention may still satisfy the requirements of 10 C.F.R. § 2.326(a)(1) if it raises an exceptionally grave issue. The Commission has defined the relevant legal standard: an exceptionally grave issue is one which raises "a sufficiently grave threat to public safety." Criteria for Reopening Records in Formal Licensing Proceedings, 51 Fed. Reg. 19,535, 19,536 (May 30, 1986).

REOPENING

For an environmental issue to be "significant" for the purposes of reopening a closed record, there must be new and significant information which will "paint a *seriously* different picture of the environmental landscape." *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-06-3, 63 NRC 19, 28 (2006).

SEVERE ACCIDENT MITIGATION ANALYSIS

An assertion that other severe accident mitigation alternatives (SAMAs) *might* become cost-effective if implemented, without an indication of any particular positive environmental impact from any such implementation or any specific negative environmental impact from failure to do so, fails to present an exceptionally grave issue.

SEVERE ACCIDENT MITIGATION ANALYSIS; MOTIONS TO REOPEN

For an intervenor to demonstrate that a revised SAMA analysis would produce a materially different result requires, at least, that the intervenor provide some

information indicating how much the mean consequences of the severe accident scenarios could reasonably be expected to change as a result of consideration of the new information, together with at least some minimal information as to the cost of implementation of other SAMAs it believes might become cost-effective.

SEVERE ACCIDENT MITIGATION ANALYSIS; CONTENTIONS, ADMISSIBILITY

A speculative assertion that the NRC would consider other SAMAs than have been previously considered does not "demonstrate" that the issue raised is material to the NRC's decision, as required by 10 C.F.R. § 2.309(f)(1)(iv).

MEMORANDUM AND ORDER

(Denying Pilgrim Watch's Request for Hearing on a New Contention Relating to Fukushima Accident)

We address herein the motion to admit a new contention filed by Pilgrim Watch on November 18, 2011,[1] challenging the application by Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc. (collectively, Entergy) for renewal of its operating license for the Pilgrim Nuclear Power Station (Pilgrim) for an additional 20-year period.[2] In this ruling of a majority of the Board, for the reasons discussed below, we deny the motion, finding, inter alia, that Pilgrim Watch has failed to satisfy the requirements for reopening the record under 10 C.F.R. § 2.326. We also find the contention is otherwise inadmissible because it fails to satisfy the criteria set out in 10 C.F.R. § 2.309(f)(1) for an admissible contention.

I. PERTINENT BACKGROUND

In 2006, Pilgrim Watch petitioned to intervene in opposition to Entergy's license renewal application (LRA).[3] This Board granted the petition and admitted two of Pilgrim Watch's contentions — Contentions 1 and 3.[4] Following the

[1] Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima (Nov. 18, 2011) [hereinafter, the Fukushima Aqueous Transport and Dispersion Contention].

[2] *See* 71 Fed. Reg. 15,222, 15,222 (Mar. 27, 2006) [hereinafter Entergy's LRA].

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

[4] LBP-06-23, 64 NRC 257, 348-49 (2006).

dismissal of Contention 3 on summary disposition[5] and an evidentiary hearing on the merits of Contention 1,[6] the Board closed the evidentiary record and terminated these proceedings.[7] On appeal, the Commission remanded to the Board a specified and narrow portion of Contention 3 for reconsideration;[8] on July 19, 2011, after receiving and considering written evidentiary submissions, including rebuttal testimony, from the parties, the Board again dismissed Contention 3.[9]

Before the Board's ruling on the remanded issue, however, Pilgrim Watch and the Commonwealth of Massachusetts moved to admit new contentions, some arising out of the March 2011 incident at the Fukushima Dai-ichi nuclear plant in Japan.[10] In a series of orders, the Board rejected each of those proposed contentions.[11]

The history of this proceeding is documented in greater detail in our Remanded Issue Order, our Pre-Fukushima Order, our Pilgrim Watch Post-Fukushima Order, and our Commonwealth Post-Fukushima Order. We note that, in each of our rulings on the contentions filed post-remand, the Board determined that, because the evidentiary record had been previously closed, the Commission's demanding requirements for reopening the record must be satisfied in order for the hearing request to be granted.[12] The majority of the Board held that those Commission

---

[5] LBP-07-13, 66 NRC 131, 137 (2007).

[6] Tr. at 557-874 (Apr. 10, 2008).

[7] LBP-08-22, 68 NRC 590, 596 (2008); Licensing Board 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).

[8] CLI-10-11, 71 NRC 287, 290 (2010).

[9] LBP-11-18, 74 NRC 29, 31 (2011) [hereinafter, Remanded Issue Order].

[10] *See* Commonwealth of Massachusetts' Motion to Admit Contention and, if Necessary, to Reopen Record Regarding New and Significant Information Revealed by Fukushima Accident (June 2, 2011); Commonwealth of Massachusetts' Contention Regarding New and Significant Information Revealed by the Fukushima Radiological Accident (June 2, 2011); Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post-Fukushima (June 1, 2011); Pilgrim Watch Request for Hearing on Post Fukushima SAMA Contention (May 12, 2011); Pilgrim Watch Request for Hearing on a New Contention: Inadequacy of Entergy's Aging Management of Non-Environmentally Qualified (EQ) Inaccessible Cables (Splices) at Pilgrim Station (Jan. 20, 2011); Pilgrim Watch Request for Hearing on a New Contention: Inadequacy of Entergy's Aging Management of Non-Environmentally Qualified (EQ) Inaccessible Cables (Splices) at Pilgrim Station (Dec. 13, 2010); Pilgrim Watch Request for Hearing on a New Contention (Nov. 29, 2010).

[11] LBP-11-20, 74 NRC 65, 68 (2011) [hereinafter, Pre-Fukushima Order]; LBP-11-23, 74 NRC 287, 290-91 (2011) [hereinafter, Pilgrim Watch Post-Fukushima Order]; LBP-11-35, 74 NRC 701, 705 (2011) [hereinafter, Commonwealth Post-Fukushima Order].

[12] *See* 10 C.F.R. § 2.326.

regulations had not been met with regard to any of the new contentions.[13] As we discuss in depth below, the Fukushima Aqueous Transport and Dispersion Contention that is now before this Board likewise fails to satisfy the exacting requirements of 10 C.F.R. § 2.326 and also fails to present an admissible contention.

II. ANALYSIS

A. Legal Standards Governing Motion to Reopen the Record

Pilgrim Watch continues to insist that it is not required to reopen the record because, in its view, the record with respect to the subject matter of the current contention was never closed.[14] As we have stated at length in each of our previous Orders, Pilgrim Watch errs on this point.[15] Consequently, we hold that Pilgrim Watch must satisfy the requirements of 10 C.F.R. § 2.326 for its request for a hearing on its Fukushima Aqueous Transport and Dispersion Contention to be granted. Those requirements are as follows:

> (1) The motion must be timely. However, an exceptionally grave issue may be considered in the discretion of the presiding officer even if untimely presented;
> (2) The motion must address a significant safety or environmental issue; and
> (3) The motion must demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially.[16]

Further, as we noted in our previous rulings, a motion to reopen must be "accompanied by affidavits that set forth the factual and/or technical bases for the movant's claim that the criteria of paragraph (a) of this section have been satisfied."[17] In such affidavits, "[e]ach of the criteria must be separately addressed, with a specific explanation of why it has been met."[18]

(i) Additionally, any move to reopen the record "which relates to a contention not previously in controversy among the parties must also satisfy the requirements for nontimely contentions in [10 C.F.R.] § 2.309(c)."[19] The balance of the section 2.309(c) factors must weigh in favor of granting

---

[13] *See* Pre-Fukushima Order, LBP-11-20, 74 NRC at 81-82, 83, 88-89; Pilgrim Watch Post-Fukushima Order, LBP-11-23, 74 NRC at 323; Commonwealth Post-Fukushima Order, LBP-11-35, 74 NRC at 751, 755.

[14] *See* Fukushima Aqueous Transport and Dispersion Contention at 45-47.

[15] *See, e.g.,* Pre-Fukushima Order, LBP-11-20, 74 NRC at 77 & n.75 (citing precedent).

[16] 10 C.F.R. § 2.326(a).

[17] *Id.* § 2.326(b).

[18] *Id.*

[19] *Id.* § 2.326(d).

the motion to reopen. Those factors are discussed in their entirety in our previous rulings in this case.

Finally, any new contention must also satisfy the admissibility requirements of 10 C.F.R. § 2.309(f)(1).

B. Analysis of Pilgrim Watch New Contention

Pilgrim Watch's contention states as follows:

> Based on new and significant information from Fukushima, the Environmental Report is inadequate post Fukushima Daiichi. Entergy's SAMA [Severe Accident Mitigation Alternative] analysis ignores new and significant issues raised by Fukushima regarding the probability of both containment failure, and subsequent larger off-site consequences due, in part, to the need for flooding the reactor (vessel, containment, pool) with huge amounts of water in a severe accident, as at Fukushima. "An important limitation of the MACCS2 code is that it does not currently model and analyze aqueous transport and dispersion of radioactive materials through the subsurface water, sediment, soils, and groundwater. As demonstrated by the recent events in Japan, certain accident scenarios can result in large volumes of contaminated water being generated by emergency measures to cool the reactor cores and SFPs, with yet to be determined offsite radiological consequences. To determine the relative risk significance of these types of scenarios, (Pilgrim's) Level 3 PRA must (model and analyze) the aqueous transport and dispersion of radioactive materials." Further, there is no provision within the Severe Accident Mitigation Guidelines (SAMGs) for processing the water post accident. This important technical gap in Entergy's SAMA needs to be addressed before closing this proceeding. As in Japan, enormous quantities of contaminated water are likely to enter Cape Cod Bay (adding to radioactive atmospheric fallout on the waters and contamination resulting from aqueous transport and dispersion of radioactive materials through subsurface water, sediments, soils and groundwater) and then flow to other water bodies and shores posing significant offsite consequences and costs, threatening the health of citizens and the ecosystem and damaging the economy.[20]

Pilgrim Watch asserts that "it plainly is necessary to redo Pilgrim's SAMA analysis" in light of the Fukushima accident,[21] and "the Fukushima events plainly

---

[20] Fukushima Aqueous Transport and Dispersion Contention at 1-2.

[21] Pilgrim Watch alleges:

> it plainly is necessary to redo Pilgrim's SAMA analysis to take into account new and significant information learned from Fukushima regarding the probability of containment failure in the event of an accident and the concomitant probability of a significantly larger volume of off-site

(Continued)

show that the environmental impacts of NRC relicensing Pilgrim may affect the quality of the human environment."[22] As with its earlier Fukushima-related contentions, Pilgrim Watch again acknowledges that the events which occurred at the Fukushima reactors "are not yet all conclusively understood."[23]

As a foundation for its contention, Pilgrim Watch points to a July 7, 2011 paper prepared for the Commission recommending "Options for Proceeding with Future Level 3 Probabilistic Risk Assessment Activities" (SECY-11-0089) as evidence that the use of the MACCS2 code in Entergy's SAMA analysis was insufficient.[24] That paper, states Pilgrim Watch, observed a "limitation" of the MACCS2 code in that "it does not currently model and analyze the aqueous transport and dispersion of radioactive materials through surface water, sediments, soils, and groundwater."[25]

In this regard, Pilgrim Watch explains that the focus of its contention is:

> the significant technical gap in Entergy's SAMA to which this contention is addressed — that Entergy failed to model contaminated acqueous [sic] releases "bled" into Cape Cod Bay from the large volumes of water needed to flood the reactor (vessel, containment, pool) in a severe accident extending over an extended period of time in the type of disaster we now know is credible. This source of contamination would add to that resulting from aqueous transport and dispersion of radioactive materials through subsurface water, sediments, soils and groundwater, plus

---

> consequences due to the need for flooding the reactor (vessel, containment, pool) with huge amounts of water in a severe accident, as at Fukushima. This source of contamination would add to that resulting from aqueous transport and dispersion of radioactive materials through subsurface water, sediments, soils and groundwater, plus atmospheric fallout on the waters — resulting in *three sources of contamination in the waters.*

Id. at 3 (emphasis in original).

[22] More specifically, Pilgrim Watch refers us to case law for their view that:

> The ASLB must consider issues raised by Fukushima prior to relicensing Pilgrim because, even if they are not yet all conclusively understood, the Fukushima events plainly show that the environmental impacts of NRC relicensing Pilgrim may "affect the quality of the human environment in a significant manner or to a significant extent not already considered."

Id. at 5 (citing *Marsh v. Oregon Natural Resources Council,* 490 U.S. 360, 374 (1989).

[23] *Id.*

[24] *Id.* at 10 (citing Options for Proceeding with Future Level 3 Probabilistic Risk Assessment Activities, SECY-11-0089, Encl. 1 (July 7, 2007) at 29).

[25] SECY-11-0089, Encl. 1 at 29. The paper states that "a Level 3 PRA must be capable of modeling and analyzing the aqueous transport and dispersion of radioactive materials" in order to determine the relative risk of Fukushima-like scenarios. *Id.* However, the paper makes no reference to SAMA analysis.

> atmospheric fallout on the waters — resulting in three sources of contamination in the water. Entergy's SAMA failed to analyze these offsite costs.[26]

Although Pilgrim Watch presents extensive information respecting the currents and tides and the wind patterns in the area around the Pilgrim plant,[27] and extensive information respecting economic and environmental impacts,[28] its sole effort to link the accident at Fukushima to the Pilgrim plant consists of the following statements:

> Therefore based on experience in Japan, it is not reasonable to assume, absent convincing evidence to the contrary, that there would be a solution to deal with the volumes of contaminated water bled into Cape Cod Bay in similar circumstances at Pilgrim Station.[29]

And:

> The area likely to be impacted from aqueous transport and dispersion of radioactive materials, as in Fukushima, is considerable encompassing: Duxbury, Kingston and Plymouth Bays; Cape Cod Bay; Massachusetts Bay (that includes, for example, Boston Harbor and Stellwagen Bank a National Marine Sanctuary), the outside arm of Cape Cod and the multiple rivers and estuaries branching off these bodies of water. Economic impact will result, as shown in Japan, from actual/measured contamination above acceptable limits and the public's perceived or feared contamination irrespective of actual readings.[30]

Finally, Pilgrim Watch asserts:

> Lessons learned from Fukushima provide a preview of what would happen at Pilgrim, a sister-reactor to those in Fukushima. Entergy's SAMA failed to model offsite marine economic costs; it must be required to do so.[31]

---

[26] Fukushima Aqueous Transport and Dispersion Contention at 8-9. Pilgrim Watch makes cursory mention of a failure of the SAMA analysis respecting the probability of containment failure, stating "Entergy's SAMA analysis ignores new and significant issues raised by Fukushima regarding the probability of both containment failure, and subsequent larger off-site consequences due to the need for flooding the reactor (vessel, containment, pool) with huge amounts of water in a severe accident, as at Fukushima," *id.* at 10, but presents no discussion whatsoever of containment failure probabilities, focusing, as we note above, upon aqueous transport and dispersion.

[27] *Id.* at 13-18.

[28] *Id.* at 19-38.

[29] *Id.* at 13.

[30] *Id.* at 18.

[31] *Id.* at 22.

Pilgrim Watch repeats and expands its previous arguments regarding why the requirements of 10 C.F.R. § 2.326 are inapplicable, asserting again that "[t]he record in this proceeding is and will remain open until and unless the Board and the Commission close it with respect to *everything* involved in this proceeding."[32]

Nonetheless, Pilgrim Watch asserts that they have "moved under, and have met the requirements of, 2.326."[33] However the entirety of their pleading on the topic is the bare and conclusory statements that:

> The motion was timely satisfying 2.326(a)(1). The motion addressed a significant safety or environmental issue, 2.326 (a)(2). The motion showed a materially different result would have been likely had the newly proffered evidence been considered initially, 2.326(a)(3).[34]

And its bare assertion that:

> Pilgrim Watch's motion shows that a materially different result would be likely had this new and significant information been available to consider initially. The offsite consequences/costs would be substantially greater if considered by Entergy in its SAMA analysis; or in the alternative Entergy failed to show that it would not be materially different because they never considered it.[35]

As to the requirements of 10 C.F.R. § 2.326(b), Pilgrim Watch's contention is supported by a signed "declaration" of Arnold Gundersen.[36] In addition to describing his credentials as an expert in nuclear engineering, Mr. Gundersen states that a Fukushima-like accident at Pilgrim "could have significant offsite consequences and unanticipated costs that would threaten the health of citizens, the ecosystem and economy."[37] He also declares that "Entergy's modeling and assumptions for a 'severe' accident do not adequately assess what has already occurred at four almost identical Boiling Water Reactors."[38]

The statement by Mr. Gundersen makes no specific reference to 10 C.F.R. § 2.326, nor does it address explicitly the requirements of that regulation. The totality of his testimony on the topic is as follows:

---

[32] *Id.* at 47 (emphasis in original).

[33] *Id.*

[34] *Id.* at 48.

[35] *Id.* at 44-45.

[36] *Id.,* Attach., Declaration of Arnold Gundersen Supporting a Request by Pilgrim Watch for a New Contention Hearing Regarding the Inadequacy of Pilgrim Station's Environmental Report, Post Fukushima (Nov. 17, 2011) [hereinafter Gundersen Declaration].

[37] *Id.* ¶ 16.

[38] *Id.* ¶ 27.

> 21. In my professional opinion, this request for hearing has been brought in a timely manner because it relies upon wholly new information gleaned from the four nuclear power plant accidents at the Fukushima site and subsequent environmental disaster presenting itself in the Fukushima Prefecture. Clear information to support this contention has now only recently become available following months and months of cover-ups by the Tokyo Electric Power Company regarding the severity of these accidents, including a five-week denial that the unfolding accident was at least a Level 7. Every day I monitor information that continues to be made public regarding attempts to contain the large volumes of contaminated water cleanup including the industrywide unanticipated challenges and burgeoning unprecedented costs.
>
> 22. More specifically, according to SECY-11-0089 the MACCS2 computer code used by Entergy does not model aqueous transport. Support for this contention's timeliness is evidenced by the fact that the NRC Commissioners did not vote on and accept SECY-11-0089 *until* late September 2011.
>
> 23. In my professional opinion, this new contention raised by Pilgrim Watch clearly addresses a significant safety and environmental issue by showing the effect of copious amounts of radioactive releases upon the marine environment, the area likely to be contaminated (or, as important, that will be believed by the public to be contaminated) and its resulting economic impact. Witnessing the events in Japan and its effect on the marine environment and economy, one cannot think otherwise.
>
> 24. . . . I believe that Entergy's Pilgrim Station SAMA would be entirely different if Entergy had modeled and analyzed aqueous transport and dispersion of radioactive materials. The new contention submitted by Pilgrim Watch clearly shows that a materially different result would be, or would have been likely, had the newly proffered evidence from the Fukushima accidents have been analyzed in the original application. Fairewinds Associates looks forward to reviewing Entergy's SAMA analysis once Entergy has modeled the impact of the release of copious amounts of radioactive water upon the aquatic, marine, and marshland environment of Cape Cod Bay and connected waters. Entergy's modeling and analysis should include mitigation and remediation of a Fukushima-like accident in Plymouth, Massachusetts and the surrounding interconnected pristine natural environments.[39]

And, as to providing any specific linkage between the events at Fukushima and the Pilgrim plant, Gundersen states:

> 30. Since we know that millions of gallons of contaminated water bled into the ocean at Fukushima, it is reasonable to assume that the same would hold true at Pilgrim. However, there is no Pilgrim-specific factual information publicly available.
>
> 31. While NUREG/CR-5634, September 1991 did not specifically reference Pil-

[39] *Id.* ¶¶ 21-24.

grim, it said on page 4-19 that flooding the Peach Bottom (Boiling Water Reactor) containment up to the RPV [reactor pressure vessel] bottom head takes 1,500,000 gallons.

- This postulation assumes that the containment retains its integrity, and that did not happen at Fukushima.
- It is important to note that flooding the containment up to the top of the reactor core would take more water. This postulation also assumes that the reactor pressure vessel would retain its integrity, and that did not happen at Fukushima.

Using Fukushima as a reference, continuing to fill a leaking reactor to maintain a water level up to the top of the core could mean that millions of gallons of radioactive water would bleed into the environment in an accident like that at Pilgrim's sister-reactors in Fukushima.

33. Here again, we know that the area impacted by the disaster at Fukushima is enormous and according to other experts over time the entire Pacific Ocean will become contaminated. Therefore, there is every reason to expect that a similarly large area would be affected by a similar accident at Pilgrim Station. It is certainly reasonable to assume that the entire Cape Cod Bay would be unusable by the public for its intended function after a severe accident at Pilgrim Station. However, and once again, no Pilgrim-specific information has been made available for valid independent scientific review. Based upon experiences at Fukushima, it is my professional judgment that the area affected, and, more importantly, believed to be contaminated, would be as large as that at Fukushima Daiichi in a similar severe accident scenario at Pilgrim Station located as it is in relation to the Cape Cod and Massachusetts Bays and feeding into the Atlantic Ocean.

39. In conclusion, the accidents at Fukushima Daiichi occurred at nuclear power plants almost identical to Pilgrim Station. If such an accident were to occur at the similarly aged and almost identical Pilgrim Station BWR Mark 1, it is my opinion that the economic impacts would be significant in a similar accident scenario at Pilgrim. However additional factual information, that is not currently publicly available, is required from Entergy in order to correctly ascertain the significant damage that would be caused to the environment if such an accident were to occur at Pilgrim Station. To conduct a thorough scientific analysis, Entergy should provide information regarding: the likely volume of water fed into the reactor in an accident similar to Fukushima; the volume and radioactive composition of water bleeding into Cape Cod Bay, added on top of the radioactive fallout onto the water from the air; and the area likely to be impacted, and equally as important, the area believed may be impacted. For example, there are comprehensive studies on the marine economy performed for the Commonwealth of Massachusetts by the University of

Massachusetts Donahue Institute that could be applied and used as a baseline once Entergy and the NRC make this required information available.[40]

Staff and Entergy filed their respective Answers to the Fukushima Aqueous Transport and Dispersion Contention on December 13, 2011, asserting, inter alia, that this contention fails to satisfy the requirements of 10 C.F.R. §§ 2.326 and 2.309(f)(1).[41] Notably, in answering the assertions by Pilgrim Watch and Mr. Gundersen, Dr. O'Kula, testifying for Entergy, set out detailed (and uncontroverted) reasons why a Fukushima-like event could not reasonably be expected to occur at Pilgrim and pointing to explicit failures to challenge the Pilgrim LRA.[42] Pilgrim Watch filed its Reply to those Answers on December 20, 2011.[43]

C. Ruling on Pilgrim Watch New Contention

1. Reopening Criteria

The foundation of Pilgrim Watch's new contention is its assertion that "Entergy failed to model [scenarios in which] contaminated aqueous releases 'bled' into Cape Cod Bay from the large volumes of water needed to flood the reactor (vessel, containment, pool) in a severe accident extending over an extended period of time."[44] We examine the requirements of 10 C.F.R. § 2.326 and § 2.309(f)(1) as they apply to this fundamental assertion and in light of all the content of Pilgrim Watch's pleadings.

Regarding the requirements of 10 C.F.R. § 2.326(a)(1) that the motion be timely, the motion must be based on new information relevant to the Pilgrim plant and the LRA that is materially different from information previously available.[45]

---

[40] *Id.* ¶¶ 30, 31, 33, 39.

[41] NRC Staff's Answer in Opposition to Pilgrim Watch's Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima (Dec. 13, 2011) [hereinafter Staff Answer]; Entergy's Answer Opposing Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post-Fukushima (Dec. 13, 2011) [hereinafter Entergy Answer].

[42] Entergy's Answer Opposing Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post-Fukushima, Declaration of Mr. Joseph R. Lynch and Dr. Kevin R. O'Kula (Dec. 13, 2011) ¶¶ 24-38 [hereinafter Entergy Decl.].

[43] Pilgrim Watch Reply to Entergy's and NRC Staff's Answers to Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima — Aqueous Discharges (Dec. 20, 2011) [hereinafter Pilgrim Watch Reply]. The NRC Staff filed a motion to strike portions of Pilgrim Watch's reply on December 29, 2011. Because we have considered the contents of all pleadings for their merits, we decline to rule on the motion to strike.

[44] Fukushima Aqueous Transport and Distribution Contention at 8.

[45] *See Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 339 (2011) (citing 10 C.F.R. § 2.309(f)(2)).

As to the newness of information regarding "bleed and feed" at Fukushima, information has been widely available since the early stages of the Fukushima accidents that Tokyo Electric Power Company (TEPCO) attempted to add additional water to the cores and the spent fuel pools of several of its units. Indeed Pilgrim Watch recognizes this fact by including in its pleading photographs and news articles from April 2011 that reference water being injected into and exiting from the Fukushima reactors.[46] Similarly, the information that this added water was not confined in the reactor vessels or their containments (the "bleed and feed" process to which Pilgrim Watch now refers) was widely publicized from the early days of the accidents, and therefore the "flooding" and "bleed and feed" at the Fukushima Dai-ichi plants to which Pilgrim Watch refers has been known since before May of 2011.[47] As to inadequacies of the MACCS2 code, Pilgrim Watch now asserts that the information contained in the SECY-11-0089 paper dated July 7, 2011, and several later documents regarding the inability of the MACCS2 code to model these phenomena is new and relies upon that for its assertion that this contention satisfies 2.326(a)(1).[48] However, these limitations of the MACCS2 code have been present for decades and Pilgrim Watch cannot reasonably assert that it has just now learned of those limitations, given that it has had access to an expert in that code (Mr. David Chanin) who served as its expert regarding several previous contentions.[49] Furthermore, SECY-11-0089 does nothing more than compile previously available information, and the Commission has been clear that such compilations cannot serve to satisfy the requirement for "new" information.[50] Thus assertions regarding the need to model "bleed and feed" processes and aqueous transport and dispersion could (and therefore should) have been raised at the outset of this proceeding, and, to the extent that they assert shortcomings in the Pilgrim LRA based upon the accidents at Fukushima, certainly not later than a nominal period after occurrence of those accidents. Boards

---

[46] Fukushima Aqueous Transport and Distribution Contention at 9.

[47] Indeed, Staff points to an article available as early as March 2011 discussing this matter. Staff Answer at 11 & n.43.

[48] *See, e,g., supra* note 25. Pilgrim Watch also references newspaper articles from September through November 2011 that describe current conditions at Fukushima and contain speculation about the causes and effects of the incident. *See* Fukushima Aqueous Transport and Dispersion Contention at 12-13, 21-22. These nonexpert sources are not the proper basis for a contention, and at any rate, Pilgrim Watch fails to provide any meaningful link between the conditions they describe at Fukushima and the asserted characteristics of the Pilgrim plant or its surroundings or environs.

[49] *See, e.g.,* Pilgrim Watch Post-Fukushima Order, LBP-11-23, 74 NRC at 299-300; LBP-07-13, 66 NRC 131, 148-49 (2007); *see also* Entergy Decl. ¶¶ 15-22.

[50] *See Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-10-27, 72 NRC 481, 496 (2010) (intervenor may not "delay filing a contention until a document becomes available that collects, summarizes, and places into context [previously available] facts supporting that contention").

have typically found new contentions to be timely when filed within 30 days of the date that asserted foundational information became available.[51] Therefore, the filing by Pilgrim Watch more than 6 months after the latest date plausibly argued to present foundational new information cannot be considered timely.[52]

Further, as we held in our Commonwealth Post-Fukushima Order, the new information on which the contention is based must be relevant to the present proceeding.[53] But as with the Commonwealth, Pilgrim Watch has failed to provide any information that links the events at Fukushima to the risk of a severe accident at the Pilgrim site, and has made no arguments regarding why the beyond-design-basis duration of station blackout that occurred at Fukushima following a beyond-design-basis earthquake and a beyond-design-basis tsunami is relevant for Pilgrim, which in and of itself causes the contention to fail to present any new information respecting the subject LRA. In addition, Entergy has provided detailed expert testimony why there is no such relevance.[54] The lack of any scientific support for their bare assertion that these problems could or should be relevant for Pilgrim causes the Pilgrim Watch pleading to fail to provide any new information respecting the Pilgrim LRA, and by that failure also renders Pilgrim Watch's contention nontimely.[55]

Nonetheless, as noted above, a nontimely contention may still satisfy the requirements of 10 C.F.R. § 2.326(a)(1) if it raises an exceptionally grave issue. The Commission has defined the relevant legal standard: an exceptionally grave issue is one which raises "a sufficiently grave threat to public safety."[56] And, as is pertinent to this particular contention, the Commission has expressed the standard for when an environmental issue is "significant" for the purposes of reopening a closed record, equating it to the standards for when an environmental impact statement (EIS) is required to be supplemented — there must be new and significant information which will "paint a *seriously* different picture of the environmental landscape."[57] And, for there to be an exceptionally grave issue in this proceeding, it must relate to the Pilgrim plant directly — not by speculation.

---

[51] *See, e.g., Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 218 & n.8 (2011).

[52] We note that both Applicant and Staff have asserted, and we agree, that these arguments are untimely for these reasons. *See* Staff Answer at 10-12; Entergy Answer at 11-18.

[53] *See* Commonwealth Post-Fukushima Order, LBP-11-35, 74 NRC at 746.

[54] *See, e.g.,* Entergy Decl. ¶¶ 66-67.

[55] The Entergy expert affidavits make the absence of such a linkage clearer, but are not necessary for our conclusion on this topic.

[56] Criteria for Reopening Records in Formal Licensing Proceedings, 51 Fed. Reg. 19,535, 19,536 (May 30, 1986).

[57] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-06-3, 63 NRC 19, 28 (2006) (emphasis in original) (also holding, at 29, that claimed additional environmental impacts

(Continued)

Here, Pilgrim Watch points to no environmental impact which would, or even might, arise from the failure to revise the SAMA analyses to consider information it asserts arose from the Fukushima accident. Rather, Pilgrim Watch avers that other SAMAs *might* become cost-effective if implemented, but indicates neither any particular positive environmental impact from any such implementation nor any specific negative environmental impact from failure to do so.

Pilgrim Watch does not raise any particularized threat to public safety at the Pilgrim plant — it asserts without scientific support that the events at Fukushima must be considered in the Pilgrim SAMA analysis without providing any information about the plant or its design, operation, and maintenance. It merely seeks a revision of Entergy's SAMA analysis that may or may not result in other SAMAs becoming cost-effective, which, in turn, may or may not help to mitigate some highly unlikely future severe accident.[58] Speculation of such an outcome does not establish that there is an exceptionally grave issue for the Pilgrim plant.[59]

Pilgrim Watch's contention can hardly be said, therefore, to paint the required "seriously different picture of the environmental landscape." And neither the speculation by Pilgrim Watch and Mr. Gundersen to the effect that other SAMAs might become cost-effective, nor Pilgrim Watch's intimations regarding other potential alterations which might result from consideration of the Fukushima-derived information, can serve to bootstrap the contention into raising any such different environmental situation. As Entergy observes and demonstrates through its experts' declarations, Pilgrim Watch's claims simply implicate no specific environmental impact changes.[60]

The alleged deficiency of Entergy's SAMA analysis does not present an exceptionally grave issue (which must call into question the licensed activity)[61] nor does it raise, based upon any information directly attributable to circumstances or conditions at the Pilgrim plant, any grave threat to the public safety respecting

---

were "not so significant or central to the FEIS's discussion of environmental impacts that an FEIS supplement (and the consequent reopening of our adjudicatory record) is reasonable or necessary"). More recently, the Commission repeated this standard, stating the asserted new information must present "a seriously different picture of the environmental impact of the proposed project from what was previously envisioned." *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 167-68 (2011) (internal quotations and citations omitted) (referencing 10 C.F.R. § 51.72, the regulation outlining the conditions for supplementing a Draft EIS).

[58] And, in this regard, Pilgrim Watch's expert offers only speculation.

[59] Indeed, the Commission has concluded that the events of Fukushima do not present a sufficiently grave threat to public safety such that reactor licensing proceedings should be suspended, stating that "we do not believe that an imminent risk will exist during the time period needed to apply changes to operating plants." *Callaway,* 74 NRC at 164.

[60] *See* Entergy Answer at 22-23.

[61] *See Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-00-12, 52 NRC 1, 5 (2000).

the Pilgrim plant,[62] and, because it is also nontimely, the contention fails to satisfy the requirements of 10 C.F.R. § 2.326(a)(1). For this reason alone, this contention is inadmissible.

Pilgrim Watch also fails to satisfy the requirement of 10 C.F.R. § 2.326(a)(3) that the motion *demonstrate* that a materially different result would likely have been reached had its purported new evidence been considered initially. The "result" at issue in this proceeding is the outcome of the SAMA analysis. Neither Pilgrim Watch's pleadings, nor the declaration of its expert, Mr. Gundersen, offer anything which can reasonably be interpreted to "demonstrate" that other SAMAs would have been considered, even if Entergy's analysis had modeled aqueous distribution of radioactive materials.[63] To do so would have, at least, required Pilgrim Watch to provide some information indicating how much the mean consequences of the severe accident scenarios could reasonably be expected to change as a result of consideration of the Fukushima-derived information, together with at least some minimal information as to the cost of implementation of other SAMAs it believes might become cost-effective. Indeed Entergy's uncontested expert testimony supports its assertion that its present SAMA analyses consider releases via atmospheric pathways which cause substantially more environmental damage (thus creating situations which cause considerably greater costs) than would have been involved had part of the releases been via aqueous pathways.[64] This is not to say that Pilgrim Watch must prove its case at this point, but simply that the term "demonstrate" requires much more than the bare speculation and bare assertions offered. Thus none of the information provided by either Pilgrim Watch or its expert "demonstrates" that any different result of the Pilgrim SAMA analysis could be obtained by consideration of the asserted new information.

Pilgrim Watch's pleadings, and the declaration of Mr. Gundersen, have not demonstrated that a materially different result would be, or would have been, likely had the newly proffered evidence been considered initially. We agree with Entergy and Staff that there is only speculation without any demonstration whatsoever that the results of the SAMA analysis would have been, or would

---

[62] Indeed, Staff has pointed out that the Commission has recently held that when a motion to reopen is untimely, the exceptionally grave test (which is inherently a safety-related test) supplants the significant environmental or safety test, and nothing raised by this SAMA contention, which does not regard safety matters at all, can reasonably be found to have any safety significance. Staff Answer at 21 (citing *Vogtle,* CLI-11-8, 74 NRC at 225 n.44).

[63] The Dissent's discussion of models which might have been used, of the marine economy in the region, and of other factors as a basis for a decision that an admissible contention has been presented errs; while all that information may well be interesting, it fails to be based upon any indication that there are events reasonably likely to cause the concerning releases at the Pilgrim plant. *See* Administrative Judge Ann Marshall Young, Dissenting at pp. 29-33 [hereinafter Dissent].

[64] Entergy Answer at 10, 22-23, 29-30, 43-44; Entergy Decl. ¶¶ 13-14, 40-64.

have been likely to be, different had the information presented by Pilgrim Watch regarding the Fukushima accident been considered.[65]

For the foregoing reasons, we find that the Pilgrim Watch contention is also inadmissible for failure to satisfy the requirements of 10 C.F.R. § 2.326(a)(3).

Moreover, Pilgrim Watch's motion is not supported by an affidavit that sets forth the factual and/or technical bases for the movant's claim that the criteria of 10 C.F.R. § 2.326(a) have been satisfied. The Gundersen declaration contains only bare speculation, presenting no facts or data to support its bald assertions. Moreover, it makes no reference to, and presents no discussion of, how the Pilgrim (or any other) SAMA analysis is performed or how it could be expected that the mean consequences of the spectrum of accident scenarios analyzed for Pilgrim in its SAMA analysis could be so altered as to make additional SAMAs cost-effective to implement. Mr. Gundersen fails to address any other mitigative mechanism which he believes would be considered, and that is foundational to providing a factual or technical basis for the assertion that other mitigative measures would become cost-effective. The present Pilgrim SAMA analysis (which is set out in the Environmental Report accompanying the LRA) plainly indicates both the cost of the most costly implemented SAMA and that the next most costly not-implemented SAMA which was considered has a cost approximately twice the most costly one which was implemented.[66] As we noted in our Commonwealth Post-Fukushima Order,[67] to provide a factual basis for the assertion that a materially different result would be obtained requires a comparison of at least estimates of the costs of implementation of some other mitigative mechanism. And, to perform the analysis would require information regarding how much the mean consequences would be altered by consideration of the facts Mr. Gundersen asserts are available from the Fukushima accident, because that provides the foundation for the numerical value for the "benefit" against which the cost must be balanced. Thus, we find his Declaration fails to provide the requisite factual and/or scientific basis for the claim that a materially different result would have been likely. We also note that both Entergy and the Staff have raised sound challenges to Mr. Gundersen's credentials as an expert with respect to the aqueous release issues and probabilistic risk analysis.[68] Although we need not make such a determination in order to reach the conclusions we reach herein, we find those arguments persuasive.

For the foregoing reasons, we find that the Declaration of Mr. Gundersen fails to provide the requisite factual and/or technical bases for the movant's claim that the criteria of paragraph (a) of section 2.326 have been satisfied, thus failing

---

[65] *See* Entergy Answer at 25-27; Staff Answer at 29-30.

[66] *See* Remanded Issue Order, LBP-11-18, 74 NRC at 40; Entergy Answer at 44; Entergy Decl. ¶ 49.

[67] Commonwealth Post-Fukushima Order, LBP-11-35, 74 NRC at 752.

[68] Entergy Answer at 29-33; Staff Answer at 32-34.

to satisfy the requirements of 10 C.F.R. § 2.326(b).[69] For this additional (and independent) reason, we find the Pilgrim Watch contention inadmissible.

Because Pilgrim Watch has failed to meet the requirements of 10 C.F.R. § 2.326 for reopening the closed record, we find the Fukushima Aqueous Transport and Dispersion Contention to be inadmissible.

2. The Requirements for Nontimely Filed Contentions

The new contention also fails to satisfy the requirements for a nontimely filed contention under 10 C.F.R. § 2.309(c) for the reasons set out by Staff and Entergy (with which we agree) in their respective Answers.[70] In particular, we find it fails to satisfy the following requirements, among others:

(a) Pilgrim Watch lacks good cause for its filing more than 6 months after the latest reasonable date for which the information upon which this contention rests could reasonably be considered new.[71] Pilgrim Watch offers no rational basis for any decision excusing that tardiness. Thus the contention fails to satisfy the requirements of section 2.309(c)(i).

(b) Any extension to this proceeding to consider this matter would undoubtedly broaden the issues (by addition of an entirely new issue) and cause a material delay in the proceeding.[72] Thus the contention fails to satisfy the requirements of section 2.309(c)(vii).

3. Contention Admissibility Criteria

Even if Pilgrim Watch had established that its new contention satisfies the reopening standards, or were correct in asserting that the reopening standards are inapplicable, Pilgrim Watch has failed to submit a contention which satisfies the requirements of 10 C.F.R. § 2.309(f)(1)(iv) to "demonstrate" that the issue raised is material to the NRC's decision, and section 2.309(f)(1)(vi) to show that a genuine dispute exists with the Applicant on a material issue of law or fact.

As to the requirements of section 2.309(f)(1)(iv), the only possible relevance of this contention to the findings the NRC must make regards the SAMA cost-benefit analysis. Pilgrim Watch has made the bare speculation (supported by similar speculation on the part of its expert) that they *believe* that the NRC would consider

---

[69] This is not, as the Dissent would have it, elevating form over substance; the requisite substance is absent. Dissent at p. 33.

[70] *See* Staff Answer at 12-13; Entergy Answer at 33-39.

[71] *See* 10 C.F.R. § 2.309(c)(i).

[72] *See id.* § 2.309(c)(vii).

other severe accident mitigation alternatives (SAMAs) than have been previously considered. But the requirement of section 2.309(f)(1)(iv) is that the contention must "demonstrate" that the issue raised is material to the NRC's decision, and the speculative assertions of Pilgrim Watch and its expert simply do not rise to the level of demonstrating the matter. Therefore, we find that Pilgrim Watch's contention fails to satisfy the requirements of section 2.309(f)(1)(iv).

Finally, as to the requirements of section 2.309(f)(1)(vi), we find that neither Pilgrim Watch's pleadings nor the Declaration of Mr. Gundersen shows that a genuine dispute exists with the Applicant on a material issue of law or fact. First, for the fact to be "material," it must affect the NRC's SEIS as it relates to SAMAs, and neither Pilgrim Watch nor Mr. Gundersen has indicated with any specificity how the SAMA analysis results could be affected. Rather the pleadings speculate that changes might result, and we find that fails to provide the requisite sufficient information which would "show" a dispute. In this regard, we note again that Entergy's experts have stated (in uncontroverted testimony) that the consequences to human health and the environment from an atmospheric release, as modeled in Entergy's current SAMA analysis, are far greater than those which could be expected from an aqueous release, and therefore, consideration of aqueous releases would not increase the damages to the environment or increase the costs associated with the considered accidents, and therefore could not change the results of the SAMA analysis.[73] Further, neither Pilgrim Watch nor Mr. Gundersen points to or references any specific portion of the application which is disputed; they simply assert that the SAMA results *might* be different. Indeed, as is noted by Entergy's expert Dr. O'Kula,[74] neither Pilgrim Watch nor Mr. Gundersen challenges the initiating event or equipment failure probability assumptions relied on in the Pilgrim SAMA analysis, or otherwise makes any attempt to relate the Fukushima accident (and its initiating events and equipment/system failures) to the Pilgrim plant.

Furthermore, Pilgrim Watch has failed to show any linkage between the accident at Fukushima and the Pilgrim plant — and thus offers nothing whatsoever to indicate (let alone "show") a dispute with the application which refers explicitly and only to the Pilgrim plant and conditions which affect it. Pilgrim Watch makes bare assertions and assumptions that a Fukushima-like accident could be repeated at Pilgrim because of the similarity of plant design.[75] Although Pilgrim Watch devotes a significant portion of its pleadings to description of the Massachusetts Coastal Zone and the consequences it claims would result from a Fukushima-

---

[73] *See* Entergy Answer at 29-31; Entergy Decl. ¶ 50; *supra* note 61.

[74] Entergy Decl. ¶ 39.

[75] *See, e.g.,* Fukushima Aqueous Transport and Dispersion Contention at 22 ("Lessons learned from Fukushima provide a preview of what would happen at Pilgrim, a sister-reactor to those in Fukushima.").

like accident at Pilgrim,[76] Pilgrim Watch provides no technical or scientific information to link the characteristics of the Fukushima Dai-ichi site, the causes of the accidents which concern it, or the operational methodologies of those plants to any characteristic of the Pilgrim plant and the surrounding environs. Pilgrim Watch fails to address a single portion of Entergy's Pilgrim analyses or the LRA, thereby failing to show that a genuine dispute exists with the Applicant on a material issue of law or fact.

Moreover, if Pilgrim Watch meant, in the alternative, to point to an omission of consideration of data from the SAMA input, they have failed.[77] From either perspective, Pilgrim Watch's contention fails to satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(vi).

For the foregoing reasons, Pilgrim Watch's Fukushima Aqueous Transport and Dispersion Contention fails to satisfy the requirements of 10 C.F.R. § 2.309(f)(1) and is therefore inadmissible.

4. A Few Comments Regarding the Dissent

Finally, we must bring to light a few specific fundamental disagreements with the Dissent. First, we find error in our colleague's conclusions that NEPA requires consideration of the Fukushima events as a condition to grant of the requested LRA. These conclusions rest upon the faulty premises that:

> Although there may be insufficient information available at this time to conclude that consideration of issues relating to the Fukushima accident *would* definitely lead to significantly different analyses of environmental consequences in the Pilgrim

---

[76] *See id.* at 13-19, 22-37.

[77] We have noted above, *see supra* note 26, a vague statement by Pilgrim Watch and a similarly vague "belief" by their expert, *see supra* pp. 7-8; Entergy Decl. ¶ 24, which can be viewed as asserting an omission, but the Pilgrim Watch statement begins with reference to earlier assertions by Pilgrim Watch respecting containment failure, which we have rejected, and then adds the bare assertion respecting its present "bleed and feed" concern, without any data respecting Pilgrim or any other support (except the unsupported speculation by their expert) for their proposition that this is indeed an issue for the Pilgrim plant. Were this sort of speculation to suffice to satisfy our regulatory criteria, there would be no boundaries to the issues to be litigated in our proceedings. Indeed, the situation here is directly analogous to that addressed by the Commission in its very recent ruling respecting a challenge raised in the license renewal application for Diablo Canyon. There the Commission held:

> Even assuming that [petitioner] intended to challenge the discussion of mitigation measures in PG&E's Environmental Report, [petitioner]'s unsupported statement . . . falls short of the information required to show the existence of a genuine dispute. . . . It is [petitioners]'s responsibility . . . to put others on notice as to the issues it seeks to litigate in the proceeding. We should not have to guess the aspects of the SAMA analysis that [petitioner] is challenging.

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 457 (2011).

> EIS (including in the SAMA analysis summarized therein), there is also at this time insufficient information to conclude that consideration of relevant Fukushima-related issues *could not* lead to significantly different analyses of the environmental consequences of renewing the Pilgrim operating license. . . . [I]t cannot at this point be said that consideration of Fukushima-related issues "could not affect" the ultimate decision on the renewal application, or that any related impacts are so remote and speculative as to justify their exclusion from consideration.[78]
>
> [O]nce the accident [at Fukushima] happened, it presented new information, the "mechanisms and consequences" of which may not yet be fully understood or completely clear at this time, but which are significant enough with respect to the Mark I BWR at the Pilgrim plant that issuing the renewed license without consideration of them would effectively run afoul of the requirements of NEPA.[79]
>
> [A] "'hard look' [must be taken] at the environmental consequences" of the renewal, and it can scarcely be said that this has been done with respect to Pilgrim and its Mark I BWR at this time, given the lack of *any* consideration in the Pilgrim EIS of information arising out of the accident at Fukushima.[80]

To adopt our colleague's view of the legal requirements would require the Staff to prove the absence of any environmental effects, having the legal effect of requiring the proof of a negative. Such an approach would, as we said in our Commonwealth Post-Fukushima Order, "stand adjudicative principles on their head."[81] *Second,* as we discussed at length in that Order and as is plainly unaltered by the present pleadings, absolutely no information from the Fukushima accidents has been presented in this proceeding from which it can reasonably be inferred that the accidents provide indicia of an impact on the Pilgrim plant or its environmental impact. Thus there is no environmental effect to be examined under NEPA respecting the proposed federal action of issuing the requested LRA. Further, it is pure speculation to aver that there will be, at some unknown and unknowable time in the future, significant enough information arising from those accidents so as to require present delay of this license renewal decision.[82] There

---

[78] Dissent at pp. 34, 35.

[79] *Id.* at p. 37.

[80] *Id.* at p. 35.

[81] Commonwealth Post-Fukushima Order, LBP-11-35, 74 NRC at 760.

[82] As the Commission has noted in ruling on petitioners' NEPA-related assertions, and our colleague explicitly acknowledged, there is simply insufficient information available at this time from Fukushima, and the NRC's processes are intended to accommodate the raising of concerns when and if sufficient information arises.

> [T]he rules cited by the rulemaking petitioners that reach "generic conclusions" regarding severe reactor and spent fuel accidents appear to be those that pertain to license renewal. . . . As we noted in the *Pilgrim* and *Vermont Yankee* matters, after considering the rulemaking

(Continued)

is, thus, no foundation whatsoever for any assertion that Fukushima-derived information provides any scientific support for the proposition that there are environmental effects of those circumstances or occurrences upon the license renewal for the Pilgrim plant — which is the singular "major federal action" to which NEPA pertains in this proceeding. Moreover, as we have noted in earlier rulings, NEPA does not require the consideration of remote and speculative events or matters, and the possibility that there may arise at some future time information out of Fukushima which implicates an environmental consequence of renewal of the Pilgrim license cannot be described as anything but speculative. There is nothing to take a "hard look" at, and nothing which the Staff could reasonably consider when preparing its site-specific Pilgrim EIS.[83]

We also find fatally flawed the Dissent's conclusion that, while acknowledging and quoting the Commission's explicitly stated position that for "licenses that the NRC issues before completing its [Fukushima] review, any new Fukushima-driven requirements can be imposed later, if necessary to protect the public health and safety,"[84] nevertheless "there are valid site-specific reasons for concluding that the sought license renewal herein does not fall within the category of licenses that should be so issued prior to consideration of Fukushima-related information."[85] Being specific, the Dissent offers only two examples of those "site-specific reasons": the similarity of the reactors and the fact that the Pilgrim license is about to be renewed.

> petitions, the NRC will make a decision whether to deny the petitions, or proceed to make revisions to Part 51. Depending on the timing and outcome of the NRC Staff's resolution of the rulemaking petitions, the Staff itself potentially could seek the Commission's permission to suspend one or more of the generic determinations in the license renewal environmental rules, and include a new analysis in pending, plant-specific environmental impact statements.

Callaway, CLI-11-5, 74 NRC at 174-75, And the Commission repeated this message in an even more recent ruling, stating

> NRC will develop lessons learned, as it has in the past — that is, the NRC will "evaluate all technical and policy issues related to the event to identify potential research, generic issues, changes to the reactor oversight process, rulemakings, and adjustments to the regulatory framework that should be conducted by NRC." Accordingly, our comprehensive evaluation includes consideration of those facilities that may be subject to seismic activity or tsunamis, . . . Further, that evaluation will include consideration of lessons learned that may apply to spent fuel pools that are part of the U.S. nuclear fleet.

Diablo Canyon, CLI-11-11, 74 NRC at 453.

[83] We find that characterization of this contention by the Dissent as "premature" unjustifiably elevates the scientific foundation for the premise that the combination of incredible events that occurred at Fukushima have a substantial likelihood of occurrence at Pilgrim to an unwarranted level. The rationale for that characterization by the Dissent implies that there is today sufficient information to believe the issue will, given time, ripen to maturity, a postulate without foundation.

[84] Dissent at p. 36 (quoting *Callaway,* CLI-11-5, 74 NRC at 166).

[85] *Id.* at p. 36.

These examples simply are not "site-specific" information. The fact that the Pilgrim plant also has a Mark I containment structure is generic, whereas the sort of site-specific information which could be relevant would, for example, regard how that plant was adapted to the site, particular site characteristics, or specific characteristics of how the Pilgrim plant was constructed or how it is operated and maintained. Moreover, the fact of generic similarity of the plants advises nothing which presents any "site-specific" comparisons or analogies between the Fukushima plants and the accident initiators which befell them, nor does it indicate anything substantive about the Pilgrim plant and its site. Similarly, the fact that the Pilgrim license is presently undergoing consideration for renewal is certainly not the sort of site-specific information to which the regulations and case law refer.

Finally, we note the Dissent's reliance upon a series of documents respecting the potential impacts upon the Pilgrim region of aqueous transport and dispersion of contaminants, but must point out that neither Pilgrim Watch nor any of the references to which it refers provides any information which indicates how the causes of the accidents at Fukushima might lead to the type of releases at Pilgrim which concern Pilgrim Watch because of the accidents at Fukushima, thus failing utterly to indicate the presence of any new information, environmental or safety, for the Pilgrim plant. In this respect, the Dissent's lengthy discourse on the technical information provided by Entergy and Pilgrim Watch (and its expert and the documents to which they refer) misses the mark — while we have no doubt that the maritime economy in the region of the Pilgrim plant is as large as asserted, for those factors to be relevant to the Pilgrim SAMA analysis, there must be some indicia that the triggering events of the Fukushima accidents are relevant for Pilgrim and, as we have noted at length in this and our earlier orders, those indicia are entirely absent from the pleadings.

Further, we note that the Dissent's analysis of how the Pilgrim Watch pleadings satisfy the requirements of section 2.326(a)(3) completely ignores the fundamental requirement of that provision that the information and pleadings must "*demonstrate*" that a materially different result would be or would have been likely. Her analogy to, and analysis under, the standards for defeat of a motion for summary disposition is simply inapposite. Nowhere in the Dissent's analysis does it address whether or not the pleadings rise to the level of demonstrating the likelihood of a different result, instead applying an inappropriate standard:[86]

> [Pilgrim Watch] provided sufficient information to defeat a summary disposition motion, by showing a genuine dispute on material issues including what the cost

[86] "I address the issue of how well Pilgrim Watch meets the exacting 'materially different result' requirement of section 2.326(a)(3), analyzing this using the Commission's test of whether it has been shown that a motion for summary disposition could be defeated." *Id.* at p. 27.

> would be of aqueous contamination originating in the Pilgrim Plant and being dispersed into Cape Cod Bay and the surrounding Atlantic Ocean, and whether it could lead to an additional cost-beneficial SAMA.[87]

This is an inappropriate standard by which to judge whether or not the exacting requirements of section 2.326(a)(3) are satisfied; whether or not Pilgrim Watch showed a genuine dispute on a material issue it plainly has not *demonstrated* the *likelihood* of a materially different result — and the former, even if satisfied, cannot rationally be found to satisfy the latter.

III. CONCLUSION AND ORDER

For the foregoing reasons, we find that Pilgrim Watch's new contention fails to satisfy the criteria for reopening a closed record under 10 C.F.R. § 2.326, as well as the contention admissibility criteria of 10 C.F.R. § 2.309(f)(1), each of which failures requires denial of this request for hearing by Pilgrim Watch. Pilgrim Watch's motion is therefore DENIED. The evidentiary record in this proceeding remains closed, and, as there are no pending contentions or remaining issues to be resolved by this Licensing Board, the proceeding is hereby TERMINATED.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[88]

Dr. Paul B. Abramson
ADMINISTRATIVE JUDGE

Dr. Richard F. Cole
ADMINISTRATIVE JUDGE

Rockville, Maryland
January 11, 2012

[87] *Id.* at p. 32.

[88] Judge Young's dissenting opinion follows below.

Administrative Judge Ann Marshall Young, Dissenting

As I have done on a number of prior occasions in this proceeding, I again find I must dissent from the Majority decision. Based on the analysis set forth below, I find that Pilgrim Watch's November 18, 2011 contention[1] meets the reopening standards of 10 C.F.R. § 2.326 and is otherwise admissible, except that it is premature at this time under Commission case law. Further, I would not terminate this proceeding at this time, as I find that NEPA requires Fukushima-related issues to be addressed in this proceeding prior to a final decision on the Pilgrim license renewal application.

I note at the outset that it is somewhat anomalous, if not inconsistent, to be considering whether a contention has at the same time been submitted *early enough* to be admitted, and yet also *not too early* — thus placing intervenors, who already face high hurdles in achieving any rights to hearings in NRC proceedings, in an even more difficult position. But current controlling case law and regulation require this, and I thus consider both questions herein. In approaching the two separate analyses, I look first to the prematurity analysis that the Commission has established with respect to the unique circumstances associated with Fukushima-related issues, given that, if information is simply not yet sufficiently available and developed to adequately support a Fukushima-related contention, there would seem to be little point in extensively analyzing it according to the rather long list of criteria in the various subsections of 10 C.F.R. §§ 2.309 and 2.326. I nonetheless, in view of the Majority's rulings based on these latter requirements, provide a brief analysis of Pilgrim Watch's satisfaction of the reopening and contention admissibility standards, and find that, but for the question of the prematurity of the issues raised, it has met those requirements.

Prematurity of New Contention

On September 9, 2011, the Commission in CLI-11-5 ruled that "the mechanisms and consequences of the events at Fukushima [we]re not yet fully understood" and "the full picture of what happened at Fukushima [wa]s still far from clear," thus warranting a conclusion that a request for analysis whether the Fukushima events constitute "new and significant information" under NEPA was then "premature."[2] Circumstances do not appear to have changed greatly since

---

[1] Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima (Nov. 18, 2011) [hereinafter PW Contention].

[2] *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 166-67 (2011). As I have previously noted, although the Commission in these statements was addressing generic issues, *id.,* and expressly stated that in individual proceedings "litigants may seek admission of new or amended

(Continued)

that time so as to warrant a conclusion to the contrary with respect to Pilgrim Watch's new contention. Perhaps more to the point at this time, I note that in SECY-11-0089, on which Pilgrim Watch relies in support of its new contention, it is stated that the offsite radiological consequences of the release of "large volumes" of contaminated water at Fukushima are "yet to be determined."[3] Based on these considerations, I must find that Pilgrim Watch's current Fukushima-related contention is premature at this time.[4]

Admissibility of Contention Under Reopening Standards and Other Relevant Requirements

With respect to the reopening standards,[5] the NRC Staff[6] and Entergy[7] and its experts[8] argue that the new contention is untimely under section 2.326(a)(1), because the factual support for the contention was publicly available long before

---

contentions," *id.* at 170, it also stated that "the current state of information" did not present "a seriously different picture of the environmental impact" of a proposed project in an application-specific context. *Id.* at 167-68. The Commission's prematurity analysis would thus reasonably seem also to be applicable in individual proceedings such as this one.

[3] *See infra* notes 9, 28, and accompanying text.

[4] I note further with respect to the prematurity analysis of CLI-11-5 that, subsequent to the July 12, 2011 issuance of the Near-Term Task Force Report, *see* Dr. Charles Miller et al., Recommendations for Enhancing Reactor Safety in the 21st Century, The Near-Term Task Force Review of Insight from the Fukushima Dai-ichi Accident (July 12, 2011) (ADAMS Accession No. ML111861807) [hereinafter Near-Term Task Force Report], the Commission directed the NRC Staff to "implement without delay" certain of the Task Force's recommendations. Staff Requirements Memorandum — SECY-11-0124 — Recommended Actions to Be Taken Without Delay from the Near-Term Task Force Report (Oct. 18, 2011) at 1 (ADAMS Accession No. ML1129115710). Given, however, that the deadline set by the Commission for completion of this task is the year 2016, *id.,* this would not seem to be sufficient to change the Commission's conclusion on prematurity as stated in CLI-11-5. (I would observe, however, that this does not necessarily mean that information on Fukushima could not become sufficiently developed to warrant the filing of contentions prior to 2016). *See also* Staff Requirements Memorandum — SECY-11-0137 — Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned (Dec. 15, 2011) (ADAMS Accession No. ML1134900550).

[5] On the applicability of the reopening standards, *see* LBP-11-20, 74 NRC 65, 91-94, 95-96 (2011) (Administrative Judge Ann Marshall Young, Concurring in Part and Dissenting in Part) [hereinafter LBP-11-20 Concurrence and Dissent].

[6] NRC Staff's Answer in Opposition to Pilgrim Watch's Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima (Dec. 13, 2011) at 6-12, 21.

[7] Entergy's Answer Opposing Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post-Fukushima (Dec. 13, 2011) at 11-17.

[8] Declaration of Mr. Joseph R. Lynch and Dr. Kevin R. O'Kula in Support of Entergy's Answer Opposing Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post-Fukushima (Dec. 13, 2011) at 9-13 [hereinafter Lynch, O'Kula Declaration].

the contention was filed — both as to the lack of modeling of aqueous transport and dispersion of radionuclides in the MACCS2 code used for the SAMA analysis, as well as to such transport through the "feed and bleed" phenomenon at Fukushima. Although Pilgrim Watch relies on the September 21, 2011, Commission vote on SECY-11-0089[9] (regarding which Entergy and Staff also raise timeliness challenges), even assuming such reliance to be timely, there are certainly questions on the extent to which this may be said to completely overcome the earlier availability of information on the MACCS2 Code not modeling aqueous transport and on the "feed and bleed" phenomenon at Fukushima. These considerations also bring into question timeliness issues under section 2.309 subsections (c) and/or (f)(2)(i)-(iii). On the other hand, the issues raised by Pilgrim Watch in the new contention appear to me to be exceptionally grave, so as to override any untimeliness under section 2.326(a)(1), as well as significant, as required by section 2.326(a)(2), based on the following analysis.

At this point I address the issue of how well Pilgrim Watch meets the exacting "materially different result" requirement of section 2.326(a)(3), analyzing this using the Commission's test of whether it has been shown that a motion for summary disposition could be defeated.[10] Mr. Lynch and Dr. O'Kula in their Declaration provide lists of the identifying numbers of the accident scenarios leading to atmospheric source terms that are modeled in the Pilgrim SAMA analysis, along with the ratios of the postulated releases of each to current

---

[9] *See, e.g.,* PW Contention at 2 n.1 (citing SECY-11-0089, Enclosure 1 at 29, available at http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2011/2011-0089scy.pdf; Commission Voting Record, Decision Item SECY-11-0089 (Sept. 21, 2011), available at http://www.nrc.gov/reading-rm/doc-collections/commission/cvr/2011/2011-0089vtr.pdf.

[10] *See* LBP-11-20 Concurrence and Dissent, 74 NRC at 94 (citing *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 346 (2011); 10 C.F.R. § 2.1205). *See also* CLI-10-11, 71 NRC 287, 297-98, 303 (2010), for the Commission's discussion and application of the summary disposition standards in this case, in remanding Pilgrim Watch Contention 3. Contention 3 as admitted involved claims including that the MACCS2 code modeling does not fully take into account accurate meteorological factors and, interestingly, did not include any showing of exactly how any changes would alter the ultimate SAMA cost-benefit conclusions. *See* LBP-11-23, 74 NRC 287, 324 (2011) (Administrative Judge Ann Marshall Young, Concurring in Part and Dissenting in Part) [hereinafter LBP-11-23 Concurrence and Dissent], in which I stated:

> . . . Pilgrim Watch was unable with respect to Contention 3 to show whether or how the outcome of the SAMA cost-benefit conclusions would be changed, but the Commission nonetheless reversed the summary disposition ruling and remanded for a new hearing on parts of the original contention. That ruling implicitly acknowledged that it is, as a practical matter, unreasonable to expect, even in a reopening context, any intervenor, even one with large resources, to challenge particular minute and complex calculations and computer modeling in a SAMA analysis on the level Entergy and Staff seek to require at this point.

LBP-11-23 Concurrence and Dissent, 74 NRC at 365 (citing CLI-10-11, 71 NRC at 301-02). In overturning the majority's grant of summary disposition in part, the Commission directed that this issue be part of the hearing on remand. *See* CLI-10-11, 71 NRC at 305, 308, 315-17.

estimates of releases from Fukushima, indicating that the postulated releases would result in much larger offsite consequences than those estimated to date with respect to Fukushima.[11] They also provide statements on the relative significance of aqueous transport of radionuclides as compared to atmospheric transport in the event of an accident.[12] They argue that "the radiological consequences from the atmospheric releases assumed in the Pilgrim SAMA analysis are greater than the consequences that may result from the aqueous releases asserted by Pilgrim

---

[11] *See* Lynch, O'Kula Declaration at 30-37. I would note that, to the extent Entergy's and its experts' arguments to the effect that no accident similar to the one that occurred at Fukushima is likely to occur at Pilgrim (which are not unpersuasive in themselves), *see, e.g.,* Entergy Answer at 2, 21; Lynch, O'Kula Declaration at 6-8, 13-21, might in any way or at any level be intended or read as somehow suggesting that virtually no Fukushima-related contention could ever be admissible with respect to Pilgrim, I would find that suggestion to be unpersuasive. Aspects of information arising out of Fukushima might be relevant to particular possible equipment failures, or to the understanding of station blackout and related issues, to state just two examples of matters that might be subjects of Fukushima-related contentions.

For another example, one need only look to the basic nature of a SAMA analysis. I have previously noted the NRC Staff's explanation of this concept:

> The PRA for a commercial power reactor has traditionally been divided into three levels: level 1 is the evaluation of the combinations of plant failures that can lead to core damage; level 2 is the evaluation of core damage progression and possible containment failure resulting in an environmental release for each core-damage sequence identified in level 1; and level 3 is the evaluation of the consequences that would result from the set of environmental releases identified in level 2. All three levels of the PRA are required to perform a SAMA analysis.

LBP-11-35, 74 NRC 701, 765 n.9 (2011) (Administrative Judge Ann Marshall Young, Concurring in Results Only) (quoting NRC Staff Testimony of Nathan E. Bixler and S. Tina Ghosh Concerning the Impact of Alternative Meteorological Models on the Severe Accident Mitigation Alternatives Analysis, Exhibit NRC000014 (June 2, 2011), A11 at 7-8) [hereinafter LBP-11-35 Concurrence]. As I therein pointed out:

> How the probabilities used in [a SAMA] analysis are developed and assigned to each input event in a series is key, as the development and assigning of probability values to a large number of possible equipment failures, operator actions, etc., determine the outcome probabilities of the overall analysis. If any of the input values are based on incorrect or incomplete information on past failures, for example, this could call into question the overall analysis and its results. It would thus seem likely that, once [more complete] information from Fukushima is available, it might well play into the input values used in a SAMA analysis for a Mark I boiling water reactor of the sort that failed at Fukushima, such as the Pilgrim reactor. Of course, a SAMA analysis includes conservatisms that account for some uncertainties, but notwithstanding these conservatisms, until it is known how the inputs into the analysis might change as a result of information learned from Fukushima, it is unclear what the results of the overall analysis might be.

Id. at 765 n.9. Contentions might obviously be based on assertions that certain SAMA input data or modeling were incorrect, with particular consequences (without necessarily having to demonstrate that they would make a new SAMA cost-beneficial).

[12] *See* Lynch, O'Kula Declaration at 22-30.

Watch,"[13] provide rather detailed explanations of the nature of the atmospheric releases, and contend that "the releases of contaminated water into Cape Cod Bay that Pilgrim Watch asserts must be considered in the Pilgrim SAMA analysis would not result in [population dose risk (PDR)] and [offsite economic cost risk (OECR)] consequences remotely approaching those assumed in the SAMA analysis."[14] Further:

> Releases of contaminated water into Cape Cod Bay will not result in immediate, direct exposures to people, and therefore would not result in corresponding costs to be considered in the SAMA analysis. Similarly, contaminated water released into Cape Cod Bay will not result in PDR and OECR consequences anywhere near as large as those that will occur in the heavily populated areas 10-50 miles from the Pilgrim plant in the long-term phase of the SAMA analysis. In other words, for example, there will be comparatively very minimal PDR consequences because (1) there will be minimal dose incurred as a result of inhalation (the release is not airborne) or shoreline exposure (limited number of persons near or on Cape Cod Bay compared to those on land); and (2) there will be minimal water and food ingestion doses (saltwater is not potable, and marine foodstuff consumption will be interdicted by State and Federal agencies until water concentration levels are deemed safe).[15]

Continuing, Entergy experts argue that swimming, fishing, boating and eating fish and shellfish are "amenable to interdiction" and therefore "uptake by humans and long-term effects would be small,"[16] and that after "ten half-lives (96.5 days) the concentration of an aqueous release of contaminated water would be less than 0.1% of the original concentration."[17] It is acknowledged that "some costs could be conservatively estimated to account for temporary lost maritime business and limits on shoreline use," but asserted that these would be "considerably smaller" than the costs for one of the postulated accident scenarios analyzed in the SAMA analysis, suggesting that they would not be enough to make another SAMA cost-beneficial, which would require at least 2.2 times the current estimated cost-avoided figure of $2,410,000 (i.e., an additional $2,892,000).[18]

These statements do not, however, address in any detail the information Pilgrim Watch and Mr. Gundersen provide, in great detail, on the ways in which aqueous transport could have negative environmental and other offsite consequences, citing not only SECY-11-0089 but also various other reports and

---

[13] *Id.* at 22.
[14] *Id.* at 26 ¶ 46.
[15] *Id.*
[16] *Id.*
[17] *Id.* at 25.
[18] *Id.* at 27-28.

modeling information on water circulation and related issues in and around Cape Cod Bay.[19] Indeed, Pilgrim Watch cites a 2006 analysis by the University of Massachusetts, according to which "[t]he maritime economy in Massachusetts generated *$14.8 billion dollars in 2004,* including $6.1 billion in secondary output impacts (jobs created in the rest of the state through the functioning of the maritime economy)."[20] It points out that the "maritime sectors include: commercial seafood, transportation, coastal tourism and recreation, marine science and technology, and marine related construction and infrastructure."[21]

With respect to marine science, Mr. Gundersen cites "sophisticated and readily available models that Entergy could use to track the likely path and dilution of discharges into Cape Cod Bay," including the Marine Ecosystem Dynamics Modeling Laboratory (MEDML) at the School for Marine Science and Technology, University of Massachusetts–Dartmouth," which has a "research team focusing on coastal and estuary circulation, frontal dynamics, bio-physical interaction, suspended sediment processes, and ecosystem modeling."[22] According to Mr. Gundersen, this team has developed "a model, described as an unstructured grid, Finite-Volume, primitive equation Community Ocean Model (FVCOM) that is specifically designed to simulate the circulation and ecosystem dynamics particularly for regions near Pilgrim that are characterized by irregular complex coastlines, islands, inlets, creeks, and inter-tidal zones."[23] Furthermore, he points

---

[19] *See* PW Contention at 12-37; Declaration of Arnold Gundersen Supporting a Request by Pilgrim Watch for a New Contention Hearing Regarding the Inadequacy of Pilgrim Station's Environmental Report, Post Fukushima (Nov. 17, 2011) at 4-5, 8-12 [hereinafter Gundersen Declaration]. I note that Mr. Gundersen's credentials as an expert on aqueous releases and PRA have been challenged, *see* Majority Decision at p. 17 (citing Entergy Answer at 29-33, Staff Answer at 32-34), but do not find this challenge persuasive. Mr. Gundersen has 39 years of nuclear industry experience and a master's degree in nuclear engineering, which together clearly establish his expertise on the matters on which he has written in his Declaration. *See* PW Contention, Exh. 2, Curriculum Vitae, Arnold Gundersen. In addition, his expertise on aqueous releases would seem to be no less extensive that the expertise on that subject of Entergy's experts, neither of whom claim any particular expertise on aqueous release issues apart from dose pathways. *See* Lynch, O'Kula Declaration at 3.

[20] PW Contention at 25 (emphasis added); *see id.* at 23; Gundersen Declaration at 4-5 (citing *An Assessment of the Coastal and Marine Economics of Massachusetts,* 29 RFR #: ENV 06 CZM 09, Massachusetts Office of Coastal Zone Management (CZM), University of Massachusetts President's Office, Donahue Institute, Amherst, Massachusetts (June 29, 2006), found at http://www.massbenchmarks.org/publications/studies/pdf/czmreport1.pdf (last visited Jan. 10, 2012)). An examination of the cited document reveals that it does indeed, at page 6, provide the figures cited by Pilgrim Watch. Pilgrim Watch and Mr. Gundersen also cite the Massachusetts Ocean Management Plan, which relies on the Donohue Institute document. PW Contention at 23; Gundersen Declaration at 5 (citing Massachusetts [Ocean] Management Plan, Vol. 2, Baseline Assessment and Science Framework (Dec. 2009), found at http://www.env.state.ma.us/eea/mop/final-v2/v2-text.pdf (last visited Jan. 10, 2012)).

[21] PW contention at 25.

[22] Gundersen Declaration at 10.

[23] *Id.*

out, this team has collaborated with scientists at the Woods Hole Oceanographic Institution (which is located in the southwestern part of Cape Cod[24]) to build "an integrated high-resolution model system that is capable of hindcasts, nowcasts, and forecasts of circulation and key ecosystem processes in coastal oceans and estuaries that would be valuable for Pilgrim's SAMA analysis."[25] Additional collaboration with scientists at the Massachusetts Institute of Technology has led to the implementation of "both ensemble and reduced Kalman filters into FVCOM to build a model-based observing and predict[ing] coastal ocean system," according to Gundersen.[26]

Gundersen asserts further that:

> Because pollutant transport is affected by factors that are highly variable over time, it is important that Entergy model over at least a 5-year time period, and use the 95% percentile [sic], and not simply the mean. For example, winds affect the direction and strength of currents. Strong winds, seen more frequently in winter and during years with more frequent storms, serve to mix the water column affecting the dilution of contaminants. River discharges also affect current direction and that varies from year to year depending upon the extent of snow and fresh water melt into the Gulf of Maine and Massachusetts Bay. Therefore, in my opinion, a single year's worth of data cannot provide a sufficiently conservative data set for the purposes of Pilgrim's SAMA analysis. Additionally, it is important that a 95th percentile analysis, not one simply based on a mean, be used to provide a reasonable estimate of potential risk and costs. The data affecting contaminant dispersion and dilution would have to be averaged in order to be input into a model, but a mean-based analysis would totally obscure the real risk. The SAMA analysis would be functionally dependent on the choice of statistical input parameter or average.
>
> . . . .
>
> We know that the impact of Fukushima on Japan, and on its marine-dependent industry has been staggering. Converting Japanese Yen to US dollars in order to assess the economic impact of such an accident at Pilgrim Station shows that Price Anderson insurance limits will be exceeded to pay compensation for damages, much of which is due to marine dependent industry losses.[27]

I note also that Mr. Gundersen cites and relies on the following language from SECY-11-0089:

> An important limitation of MACCS2 is that it does not currently model and analyze the aqueous transport and dispersion of radioactive materials through surface water,

---

[24] *See* http://www.whoi.edu/page.do?pid=9297 (last visited Jan. 10, 2012).

[25] Gundersen Declaration at 11.

[26] *Id.*

[27] *Id.* at 11-12.

> sediments, soils, and groundwater. As demonstrated by the recent events in Japan, certain accident scenarios can result in large volumes of contaminated water being generated by emergency measures to cool the reactor cores and SFPs, with yet to be determined offsite radiological consequences. To determine the relative risk significance of these types of scenarios, a Level 3 PRA must be capable of modeling and analyzing the aqueous transport and dispersion of radioactive materials. This has therefore been identified as an important technical gap to be addressed . . . .[28]

With respect to connecting the aqueous transport issue to any posited accident at the Pilgrim plant, I note that Pilgrim Watch has incorporated by reference its May 11 and June 1, 2011, contentions.[29] I previously found the second of these to be admissible (prior to the Commission's issuance of CLI-11-5), in my Concurrence and Dissent to LBP-11-23.[30] I also now find that the matters put forth in and in support of Pilgrim Watch's June 2011 contention, in conjunction with the current contention, provide a sufficient connection between containment failure and failure of the direct torus vent to operate (as raised in the June 2011 contention), on the one hand, and consequences including those asserted in and in support of the current contention, on the other.

Based on the preceding, among other information provided by Pilgrim Watch and Mr. Gundersen, I conclude that they have provided sufficient information to defeat a summary disposition motion, by showing a genuine dispute on material issues including what the cost would be of aqueous contamination originating in an accident at the Pilgrim plant and being dispersed into Cape Code Bay and the surrounding Atlantic Ocean, and whether it could lead to an additional cost-beneficial SAMA.[31] The information from the University of Massachusetts

---

[28] SECY-11-0089, Options for Proceeding with Future Level 3 Probabilistic Risk Assessment Activities (July 7, 2011); *see* Gundersen Declaration at 8-9.

[29] PW Contention at 8.

[30] *See* LBP-11-23 Concurrence and Dissent.

[31] Taking Entergy's figures, leading to the need to demonstrate at least an additional $2,892,000 in averted costs, *see supra* p. 29, and comparing them to the $14.8 billion figure for the Massachusetts maritime economy for a year provided in the University of Massachusetts study, using a fraction of that yearly figure to conservatively assume that, for example, only one-tenth of the whole maritime economy of Massachusetts would be affected, and then taking one-fourth of that to represent approximately the 96.5 days Entergy estimates negative impacts would continue, produces a figure of $370,000,000 — far greater than $2,892,000. Even considering this in a context of a healthy and robust economy, the impacts would seem to be, as Mr. Gundersen estimates, "enormous." *See* Gundersen Declaration. However these economic costs may be considered and compared with the costs of atmospheric releases (including Entergy experts' suggestion that *any* consequences from atmospheric releases would be reduced by any aqueous release consequences, *see* Lynch, O'Kula Declaration at 8, 29), and however they might be affected by any further mathematical computations that are part of the SAMA analysis, neither Entergy nor the NRC Staff has addressed the specific information on

(Continued)

study on the generation of $14.8 billion in 2004, cited by Mr. Gundersen and Pilgrim Watch, clearly raises a material dispute with respect to the Pilgrim SAMA analysis, even if the same might not be true with respect to population dose risk, and notwithstanding Entergy's (relatively less specific) assertions that *any* consequences of aqueous dispersal would be less than those of atmospheric releases.

I also find that the preceding information, particularly that relating to impacts on the maritime environment and economy in the area surrounding the Pilgrim plant, presents a significant and exceptionally grave issue that outweighs any questions on timeliness. Obviously, if there were an accident at the Pilgrim plant with consequences including releases of contaminated water, the results could be catastrophic, and I find that Pilgrim Watch has provided information that "paint[s] a seriously different picture of the environmental landscape"[32] were there to be the sort of aqueous releases addressed in its new contention. Moreover, based on the same information presented, summarized, and/or referenced above, I would find that other relevant criteria for admission of the current contention have been met, with the exception of a lack of support in the form of information from Fukushima that has been sufficiently collected and developed to warrant consideration at this time.[33]

On the reopening standards, I note one additional point. In the same vein as I discussed in my concurrence and dissent to LBP-11-20, I recognize that Mr. Gundersen has not specifically identified the statements in his Declaration as addressing the reopening standards of 10 C.F.R. § 2.326, but do not find this negates a conclusion that Pilgrim Watch, with Mr. Gundersen, has demonstrated, in reality, that the standards have been met. In my view, to rule otherwise would be to elevate form over substance.[34]

I would find, in the end, that Pilgrim Watch has demonstrated, in the combination of its June and November 2011 contentions, genuine disputes of material fact that should be addressed in an appropriate manner prior to issuance of any ultimate decision on the Pilgrim license renewal application. In my view, there is no question but that Pilgrim Watch has presented and supported its current contention, when taken in combination with its June 2011 contention, sufficiently that the issues raised therein warrant further inquiry, when enough information

---

impacts to the maritime economy provided by Pilgrim Watch, which has certainly demonstrated a genuine issue of material fact with this information, in combination with other information provided in the current contention and in its June 2011 contention.

[32] *See Callaway,* CLI-11-5, 74 NRC at 167-68.

[33] This would include a finding that a balancing of the factors found at 10 C.F.R. § 2.309(c)(1) would warrant admitting the contention despite its untimeliness, but for the prematurity issues addressed above.

[34] *See* LBP-11-20 Concurrence and Dissent, 74 NRC at 95-96.

on Fukushima is available to permit this to be done effectively. I would therefore refrain from terminating this proceeding and making an ultimate decision on the renewal application until information on the Fukushima accident becomes sufficiently clear for appropriate consideration that would permit a more meaningful, fully reasoned decision on the application. At such time, Pilgrim Watch (as well as the State of Massachusetts) should be able to update contentions, and perhaps submit new ones, relating to information arising out of the Fukushima accident, to an extent and level of specificity that would warrant more in-depth and meaningful analysis.

NEPA Considerations on Termination of Proceeding

In my estimation, terminating this proceeding at this time would be to essentially disregard relevant requirements of the National Environmental Policy Act (NEPA). Pertinent Fukushima-related issues should be addressed with respect to the Pilgrim license renewal application, given NEPA's "'dual purpose' [of] ensur[ing] that federal officials *fully take into account* the environmental consequences of a federal action *before* reaching major decisions, and [ ] inform[ing] the public, Congress, and other agencies of those consequences."[35] Although there may be insufficient information available at this time to conclude that consideration of issues relating to the Fukushima accident *would* definitely lead to significantly different analyses of environmental consequences in the Pilgrim EIS (including in the SAMA analysis summarized therein),[36] there is also at this time insufficient information to conclude that consideration of relevant Fukushima-related issues *could not* lead to significantly different analyses of the environmental consequences of renewing the Pilgrim operating license. And I find that both Pilgrim Watch and the Commonwealth of Massachusetts have shown that it is reasonably foreseeable that consideration of information arising out of the Fukushima accident *could* have such an effect with respect to the Pilgrim plant.[37]

---

[35] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348 (2002) (emphasis added) (citing *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 349 (1989); *Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.,* 462 U.S. 87, 97 (1983); *Dubois v. U.S. Department of Agriculture,* 102 F.3d 1273, 1291 (1st Cir. 1996)).

[36] NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supp. 29, Regarding Pilgrim Nuclear Power Station," Final Report (July 2007) (ADAMS Accession No. ML063260173) [hereinafter EIS]; *see id.* Ch. 5.

[37] *See supra* section on Admissibility of Contention Under Reopening Standards and Other Relevant Requirements; LBP-11-23 Concurrence and Dissent; LBP-11-35 Concurrence; *Robertson,* 490 U.S. at 354-56. I do not find a showing of certainty in this regard, such that "there is today sufficient

(Continued)

As I have previously noted,[38] it cannot at this point be said that consideration of Fukushima-related issues "could not affect" the ultimate decision on the renewal application, or that any related impacts are so remote and speculative as to justify their exclusion from consideration.[39] Thus I find the appropriate course of action at this point is to refrain from terminating this proceeding, and from finally deciding on the renewal application until sufficient Fukushima-related information is available to permit consideration of "every significant aspect of the environmental impact"[40] of renewal — including those relating to Fukushima — so as to be able to "inform the public that it has indeed considered environmental concerns in its decisionmaking process,"[41] which is not completely possible at this time. To be sure, it is not necessary that "every alternative device and thought conceivable by the mind of man" be considered in this endeavor.[42] But a "'hard look' [must be taken] at the environmental consequences"[43] of the renewal, and it can scarcely be said that this has been done with respect to Pilgrim and its Mark I BWR at this time, given the lack of *any* consideration in the Pilgrim EIS of information arising out of the accident at Fukushima, with its Mark I boiling water reactors.

Consideration of these issues should be undertaken by supplementing the Pilgrim EIS as soon as sufficient information is reasonably available, prior to a determination on the renewal application. Consideration may also be initiated through the filing of contentions at an appropriate time by parties who have already strongly indicated an interest and shown ability to do so. When sufficient information is available to permit such contentions, both Massachusetts and Pilgrim Watch might, as indicated above, be able to provide much more detailed and specific contentions and bases, focused more precisely on how such information would change specific parts of the Pilgrim EIS and SAMA analysis and warrant reopening of the record in this proceeding. It might also be that Fukushima-related matters relevant to license renewal of plants such as Pilgrim with Mark I BWRs are ultimately addressed by the Commission in a rulemaking that could specifically inform a decision on the renewal application (and which

---

information to believe the issue will, given time, ripen to maturity" without question, *see* Majority Decision at pp. 22-23 n.83, but rather simply that it is "reasonably foreseeable" that information arising out of Fukushima could significantly affect the analysis in the Pilgrim EIS and SAMA analysis.

[38] *See* LBP-11-35 Concurrence, 74 NRC at 766.

[39] *Limerick Ecology Action, Inc. v. NRC,* 869 F.2d 719, 737 (3rd Cir. 1989); *see also id.* at 738-41.

[40] *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.,* 435 U.S. 519, 553 (1978).

[41] *Baltimore Gas,* 462 U.S. at 97.

[42] *Vermont Yankee,* 435 U.S. at 551.

[43] *Baltimore Gas,* 462 U.S. at 97 (citing *Kleppe v. Sierra Club,* 427 U.S. 390, 410 n.21 (1976)).

might also, either partially or fully, preclude the filing of additional contentions[44]). But under NEPA, these significant matters must be considered, in one way or another, before agency action on the license renewal application.

The Commission has, I recognize, stated that, for "licenses that the NRC issues before completing its [Fukushima] review, any new Fukushima-driven requirements can be imposed later, if necessary to protect the public health and safety."[45] However, over and above the requirements of NEPA,[46] there are valid site-specific reasons for concluding that the license renewal sought herein does not fall within the category of licenses that should be so issued prior to consideration of Fukushima-related information.

These include the fact noted above, and previously,[47] that the Pilgrim Mark I boiling water reactor has the same containment design as those at Fukushima. In addition, this proceeding is also unique, even among plants with Mark I BWRs in which license renewal proceedings may be currently pending, in that, if it is not held open until sufficient information on the Fukushima accident is available, the posture of the case is such that it is very likely action will be taken to grant the pending application in the very near future, thereby foreclosing the possibility of any pertinent Fukushima-related issues being addressed *at all,* in *any* manner, *before* the license is renewed for an additional 20 years. The EIS and the SAMA analysis would remain as they are, without *any* consideration of the impacts of Fukushima-related issues. And if, later, new information on the Fukushima accident were ultimately to reveal issues that might, for example, bring into question the propriety of the license renewal itself, approaching such issues only *after* issuing the renewed license would obviously be problematic. As argued by Pilgrim Watch, NEPA exists in part to "ensure[ ] that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast."[48]

---

[44] *See Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 345 (1999).

[45] *Callaway,* CLI-11-5, 74 NRC at 166.

[46] *See also* 10 C.F.R. § 51.20(b)(2), which requires an EIS for the renewal of an operating license for a nuclear power reactor.

[47] *See* LBP-11-23 Dissent, 74 NRC at 325-27, 364, 367.

[48] PW Contention at 5 (quoting *Robertson,* 490 U.S. at 349). Pilgrim Watch also cites *Marsh v. Oregon Natural Resources Council,* 490 U.S. 360, 371 (1989), for the principle that "it would be incongruous with NEPA's 'action-forcing' purpose to allow an agency to put on 'blinders to adverse environmental effects,' just because the EIS has been completed." *Id.* at 4. As the Court also stated:

> . . . NEPA promotes its sweeping commitment to "prevent or eliminate damage to the environment and biosphere" by focusing Government and public attention on the environmental effects of proposed agency action. 42 U.S.C. § 4321. By so focusing agency attention, NEPA

(Continued)

It is true, as I have previously noted,[49] that, but for the remand of Contention 3 in CLI-10-11,[50] the Pilgrim renewal application would no doubt have been granted some time ago. However, this did not occur, and it happened that the Fukushima accident occurred 2 days after oral argument on the remanded Contention 3. At that point, or soon thereafter as the severity of the accident began to become apparent (even if only on a preliminary basis), matters relating to potential severe accidents and their mitigation, and to the environmental impacts of continued operation in the very densely populated coastal area where Pilgrim is located, took on added significance, particularly given that the plant is a Mark I boiling water reactor. And at an appropriate point it will be *possible* to consider information from Fukushima as it may be relevant to Pilgrim, if a determination on the pending license renewal application is held in abeyance.

Taking this proceeding, then, where it now stands, if license renewal is to be a meaningful step *with respect to the Pilgrim plant,* the impact of Fukushima-related issues must be analyzed and satisfactorily concluded *prior to* an ultimate decision on the renewal application. Holding the proceeding open would permit this, while at the same time assuring that Pilgrim Watch, the Commonwealth and its citizens have their understandable interests and concerns addressed in an appropriate manner.

This approach would also comply with NEPA and the requirements of 10 C.F.R. § 51.20(b)(2). Although this would not have been required prior to Fukushima, once the accident happened, it presented new information, the "mechanisms and consequences" of which may not yet be fully understood or completely clear at this time, but which are significant enough with respect to the Mark I BWR at the Pilgrim plant that issuing the renewed license without consideration of them would effectively run afoul of the requirements of NEPA. This would not be true with respect to *any* new information that arose. But the accident at the Fukushima Dai-ichi plant was clearly an out-of-the-ordinary, disastrous event,

---

> ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct. *See Robertson,* 490 U.S. at 349. . . . As we explained in *TVA v. Hill,* 437 U.S. 153, 188, n.34 (1978), although "it would make sense to hold NEPA inapplicable at some point in the life of a project, because the agency would no longer have a meaningful opportunity to weigh the benefits of the project versus the detrimental effects on the environment," up to that point, "NEPA cases have generally required agencies to file environmental impact statements when the remaining governmental action would be environmentally 'significant.'"

Marsh, 490 U.S. at 371-72 (also citing with approval and quoting from *Environmental Defense Fund v. Tennessee Valley Authority,* 468 F.2d 1164 (6th Cir. 1972), stating, "In that case the Court of Appeals upheld an injunction barring the continued construction of a dam on the Little Tennessee River pending the filing of an adequate EIS, notwithstanding the fact that the project was initially approved and construction commenced prior to the effective date of NEPA." *Id.* at 372 n.15).

[49] *See* LBP-11-35 Concurrence, 74 NRC at 766 n.13.

[50] *See* CLI-10-11, 71 NRC 287 (2010).

with continuing consequences, the magnitude and exact processes of which might not be completely clear at this time, but which are becoming clearer as time goes by.

Even considering the limited review involved in license renewal,[51] if the EIS and SAMA analysis are significant enough matters that they are *required* to be completed in connection with the license renewal application itself, logic dictates that they are significant enough that they should *accurately* address *all truly significant issues* that might reasonably be expected to be relevant to the application, even if meaningful consideration might need to await some additional development of information. To the extent it is not evident at this point that significant Fukushima-related issues may well be quite relevant to the pending renewal application on Pilgrim and its Mark I BWR, Pilgrim Watch has in its current contention shown a more than reasonable likelihood that relevant Fukushima-related information could in this proceeding lead to significantly different analyses and conclusions in the EIS and SAMA analysis. And I find that consideration of such information would be necessary in order to "fully take into account the environmental consequences" of renewing the Pilgrim operating license.[52]

The existing Pilgrim operating license will, of course, remain in effect until issuance of an ultimate decision on the renewal application. Thus any possible harm to the Applicant resulting from awaiting further development of Fukushima-related information should be minimized.[53] Moreover, it would seem to be in *all* parties' interests to timely assure either that Fukushima-related information would not negatively impact the Pilgrim EIS and/or SAMA analysis and conclusions, or that any potential problems could, if and to the extent possible, be effectively identified, addressed, and, as appropriate, mitigated.

For the preceding reasons I urge the Commission to stay termination of this proceeding until relevant matters relating to the Fukushima accident may — whether through an updated EIS, timely new or amended contentions, and/or a relevant rulemaking — be addressed appropriately and sufficiently to permit a fully reasoned decision on the Pilgrim renewal application, as required by relevant NEPA and NRC law and regulation.[54]

---

[51] *See Callaway,* CLI-11-5, 74 NRC at 164.

[52] *See PFS,* CLI-02-25, 56 NRC at 348.

[53] Obviously, Entergy has its own significant business interests that would be affected by holding the proceeding open, and they may be considered and balanced along with all other relevant factors. However, in such a balancing those interests would obviously not automatically outweigh the significant environmental issues that are at issue.

[54] It would also be appropriate to provide a reasonable mechanism for informing parties when the time is ripe for filing new Fukushima-related contentions. *See Callaway,* CLI-11-5, 74 NRC at 171.

Cite as 75 NRC 39 (2012) **CLI-12-1**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, 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) **February 9, 2012**

The Commission denies review of an Atomic Safety and Licensing Board decision that addressed and rejected a challenge to the Severe Accident Mitigation Alternatives (SAMA) analysis for the Pilgrim Nuclear Power Station.

SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS

The SAMA analysis is a probability-weighted assessment of the benefits and costs of mitigation alternatives that can be used to reduce the risks (probability or consequences or both) of potential severe accidents at nuclear power plants.

SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS

As a mitigation alternatives analysis under the National Environmental Policy Act (NEPA), the SAMA analysis is neither a worst-case nor a best-case impacts analysis. NRC-endorsed guidance on SAMA analysis methodology specifies use of the mean annual off-site dose and economic impact.

CONTENTIONS, ADMISSIBILITY

We have long required contention claims to be set forth with particularity. It should not be necessary to speculate about what a pleading is supposed to mean. Petitioners must raise and reasonably specify at the outset their objections to a license application.

SEVERE ACCIDENT MITIGATION ALTERNATIVES

The mitigation measures examined in a SAMA analysis are supplemental to those we already require under our safety regulations for reasonable assurance of safe operation. Through our reactor oversight process, including generic safety issue reviews, we revisit whether additional mitigation measures should be imposed as a safety matter under 10 C.F.R. Part 50.

MEMORANDUM AND ORDER

Before us is Intervenor Pilgrim Watch's petition for review of Atomic Safety and Licensing Board decision LBP-11-18 and several related interlocutory Board orders.[1] In LBP-11-18, the Board on remand rejected Pilgrim Watch's challenge to the Severe Accident Mitigation Alternatives (SAMA) analysis associated with the license renewal application for the Pilgrim Nuclear Power Station (Pilgrim). Both the NRC Staff and the applicants, Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc. (together, Entergy) oppose the petition for review.[2] For the reasons outlined below, we deny the petition.

---

[1] *See* Pilgrim Watch Request for Review of the Partial Initial Decision (Rejecting upon Remand, Pilgrim Watch's Challenge to Meteorological Modeling in SAMA Analysis in Entergy's License Renewal Application) July 19, 2011 (Aug. 3, 2011) (Petition); LBP-11-18, 74 NRC 29 (2011); Order (Scheduling Telephone Conference) (Sept. 2, 2010) (unpublished); Order (Confirming Matters Addressed at September 15, 2010 Telephone Conference) (Sept. 23, 2010) (unpublished); Order (Questions from Board Majority Regarding the Mechanics of Computing "Mean Consequences" in SAMA Analyses) (Oct. 26, 2010) (unpublished); Order (Ruling on Timeliness of Mean Consequence Issue) (Nov. 23, 2010) (unpublished) (November 23 Ruling on Mean Consequences Issue); Order (Addressing Joint Motion in Limine, Proposed Findings of Fact and Conclusions of Law/Concluding Statements of Position, and Argument to Be Held March 9, 2011) (Feb. 22, 2011) (unpublished); Revised Notice and Order (Regarding Hearing and Oral Argument) (Feb. 23, 2011) (unpublished); Memorandum and Order (Ruling on Timeliness of Mean Consequence Value Issue) (Mar. 3, 2011) (unpublished) (March 3 Ruling on Mean Consequences Issue).

[2] *See* Entergy's Answer Opposing Pilgrim Watch's Request for Review (Aug. 15, 2011) (Entergy Brief); NRC Staff's Answer to Pilgrim Watch's Request for Review of the Licensing Board's July 19, 2011 Partial Initial Decision (LBP-11-18) (Aug. 15, 2011) (Staff Brief).

I. BACKGROUND

The Board's decision in LBP-11-18 addresses and rejects Pilgrim Watch's challenge to the Pilgrim SAMA analysis. A SAMA analysis is part of the NRC's license renewal review under the National Environmental Policy Act (NEPA).[3] It is a NEPA mitigation alternatives analysis, and to date has been conducted as a quantitative analysis to identify if there are additional mitigation measures — procedures or hardware — that may be cost-beneficial to implement at a nuclear power plant to further reduce severe accident risk (probability or consequences). To better understand the issues discussed in LBP-11-18 and our decision today, it is helpful to understand the methodology used to perform the SAMA analysis. We therefore begin by outlining briefly below some of the relevant aspects of that approach.

The SAMA analysis is a probability-weighted assessment of the benefits and costs of mitigation alternatives that can be used to reduce the risks (probability or consequences or both) of potential severe accidents at nuclear power plants. Various computer codes are used to calculate the probabilities and consequences. These include codes that perform a Level 1 probabilistic risk assessment (PRA) (PRA of accident sequences leading to core damage), and a Level 2 PRA (PRA of accident progression leading to containment failure and release of radionuclides to the environment). The output of the Level 1 PRA is used in the Level 2 PRA, and the output of the Level 2 PRA is, in turn, used in the Level 3 offsite consequence calculation portion of the analysis that is performed in the MACCS2 Accident Consequence Analysis (MACCS2) code. The MACCS2 code calculates estimated offsite consequences (doses, economic losses due to protective actions such as evacuation, banning of contaminated food, etc.) over all different kinds of weather at the site.

A. MACCS2 Computer Code

The computer code used for the Pilgrim SAMA analysis is the MACCS2 code. The NRC uses MACCS2 to evaluate the potential offsite consequences of severe nuclear reactor accidents, and NRC-endorsed guidance on SAMA analysis endorses use of the MACCS2 code.[4] The code includes three separate computer "modules" used at sequential stages of the SAMA analysis.

The first module is the atmospheric transport and dispersion module, called ATMOS. ATMOS models how radioactive material would be transported and dispersed during a severe accident, predicting the concentration of material that

[3] 10 C.F.R. § 51.53(c)(3)(ii)(L).

[4] *See* CLI-10-11, 71 NRC 287, 291 & n.11, *reconsideration denied,* CLI-10-15, 71 NRC 479 (2010).

would be in the air and deposited on the ground. ATMOS includes both wet and dry deposition of aerosols and particulate material in the plume. Embedded in the ATMOS module is a straight-line Gaussian plume model. A straight-line atmospheric model implies that the plume centerline of the released material travels in straight lines determined by the prevailing wind direction at the time from the point of radiological release. In contrast to the straight-line Gaussian plume model, a variable wind trajectory model can depict potential shifts in plume direction, and therefore can more precisely depict effects of terrain (e.g., mountains) or other phenomena that can affect the trajectory of a plume.

ATMOS calculates the plume size and location, and further calculates the concentration of each released isotope — both in air and deposited on the ground — for a user-defined distance from the release point (the usual NRC practice in a SAMA analysis is a 50-mile-radius area surrounding the nuclear power plant). Data inputs used include the following: (1) the amount of each radionuclide in the reactor core at the time of reactor scram as determined by the core burnup; (2) in each accidental release, the amount of each radionuclide released and its release height, release duration, and energy of release; (3) one representative year of hourly weather data (8760 hours) including wind direction, wind velocity, precipitation intensity, and atmospheric stability class; and (4) a polar coordinate grid depicting a 50-mile radius around the nuclear power plant. The 50-mile-radius grid map is divided into sixteen compass wind directions, and further divided by radial rings specifying incremental distances from the plant. ATMOS calculates the concentration of each isotope for each sector or "spatial grid cell" of the 50-mile-radius map.[5]

The Board's decision in LBP-11-18 focuses on the adequacy, for the Pilgrim SAMA analysis, of the initial portion of the analysis — the plume modeling performed with the ATMOS module. The other two MACCS2 modules, named EARLY and CHRONC, are used in subsequent stages of the SAMA analysis.

The EARLY module uses the radioactivity concentrations determined earlier in the plume modeling stage, and additional inputs (e.g., population data, protective action criteria, evacuation or sheltering inputs) to predict the offsite population dose that would occur during the first 7 days after an accident, the emergency phase, calculated from the time of initial accident release.

The last module, CHRONC, calculates the estimated long-term population dose and the offsite economic consequences of a severe accident. The offsite economic consequences largely arise from the protective actions taken (such as evacuation and relocation of people away from contaminated areas) to limit radiation exposure of the public during and after plume passage. The CHRONC module uses the

---

[5] *See, e.g.,* Affidavit of Dr. Nathan Bixler Concerning the Board's Questioning from Board Majority Regarding the Mechanics of Computing "Mean Consequences" in SAMA Analyses (Nov. 18, 2010) at 3.

radioactivity concentrations determined in the initial ATMOS module, as well as extensive economic cost data inputs and parameters, to determine long-term offsite population dose and long-term economic costs. Long-term consequences are calculated for the period from after the end of the 7-day emergency phase to up to 30 years after a severe accident. In addition to population data, numerous economic cost inputs are used, including, for example, average countywide value of farm wealth and of nonfarm wealth, average cost of labor to perform decontamination, population relocation costs, daily cost for an evacuated person, and a monetary factor (a monetary value for converting radiological dose to an economic cost).[6] The numerous economic cost parameters and inputs later added to the SAMA analysis in the CHRONC module phase help to translate the plume modeling results into the estimated long-term monetary costs of a severe accident.

B. Procedural Background

The Board in LBP-11-18 provides a detailed procedural history of this long-pending license renewal proceeding, involving numerous Board and Commission decisions.[7] We provide here only the background most relevant to our decision today.

Pilgrim Watch became a party to this proceeding after the Board admitted two Pilgrim Watch contentions, a safety contention (Contention 1) challenging Entergy's aging management program for buried piping, and an environmental contention (Contention 3) challenging Entergy's SAMA analysis.[8]

Entergy sought summary disposition of both contentions. While the Board declined to dismiss Contention 1, a Board majority dismissed Contention 3.[9] As admitted, Contention 3 challenged three aspects of the SAMA analysis: plume modeling, evacuation inputs, and economic cost inputs.[10] The Board concluded that, based on additional analyses Entergy had performed, no genuine material dispute remained on any of the three SAMA challenges.

In CLI-10-11, we affirmed in part and reversed in part the dismissal of Contention 3. We agreed with the majority that most of Pilgrim Watch's arguments failed to raise a genuine material dispute for hearing, including its claims regard-

---

[6] *See* Exh. NRC000001, Entergy License Renewal Application, Environmental Report, Attachment E at E.1-61 to E.1-63 (Jan. 2006) (Environmental Report).

[7] *See* LBP-11-18, 74 NRC at 31-36.

[8] *See* LBP-06-23, 64 NRC 257, 348-49 (2006).

[9] *See* LBP-07-13, 66 NRC 131, 154 (2007) (dismissing Contention 3) (Young, J., dissenting); LBP-07-12, 66 NRC 113 (2007) (denying summary disposition of Contention 1). The Board ultimately held an evidentiary hearing on Contention 1 and found in favor of Entergy. *See* LBP-08-22, 68 NRC 590 (2008), *petition for review denied,* CLI-10-14, 71 NRC 449 (2010).

[10] CLI-10-11, 71 NRC at 293 (quoting LBP-06-23, 64 NRC at 341).

ing the evacuation inputs and economic cost inputs in the analysis.[11] We stressed that Pilgrim Watch's challenges regarding evacuation inputs and economic costs "were unsupported by significantly probative evidence, go well beyond the scope of Contention 3 as admitted, or raise issues beyond the intent and scope of a SAMA analysis."[12] We further described Pilgrim Watch's economic cost arguments as "largely based on its own unsupported reasoning and computations," and plainly insufficient to raise a dispute with the Supplemental Environmental Impact Statement's conclusion that "further adjustments to more precisely account for business and tourism would not change the overall conclusions of the SAMA analysis."[13] We therefore affirmed the Board majority's dismissal of Pilgrim Watch's specific challenges going to the evacuation inputs and the adequacy of the economic costs calculation portion of the SAMA analysis.

We reversed the Board only to the extent that it had inappropriately dismissed one issue: a challenge to the Pilgrim SAMA analysis atmospheric transport and dispersion — or "plume" — modeling.[14] We found that Pilgrim Watch sufficiently raised a genuine material dispute on whether limitations of the plume modeling led to significantly underpredicted radiological doses. Pilgrim Watch claimed that use of a straight-line Gaussian plume model underpredicted dose, which in turn had skewed the SAMA analysis cost-benefit results. Pilgrim Watch argued that more mitigation alternatives would have been found cost-beneficial if a variable wind trajectory model had been used.[15]

In sum, the limited threshold matter we remanded to the Board for hearing involved the ATMOS module portion of the analysis — Pilgrim Watch's challenge to the "adequacy of the meteorological patterns/air dispersion modeling" in the SAMA analysis.[16] We stressed that Pilgrim Watch had failed to raise any genuine material dispute for hearing on any of its other discrete "challenges that *extend beyond* its meteorological modeling concerns."[17] We made clear, therefore, that if

---

[11] *See id.* at 309-16. *See also* CLI-10-15, 71 NRC at 480-85.

[12] CLI-10-11, 71 NRC at 308.

[13] *See id.* at 314-15 (quoting Exh. NRC000002, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 29, Regarding Pilgrim Nuclear Power Station" (Final Report), NUREG-1437 (July 2007), Vol. 2 at G-18 (Pilgrim SEIS)).

[14] *See id.* at 301-08.

[15] *See, e.g.,* Pilgrim Watch Petition for Review of LBP-06-48, LBP-07-13, LBP-06-23 and the Interlocutory Decisions in the Pilgrim Nuclear Power Station Proceeding (Nov. 12, 2008) at 15 (use of straight-line Gaussian model "leads to a non-conservative geographical distribution of dose" that can "materially affect the costs of mitigation alternatives"); Pilgrim Watch Brief in Response to Entergy's Response to CLI-09-11 (July 6, 2009) at 8 ("use of a variable trajectory model and MACCS2 code modified to accept site specific [meteorologic] conditions could raise the costs of a potential accident to levels orders of magnitude higher than those projected by Entergy").

[16] CLI-10-11, 71 NRC at 307.

[17] *Id.* at 308 (emphasis added).

the Board were to conclude that the initial plume modeling phase of the Pilgrim SAMA analysis was sufficiently conservative or otherwise reasonable, no further issue would remain before the Board.[18]

We acknowledged, however, that the Board on remand might conclude that deficiencies in the plume modeling were significant (e.g., could have significantly underpredicted doses). We went on to explain that if the Board found the plume modeling deficient or otherwise in need of significant reassessment, then ultimately the economic cost calculation portion of the SAMA analysis could also warrant reexamination, insofar as any of the later calculations or assumptions regarding evacuation or economic costs were directly based on the plume modeling results.[19] Since the Board had yet to reach a merits decision on the adequacy of the plume modeling, we did not "dismiss entirely" the possibility that the economic costs calculation might also need to be reevaluated.[20] But we made clear that there was no pending genuine material dispute with the *current* Pilgrim SAMA analysis on the "economic costs" input claims Pilgrim Watch had raised.[21]

On remand, the Board in LBP-11-18 rejected Pilgrim Watch's plume modeling challenge. The Board concluded that by "an overwhelming preponderance of the evidence," Entergy and the Staff had demonstrated that the meteorological data used in the analysis and the use of the straight-line Gaussian plume model were both "reasonable and adequate," and that use of a variable trajectory plume model would not materially "change the cost-benefit conclusions for the SAMA candidates evaluated."[22]

We turn now to Pilgrim Watch's petition for review of LBP-11-18.

II. ANALYSIS

We will review a full or partial initial decision by a Presiding Officer as a matter of discretion. In determining whether to grant review, we consider whether a petition raises a "substantial question" in regard to any of the following:

> (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;

[18] *Id.* at 308, 315.
[19] *Id.* at 307-08, 315.
[20] *Id.* at 308.
[21] *Id.* at 315.
[22] LBP-11-18, 74 NRC at 56.

(iii) A substantial and important question of law, policy, or discretion has been raised;

(iv) The conduct of the proceeding involved a prejudicial error; or

(v) Any other consideration [we deem] to be in the public interest.[23]

While we have the authority to undertake a *de novo* factual review, where a Board's decision rests on a weighing of extensive fact-specific evidence presented by technical experts, we generally will defer to the Board's factual findings, unless there appears to be a "clearly erroneous" factual finding or related oversight.[24] We gave careful consideration to Pilgrim Watch's claims, but, as discussed below, the petition does not identify any substantial question warranting plenary review.

A. The Board Appropriately Addressed Matters Within the Scope of the Remand

Pilgrim Watch claims that the Board improperly "bifurcated the hearing" to consider first whether the asserted plume modeling deficiencies could, "*on [their] own,* credibly alter the SAMA analysis conclusions."[25] Pilgrim Watch argues that the Board's approach was "irrational," and that the Board "denied" it "the right to present . . . evidence of 'economic costs' to show that 'the [in]adequacy of the meteorological differences may have a material impact.'"[26]

Pilgrim Watch fails to point to any clear or prejudicial error in the Board's approach. Following Entergy's motion for summary disposition, the only existing genuine material dispute was the adequacy of the plume modeling. The plume modeling is a separate, initial stage in the SAMA analysis, as we have explained. It was not "irrational" to consider whether a plume model and particular meteorological inputs used in it were appropriate and sufficiently conservative for the purpose of the analysis. As noted in the Board's decision and later here, an NRC-sponsored study examined exactly the issue whether the MACCS2 code's straight-line Gaussian plume model is an adequate atmospheric transport and dispersion model for probabilistic offsite consequence assessments, such as the SAMA analysis. The Board in LBP-11-18 reviewed extensive evidence on challenged meteorological inputs, and on whether use of a variable trajectory plume model credibly would have made a significant difference to the Pilgrim SAMA

---

[23] 10 C.F.R. § 2.341(b)(4).

[24] *See, e.g., Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-1, 63 NRC 1, 2 (2006); *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), CLI-10-5, 71 NRC 90, 98-99 (2010).

[25] Petition at 3 (emphasis in original). *See also id.* at 4-5, 7-10.

[26] *Id.* at 3.

cost-benefit conclusions — evidence that Pilgrim Watch had the opportunity to contest.

Pilgrim Watch goes on to claim that the Board applied a "double standard," allowing Entergy to present evidence going to the "economic costs" aspects of the SAMA analysis, yet barring Pilgrim Watch from doing so.[27] But Pilgrim Watch mischaracterizes the Board's actions. The purpose of the SAMA analysis is to evaluate and identify potential cost-beneficial mitigation measures to reduce severe accident risk and consequences. The Pilgrim analysis identifies seven specific potentially cost-beneficial mitigation measures.[28] Other mitigation measures examined in the analysis were found to have implementation costs that exceeded the benefit (e.g., the accident risk reduction) that would result from the mitigation alternative. To judge whether any imprecision or inaccuracy in the plume modeling analysis could affect the Pilgrim SAMA analysis conclusions, the Board appropriately considered *how much change* there would need to be in the analysis results to make a difference to the overall conclusions on cost-beneficial SAMAs. The Board unanimously found that the degree of error that Pilgrim Watch's asserted plume modeling deficiencies credibly might have caused would not reach the level of error necessary to have a material impact on the overall SAMA analysis conclusions.[29]

The Board's decision does not rest on evidence of the adequacy of any particular "economic cost" inputs, parameters, or calculations. It takes the cost-benefit analysis results as they are, and merely considers what degree of error in the existing cost-benefit analysis could change the overall cost-benefit conclusions. The decision concludes, based on extensive plume modeling and meteorological evidence, that any potential error in the plume modeling from deficiencies Pilgrim Watch asserted would not be great enough to affect the cost-benefit conclusions. It bears noting that the SAMA analysis takes into account numerous factors: accident progression scenarios, source terms (including reactor core inventory and duration of releases), exposure pathways, short-term and long-term mitigative measures, and many others. The plume modeling has an important, but nevertheless limited effect on the overall SAMA analysis conclusions.

The decision suggests no "double standard" applied to Pilgrim Watch in regard to issues or evidence allowed on remand. Instead, as Entergy describes, Pilgrim Watch "conflates its rejected economic inputs claims" (e.g., whether cost calculations accounted for lost tourism income) with the immediate issue on remand — whether asserted deficiencies in the plume modeling might themselves

[27] *Id.* at 3-5, 14-15.

[28] *See* Exh. NRC000002, Pilgrim SEIS, Vol. 1, at 5-9 to 5-10.

[29] *See* LBP-11-18, 74 NRC at 55-56; Separate Statement by Judge Young, 74 NRC at 58-59.

be significant enough to materially alter the existing Pilgrim SAMA cost-benefit conclusions.[30]

Pilgrim Watch fails to identify any evidence focused on the adequacy of the plume modeling that the Board excluded. Nor does it identify any Entergy or Staff evidence relied upon by the Board that is not directly related to the adequacy of the SAMA analysis plume modeling. In our view, Pilgrim Watch's generalized complaints fail to raise any substantial question of error by the Board. Moreover, as the Staff correctly states, Pilgrim Watch "never objected, moved to strike, or filed a *motion in limine* regarding any of the evidence presented in Entergy's or the Staff's pre-filed testimony or exhibits," thereby waiving any objections to the evidence presented by the Staff and Entergy.[31]

Pilgrim Watch argues that the Board should have "asked simply whether meteorological modeling deficiencies (e.g., a straight-line Gaussian Plume model, and failure to consider sea breeze, hot spots, storms, fog, and topography) could call into question Entergy's assumptions about (i) the size and location of the affected area and (ii) the population doses within that area."[32] But that is effectively what the Board did when it considered whether use of a more sophisticated, more precise, variable trajectory plume model would materially change the conclusions in the Pilgrim SAMA analysis. The Board focused, however, not on whether more advanced modeling would capture greater detail, or might depict some different radiological dose in a particular location, but on whether potential differences could be significant enough to be material.

Among other evidence, the Board considered a "model-to-model comparison between MACCS2 and more complex atmospheric transport and dispersion models."[33] The Board considered the results of a 2004 NRC-funded comparative study — referred to as the "Molenkamp Report" — designed precisely to evaluate

---

[30] *See* Entergy Brief at 16. Moreover, the bulk of "economic cost" issues that Pilgrim Watch seeks to litigate fall well beyond the scope of the admitted contention, and therefore would not have been part of the remand even if the Board had concluded that the plume modeling results were in question. *See, e.g.,* Pilgrim Watch SAMA Remand Pre-Filed Testimony (Jan. 3, 2011) (admitted by Board as the "Pilgrim Watch Statement of Position") at 38, 43-44, 56-65, 67-80 (e.g., challenging source terms, "clean up" standards, health cost parameters, decontamination cost parameters). *See infra* note 49 and associated text.

[31] Staff Brief at 16. Among its arguments regarding "economic costs," Pilgrim Watch challenges the Board's use of an "arithematic [sic] example[ ]," a mathematical formula that the Board used to demonstrate the limited impact of the "sea breeze" phenomenon on the overall Pilgrim SAMA analysis. *See* Petition at 15 n.12. Because the Board provided this formula simply as "an additional view of the evidence," not necessary to the rest of the decision, we need not address the validity or accuracy of the formula. *See* LBP-11-18, 74 NRC at 50-51 & n.123. The Board's example, in any case, does not go to the economic cost calculation portions of the SAMA analysis, as Pilgrim Watch suggests.

[32] Petition at 8.

[33] LBP-11-18, 74 NRC at 48.

the adequacy of the MACCS2 code's straight-line Gaussian plume model for predicting offsite severe accident consequences, such as those evaluated in a SAMA analysis.[34] Using the same meteorological and source term inputs, the study compared the results of the MACCS2 code's Gaussian plume model with more advanced models (2 two-dimensional models, RASCAL and RATCHET, and a three-dimensional model, LODI).[35] More specifically, the study compared average radiological dose predictions produced by the different plume models, calculated at various distances — up to 100 miles — from the postulated point of release.

Based on the study's results, additional evidence, and extensive expert opinion, the Board concluded that "results calculated by the various models are generally within a factor of two and that MACCS2 is within plus or minus 10% of a state-of-the-art three-dimensional model [LODI] when averaged over a series of radial arcs out to 50 miles."[36] Again, based on the comparison study and considerable expert evidence, the Board went on to conclude that "asserted inadequacies in the modeling of meteorology and the use of the meteorological data in the Pilgrim SAMA analysis . . . cannot be so large as to credibly alter the Pilgrim SAMA analysis conclusions regarding which SAMAs are cost-beneficial to implement."[37]

In rendering its conclusions, the Board considered evidence directly relevant to the adequacy of the Pilgrim SAMA analysis plume modeling, the issue on remand. Pilgrim Watch was not prevented from rebutting the evidence Entergy and the Staff presented, or from presenting its own expert or other factual evidence in support of its view that the plume modeling significantly underestimated radiological dose.

Five experts in the proceeding presented reasoning to support their conclusion that use of a variable trajectory plume model would not significantly alter the Pilgrim SAMA analysis conclusions.[38] Notably, Pilgrim Watch's expert, Dr. Bruce Egan, did not directly contest this conclusion. He instead suggested that this was a "site-specific" opinion that "would not necessarily be applicable to other

---

[34] *See* Exh. JNT000001, "Comparison of Average Transport and Dispersion Among a Gaussian, a Two-Dimensional, and a Three-Dimensional Model," NUREG/CR-6853 (Oct. 2004), at xi, xv, 1-2, 4 (Molenkamp Report).

[35] *Id.* at xv-xvi. A two-dimensional model "allows the plume to bend and change direction." *Id.* at xv. The two-dimensional model, RASCAL, is used "by the NRC's Incident Response Center, for use in responding to radiological accidents." *Id.* A three-dimensional model "allows individual particles (making up the plume) to move in any direction," and therefore the "plume can split into two plumes as it encounters a hill, a canyon, or another complex wind pattern." *Id.*

[36] LBP-11-18, 74 NRC at 48.

[37] *Id.*

[38] *See, e.g., id.* at 35 n.30 (citing prefiled testimony of Entergy experts Dr. Kevin O'Kula and Dr. Steven Hanna, and Staff experts Nathan E. Bixler, S. Tina Ghosh, and James V. Ramsdell, Jr.).

power plants."[39] Dr. Egan offered his view that potentially, at "*another site,*" where the degree of change in projected radiological dose and related consequences may not need to be large to materially affect the analysis conclusions, "improvements to the modeling code could change the identification of cost-effective SAMAs."[40] But the issue in this proceeding is the adequacy of the *Pilgrim* SAMA analysis.

In addition to the Molenkamp Report, the Board considered another comparison study involving a variable trajectory model.[41] This was a study of the wind trajectory "roses"[42] in the 50-mile-radius region surrounding the Pilgrim station. The study was performed with CALMET, an Environmental Protection Agency (EPA) wind field model that is the meteorological model in CALPUFF, a plume model recommended by Pilgrim Watch.[43] Entergy expert Dr. Steven Hanna used CALMET to examine the "potential wind trajectories (paths) over the entire 50-mile-radius geographic domain" surrounding the Pilgrim station.[44] For this study, Dr. Hanna obtained site-specific meteorological data from approximately thirty weather sites located at varying points in the 50-mile-radius area surrounding the Pilgrim station.[45]

The Hanna CALMET Report investigated whether the 2001 observed hourly meteorological data used in the Pilgrim SAMA analysis were representative of other locations in the 50-mile radius, representative of other years, and significantly, whether there was likely to be any material change to the SAMA analysis if variable wind fields in the 50-mile radius were modeled by a variable trajectory model. In LBP-11-18, the Board found that the Hanna CALMET Report confirmed the representativeness of the meteorological data used in the Pilgrim SAMA analysis, and further demonstrated that use of a variable wind

---

[39] *See* Exh. PWA000023, Statement by Bruce A. Egan, ScD, CCM (Jan. 30, 2011), at 3 (Egan Testimony) (referring to conclusion of Dr. O'Kula on the limited impact of asserted deficiencies).

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

[41] *See* LBP-11-18, 74 NRC at 42, 53-54 (citing Exh. ENT000004, S. Hanna & E. Hendrick, Analysis of Annual Wind Roses and Precipitation Within About 50 Miles of the Pilgrim Nuclear Power Station, and Use of CALMET to Calculate the Annual Distribution of Trajectories from the Pilgrim Station) (Dec. 2010) (Hanna CALMET Report).

[42] "[W]ind roses . . . show the frequency that the wind is blowing in each of sixteen directional sectors." LBP-11-18, 74 NRC at 42. *See also* Exh. JNT000001, Molenkamp Report at 47 ("one of the best ways to summarize winds at a location is with a wind rose that shows the relative frequency of winds with particular directions and speeds at a given site").

[43] *See* Petition at 9.

[44] *See* Exh. ENT000004, Hanna CALMET Report at 3.

[45] *See id.* at 3-8.

trajectory model would "show no dramatic differences that would affect the long term and broad area impacts produced by a SAMA analysis."[46]

Notably, the Hanna CALMET study encompassed the terrain variability in the Pilgrim area. Dr. O'Kula and Dr. Hanna described that, at the 50-mile radius, the modeled wind trajectories "traversed the entire area and have been affected by any sea and terrain impacts to the extent they exist and are accounted for by the wind observations throughout the Pilgrim SAMA domain and by the CALMET model."[47] Dr. Hanna and Dr. O'Kula concluded from the study that "for the Pilgrim SAMA analysis, the Gaussian plume segment model with constant wind direction for a plume released at a given hour used in ATMOS and the three-dimensional CALMET trajectory model produce similar results."[48]

Pilgrim Watch's expert, Dr. Egan, did not address the Hanna CALMET Report. Nor does Pilgrim Watch's petition for review. Pilgrim Watch points to no clear error in the Board's reasoning, which was based on extensive expert evidence, including two studies with variable trajectory wind modeling, both intended to assess the adequacy of the MACCS2 plume model for purposes of a SAMA form of analysis.

B. Pilgrim Watch's Claims of "Ignored" Evidence

Pilgrim Watch repeatedly claims that the Board "ignored" Pilgrim Watch's evidence. Pilgrim Watch does not, however, identify any unaddressed evidence pointing to clear error in the Board's findings. In fact, Pilgrim Watch's prehearing submission, titled "Pre-Filed Testimony," did not include any expert testimony, and otherwise was not supported by any expert witness. The Board nevertheless admitted the document as a "Statement of Position," and further admitted all of Pilgrim Watch's attached exhibits. The Board advised that it would accord each

---

[46] LBP-11-18, 74 NRC at 42 (quoting Exh. ENT000001, Testimony of Dr. Kevin O'Kula and Dr. Steven Hanna on Meteorological Matters Pertaining to Pilgrim Watch Contention 3 (Jan. 3, 2011), at 76 (O'Kula/Hanna Testimony)). In explaining the Hanna CALMET Report's conclusions, Dr. O'Kula explained that the "ability to account for short-term time and space variations of meteorology" did not "significantly enhance the accuracy of the SAMA analysis" because a SAMA analysis is based upon "annual distributions summed over time and over the Pilgrim SAMA domain." *See* Exh. ENT000001, O'Kula/Hanna Testimony, at 97.

[47] Exh. ENT000001, O'Kula/Hanna Testimony, at 97. *See also id.* at 103-04 (describing terrain as "relatively flat," with generally "no rugged terrain or narrow valley features," but specifying the "most notable, but isolated, terrain features surrounding the Pilgrim site").

[48] *Id.* at 97. *See also id.* at 9-10. Dr. O'Kula conducted an additional analysis with the CALMET wind roses study results, by considering the calculated CALMET wind trajectories in light of the population distribution surrounding the Pilgrim plant. His additional analysis concluded that use of an alternate plume model that depicts time and spatially varying winds would not have any significant effect on the Pilgrim SAMA cost-benefit conclusions. *See id.* at 10,100-03.

exhibit persuasive weight to the extent it was "relevant, material, and reliable, pursuant to 10 C.F.R. § 2.337(a)."[49]

Pilgrim Watch claims that the Board "ignored" that the location selected for the Molenkamp Report's comparison study of the MACCS2 plume model to more advanced plume models was a relatively flat terrain site, not a coastal site.[50] But the Board expressly addressed this aspect of the study. It found "uncontroverted evidence indicating adequate similarity" between the location of the Molenkamp Report's study and "the Pilgrim coastal domain, in terms of wind variations and topography."[51] The Board further concluded that the data used in the SAMA analysis "to represent the sea breeze and other meteorological phenomena *as well as topographical effects* are sufficiently representative of the conditions at Pilgrim for SAMA analyses use."[52] Pilgrim Watch fails to indicate any clear error in these conclusions.

Pilgrim Watch also argues that the Board "flatly refused even to look at evidence provided" by Dr. Jan Beyea, on the asserted issue of "hot spots"[53] because Dr. Beyea is not a meteorologist.[54] But the Board's decision spends nearly five pages discussing the "hot spot" issue, making clear that it evaluated Dr. Beyea's comments, but found his "brief[ ] mention" of "hot spots" to be unpersuasive for lack of any "scientific rationale or discussion of his concern."[55] The Board went on to describe that "on the other side of the evidentiary balance," the Staff and Entergy provided extensive expert testimony that the asserted "hot spots" phenomenon, even if it could be modeled in a transport and dispersion

---

[49] LBP-11-18, 74 NRC at 35-36 (referencing "Pilgrim Watch Statement of Position").

[50] *See* Petition at 17.

[51] LBP-11-18, 74 NRC at 43.

[52] *Id.* (emphasis added). The Molenkamp Report acknowledges that although a site with "greater topographical and diurnal heterogeneity" would have been preferable, there was "sufficient variability" for purposes of the study because the wind fields in Oklahoma and Kansas "are frequently affected by low-level nocturnal jets and occasional severe storms." *See* Exh. JNT000001, Molenkamp Report, at xi, 3. The report notes that there may be "some special locations" where the adequacy of the MACCS2 atmospheric dispersion and transport model "might still be unresolved." *Id.* at 3. But based on the Pilgrim site-specific evidence provided, the Board did not find any such special distinction for the Pilgrim location.

[53] Pilgrim Watch claimed that "hot spots" of radioactivity would result because "a plume over water, rather than being rapidly dispersed, will remain tightly concentrated due to the lack of turbulence, and will remain concentrated until winds blow it onto land." *Id.* at 52 (quoting Pilgrim Watch Statement of Position at 30).

[54] Petition at 17.

[55] LBP-11-18, 74 NRC at 52-53, 55. Dr. Beyea was not a Pilgrim Watch expert.

model, would not change the overall Pilgrim SAMA cost-benefit analysis. Pilgrim Watch points to no clear error in this assessment.[56]

Similarly, the Board did not "ignore" that a straight-line Gaussian plume model does not depict "spatially varying" winds.[57] The decision reflects the Board's conclusion that a more sophisticated model depicting spatially varying winds may be more detailed or precise, but ultimately would not make a material difference to the overall SAMA analysis conclusions. The Board explains that a SAMA analysis is a "probabilistic analysis focused on long-term and spatially averaged impacts from severe accident events."[58] The "effects are averaged both over the area within 50 miles of the site and over the expected variations in meteorological patterns."[59]

Unlike for emergency planning, in which an actual plume must be tracked in real time, a SAMA analysis examines a spectrum of representative types of accidents (with different source terms and release characteristics), and further factors in potential weather scenarios (based on one representative year's worth of hourly weather data). The Pilgrim SAMA analysis examined nineteen different types of representative severe accident scenarios.[60] For each of these nineteen categories of accidents, 2336 potential meteorological conditions were modeled.[61] The SAMA analysis therefore computed 2336 separate accident consequence results for predicted population dose and 2336 separate accident consequence results for predicted offsite economic costs for each accident category.[62]

As we explained in CLI-10-11, the SAMA analysis, as a NEPA mitigation alternatives analysis, is by practice "neither a worst-case nor a best-case impacts analysis."[63] It focuses ultimately on the mean annual consequences (both offsite population dose and economic costs) over the examined 50-mile region. The

---

[56] *Id.* at 52-55. The Board also took into account Pilgrim Watch's proffered article by Wayne Angevine on ozone transport. Mr. Angevine did not sponsor the article, and was not a Pilgrim Watch witness. *See id.* at 52 (quoting Angevine article — which did not address SAMAs or radiological transport — and then going on to find Pilgrim Watch's "hot spots" claim without merit based on other expert evidence). *See also* Exh. PW000006, Wayne M. Angevine et al., *Modeling of the Coastal Boundary Layer and Pollutant Transport in New England,* J. Appl. Meteorology & Climate (Jan. 2006).

[57] Petition at 17.

[58] LBP-11-18, 74 NRC at 40.

[59] *Id.*

[60] *See* Exh. NRC000002, Pilgrim SEIS, Vol. 2, at G-3; Exh. ENT000006, Environmental Report, Attachment E, at E.1-44 to E.1-48.

[61] *See* Exh. NRC000014, NRC Staff Testimony of Nathan E. Bixler and S. Tina Ghosh Concerning the Impact of Alternative Meteorological Models on the Severe Accident Mitigation Alternatives Analysis (Feb. 2, 2011), at 13.

[62] *Id. See also* Exh. ENT000001, O'Kula/Hanna Testimony, at 36.

[63] *See* CLI-10-11, 71 NRC at 316.

analysis uses the "*mean* values" of the accident consequence distributions for each accident category.[64] These mean values "are multiplied by the estimated frequency" of the accident "to determine population dose risk and offsite economic cost risk for each type of accidence sequence studied."[65] This results in "an averaging of potential consequences."[66] While the potential worst-case consequences are factored into, and therefore help comprise, the mean values, they are not used as the baseline for the cost-benefit comparisons.

The Board's decision takes into account the nature of the SAMA analysis. For example, the Board cited to extensive testimony indicating that, while "a hypothetically simulated plume during one or two hours could be redirected onshore by an individual sea breeze, thereby increasing impacts," another "plume during another hour could be redirected offshore by an individual land breeze," thereby "yielding no [net change in] impacts."[67] The Board found persuasive the conclusion, shared by all the Staff and Entergy experts, that for the Pilgrim SAMA analysis, any potential underestimations and overestimations of accident consequences caused by the asserted deficiencies in the plume modeling essentially "cancel each other," and therefore more detailed plume modeling would not materially change the Pilgrim SAMA analysis conclusions.[68]

C. Pilgrim Watch's Challenge to the Use of "Mean Values"

This brings us to Pilgrim Watch's arguments regarding the practice of using mean consequence values. Pilgrim Watch seeks to challenge the practice, and argues that the Board erred in excluding the issue from the scope of the remand

---

[64] *Id.* (emphasis in original).

[65] *Id.*

[66] *Id.*

[67] LBP-11-18, 74 NRC at 45 n.99 (quoting Entergy expert Dr. Hanna). *See also* Exh. ENT000001, O'Kula/Hanna Testimony, at 46.

[68] *See* LBP-11-18, 74 NRC at 46. Pilgrim Watch additionally claims that the Board focused only on Pilgrim Watch's claims regarding "sea breezes" and "hot spots," and "failed to consider" other "important meteorological issues" of concern to Pilgrim Watch. *See* Petition at 5, 16. Pilgrim claims that the Board did not address uncontroverted evidence it presented on "storms, high winds, precipitation, and fog." *See id.* at 43. Pilgrim Watch nowhere identifies this evidence in the record, and we have no obligation to sift through a copious record before the Board for arguments never specifically identified or described on appeal. We nevertheless examined Pilgrim Watch's Statement of Position, and find that Pilgrim Watch's references to fog, precipitation, and storms are either unsupported, or otherwise do not suggest any clear error in the Board's finding that asserted deficiencies in the plume modeling would not make a difference in the overall Pilgrim SAMA analysis conclusions. *See* Pilgrim Watch Statement of Position at 9, 21-23. Further, Pilgrim Watch incorrectly argues that its claims were not challenged. *See, e.g.,* Exh. ENT000013, Rebuttal Testimony of Dr. Kevin R. O'Kula and Dr. Steven R. Hanna on Meteorological Matters Pertaining to Pilgrim Watch Contention 3 (Feb. 1, 2011), at 7-8.

hearing.[69] Pilgrim Watch argues that the SAMA cost-benefit analysis should be based directly on the 95th percentile level of projected severe accident consequences, the "worst" 5% of the consequence scenarios evaluated. Pilgrim Watch claims that the hearing on remand should have considered "whether substituting the 95th percentile for the mean in the consequence values analysis would make a difference in the analysis."[70]

An interlocutory Board decision ruled that Pilgrim Watch had never raised these particular methodology challenges in Contention 3. The Board found that Pilgrim Watch improperly sought, years into the hearing process, to recast its contention to include wholly new SAMA challenges never fairly raised or admitted in Contention 3, nor ever submitted in an amended contention.[71] Pilgrim Watch argues that it properly challenged the SAMA methodology of using mean consequence values in Contention 3, as proffered in its initial intervention petition.

Pilgrim Watch identifies no substantial question warranting review of the majority's decision on this issue. First, Entergy's Environmental Report made clear that mean values were used for the cost-benefit analysis.[72] Nor is the practice of using mean values for cost-benefit risk analyses new. NRC-endorsed guidance on SAMA analysis methodology specifies use of the "mean annual off-site dose and economic impact," which is consistent with NRC regulatory analysis guidelines.[73] Second, Pilgrim Watch's proffered SAMA contention never suggested any challenge to use of mean or averaged accident consequence values. All three judges concurred that a challenge to use of "mean" consequence values — a fundamental aspect of SAMA analysis methodology — was not fairly identified in the petition for intervention. We agree.

We have long required contention claims to be set forth "with particularity,"[74]

---

[69] *See* Petition at 3-4, 10-14.

[70] *Id.* at 4.

[71] *See generally* March 3 Ruling on Mean Consequences Issue. Judge Young provided a Separate Statement we address *infra* note 80. The Board originally ruled on the issue in November 2010, but the first decision did not contain the Board's full reasoning. *See* November 23 Ruling on Mean Consequence Issue.

[72] *See* Exh. ENT000006, Environmental Report, Attachment E, at E.1-66 to E.1-68.

[73] *See* NEI 05-01, Rev. A, "Severe Accident Mitigation Alternatives (SAMA) Analysis, Guidance Document" (Nov. 2005), at 15; *see also id.* at 2, 16; "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," NUREG/BR-0058, Rev. 4 (Sept. 2004) (ADAMS Accession No. ML042820192) at 23 ("[w]hen possible, best estimates should be made in terms of the 'mean' or 'expected value'"); "Regulatory Analysis Technical Evaluation Handbook," Final Report, NUREG/BR-0184 (Jan. 1997) (ADAMS Accession No. ML050190193). The Board noted that both the ER and the EIS specified that the SAMA analysis methodology was based upon that in NUREG/BR-0184. *See* March 3 Ruling on Mean Consequences Issue at 16 nn.67-68 (citing Environmental Report and SEIS).

[74] *See, e.g.,* 10 C.F.R. § 2.309(f)(1); *Vogtle,* CLI-10-5, 70 NRC at 100-01.

stressing that it "should not be necessary to speculate about what a pleading is supposed to mean."[75] Our proceedings would prove unmanageable — and unfair to the other parties — if an intervenor could freely change an admitted contention "at will as litigation progresses,"[76] "stretching the scope of admitted contentions beyond their reasonably inferred bounds."[77] "Petitioners must raise and reasonably specify at the outset their objections to a license application."[78]

Our rules allow for amendment of contentions and the submission of new contentions when good cause is shown.[79] But Pilgrim Watch here does not suggest that new information was introduced that it could not have known about earlier, and it never has sought to amend its contention. It instead insists that Contention 3 as proffered was intended, all along, to include this challenge to use of mean accident consequence values. We are not persuaded by Pilgrim Watch's arguments, which are inconsistent with our contention admissibility standards, and do not point to any Board factual or legal error warranting plenary review.[80]

Further, we see no indication that Pilgrim Watch ever provided any basis or support for its challenge to the SAMA methodology. Pilgrim Watch provides no legal or other argument indicating that use of mean accident values for a mitigation analysis is an unreasonable practice under NEPA standards, or that NEPA requires a cost-benefit mitigation analysis to be based on the 95th percentile accident consequence level. Not only was the challenge to the SAMA methodology not timely raised, it also was not supported.

As the Board in LBP-11-18 states, "the 95th percentile is akin to a worst-case

---

[75] CLI-10-15, 71 NRC at 482 (citation omitted).

[76] *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 386 (2002).

[77] *See* CLI-10-11, 71 NRC at 309.

[78] *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 427 (2003).

[79] *See* 10 C.F.R. § 2.309(f)(2).

[80] Judge Young, in a Separate Statement, concluded that while Pilgrim Watch did not raise the challenge to use of mean consequences in the originally proffered contention, it later raised the issue, "at a[n] appropriate time," in opposing Entergy's motion for summary disposition of Contention 3. *See* March 3 Ruling on Mean Consequences Issue, Separate Statement at 6. We disagree. The use of mean values was apparent from the Environmental Report. That Entergy in its motion for summary disposition referred to the practice of using mean consequence values — as part of its explanation for why Pilgrim Watch's claims would not make a material difference to the SAMA analysis — did not make the issue new. Nor did it suggest that Entergy considered the practice one of the challenged issues in the contention (in which case Entergy would have presented arguments in support of the practice). In any event, we agree with the majority that Pilgrim Watch's response to the summary disposition motion also did not properly raise a genuine material dispute over the methodology of using mean consequence values, nor did it suggest that 95th percentile accident consequence values be used. *See id.* at 15.

scenario analysis."[81] And the Supreme Court expressly has held that NEPA does not require a "worst case" inquiry.[82] We ourselves have stated that to require "worst case" analyses can easily lead to "limitless" NEPA analyses because it is always possible to introduce yet another "additional variable to a hypothetical scenario" to "conjure up a worse 'worst case.'"[83]

The same can be said for SAMA analyses. It always will be possible to conceive of yet another input or methodology that could have been used in the SAMA computer modeling, and many different inputs and approaches may all be reasonable choices. But our "adjudicatory hearings are not EIS editing sessions."[84] The SAMA analysis is not a safety review performed under the Atomic Energy Act. The mitigation measures examined are supplemental to those we already require under our safety regulations for reasonable assurance of safe operation. Through our reactor oversight process, including generic safety issue reviews, we revisit whether additional mitigation measures should be imposed as a safety matter under 10 C.F.R. Part 50. And in response to the Fukushima accident in Japan, we currently are conducting a comprehensive safety review that involves, among other things, a review of the requirements and guidance associated with accident mitigation measures.[85]

There is questionable benefit to spending considerable agency resources in an attempt to fine-tune a NEPA mitigation analysis. Ultimately, we hold adjudicatory proceedings on issues that are material to licensing decisions. 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

---

[81] LBP-11-18, 74 NRC at 37 n.46.

[82] *See Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 354-56 (1989).

[83] *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 352 (2002), *rev'd in part on other grounds, San Luis Obispo Mothers for Peace v. NRC,* 449 F.3d 1016 (9th Cir. 2006).

[84] *See McGuire/Catawba,* CLI-03-17, 58 NRC at 431.

[85] *See generally Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 147-49 (2011) (discussing the NRC's regulatory response to the events in Japan). Most recently, the Staff provided for our consideration a proposed prioritization of the Fukushima Near-Term Task Force recommendations, including the strengthening and integration of severe accident management guidelines and extensive damage mitigation guidelines. *See* Staff Requirements — SECY-11-0137 — Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned (Dec. 15, 2011) (ADAMS Accession No. ML113490055); "Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned," Commission Paper SECY-11-0137 (Oct. 3, 2011) (ADAMS Accession No. ML11269A204), at 2-5, 36-39; Staff Requirements — SECY-11-0124 — Recommended Actions to Be Taken Without Delay from the Near-Term Task Force Report (Oct. 18, 2011) (ADAMS Accession No. ML112911571).

dispute will not be material to the licensing decision, and is not appropriate for litigation in an NRC proceeding.

We further note that in a highly predictive analysis such as a SAMA analysis, there are bound to be significant uncertainties, and therefore an uncertainty analysis is performed. Baseline analysis results therefore are multiplied by an uncertainty factor.[86] The final cost-benefit comparisons are based not on the baseline analysis results, but on revised results that take into account an uncertainty factor. Pilgrim Watch does not address the additional uncertainty analysis.

D. Pilgrim Watch's Additional Asserted Board Errors

Pilgrim Watch raises a laundry list of various other asserted Board errors. Again, Pilgrim Watch does not demonstrate any clear factual error, improper legal conclusion, prejudicial error, or any other substantial question warranting plenary review.

Pilgrim Watch argues that the Board did not "set forth the bases for its findings and conclusions," and did not give "the reasons that it rejected" Pilgrim Watch's evidence.[87] Pilgrim Watch apparently takes issue with the Board's statement that it "fully considered all record evidence," and that any argument not specifically addressed was found "without merit or otherwise unnecessary for the decision."[88] We find the Board's decision sufficiently detailed and supported. The Board sets forth its reasoning and Pilgrim Watch gives us no compelling reason to question its conclusions.

Pilgrim Watch further claims that the Board erred in not considering "new, significant and material information from Fukushima."[89] Pilgrim Watch argues that the "Board did not consider evidence arising out of occurrences at Fukushima, even when such evidence was contrary to both the Board's assumptions underlying Entergy's SAMA analysis, and critical conclusions that the Board majority relied upon when making its Decision."[90] But Pilgrim Watch does not identify any specific Board "assumptions" or "critical conclusions" regarding the Pilgrim SAMA analysis plume modeling that are incorrect. It provides no supported argument linking the events at Fukushima to the Board's conclusions in LBP-11-18. Pilgrim Watch's Fukushima-based claims do not suggest any basis warranting plenary review of the Pilgrim SAMA analysis plume modeling decision.

---

[86] *See* Exh. NRC000002, Pilgrim SEIS, Vol. 2, at G-41 (revised baseline benefits were increased by a factor of 1.62, the ratio of the 95th percentile core damage frequency (CDF) to the mean CDF).

[87] Petition at 6.

[88] *Id.* (quoting LBP-11-18, 74 NRC at 56 n.141).

[89] *Id.* at 20.

[90] *Id.* at 21.

To the extent that Pilgrim Watch suggests *other* SAMA analysis challenges based on the Fukushima accident, Pilgrim Watch has availed itself of the opportunity to file new contentions. It filed two new SAMA contentions assertedly based on new information stemming from the Fukushima accident.[91] The Board, in LBP-11-23, found both contentions inadmissible.[92] Pilgrim Watch refers in its petition to one of these new contentions, involving a challenge to the length of radiological releases modeled in the MACCS2 code.[93] We will consider Pilgrim Watch's Fukushima-based contentions when we address its separate petition for review of LBP-11-23.[94] We note, additionally, however, that Pilgrim Watch also appears to raise arguments involving the Fukushima accident that it did not raise before the Board in its new contentions.[95] New claims cannot be raised for the first time on appeal.[96]

Pilgrim Watch also asserts a procedural error involving the Board's decision not to hold an oral evidentiary hearing.[97] The Board granted a Joint Motion of the parties, requesting that the Board resolve Contention 3 "with no oral evidentiary hearing, based solely on the parties' submitted prefiled testimony and exhibits."[98] While the Board granted the joint motion, it directed the parties to make short "closing arguments" on Contention 3.[99] It also indicated that it might have some questions in the nature of seeking "clarification" of the "parties' proposed findings of fact and conclusions of law," and that "any party that wishes to do so may have

---

[91] Pilgrim Watch Request for Hearing on Post-Fukushima SAMA Contention (May 12, 2011); Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post-Fukushima (June 1, 2011).

[92] LBP-11-23, 74 NRC 287 (2011). Judge Young concurred in part and dissented in part. Pilgrim Watch recently filed a third proposed new contention based on the Fukushima accident. *See* Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima (Nov. 18, 2011). The Board denied Pilgrim's request early this year. LBP-12-1, 75 NRC 1 (2012) (appeal pending).

[93] Petition at 22.

[94] *See generally* Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Requests for Hearing on New Contentions Relating to Fukushima Accident) (Sept. 8, 2011).

[95] *See* Petition at 22-23.

[96] *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 132-33 & n.38 (2007), *aff'd, New Jersey Department of Environmental Protection v. NRC,* 561 F.3d 132 (3d Cir. 2009) (citing *USEC Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 458 (2006)).

[97] Petition at 4-5, 15-16.

[98] *See* Order (Addressing Joint Motion, Motion in Limine, Proposed Findings of Fact and Conclusions of Law/Concluding Statements of Position, and Argument to Be Held March 9, 2011) (Feb. 22, 2011) at 1 (unpublished) (also addressing oral argument to be held on Pilgrim Watch's proposed new contentions based on Fukushima accident).

[99] *Id.* at 3.

its witnesses present and available" to assist in providing answers to the Board's questions.[100] The record reflects that Pilgrim Watch agreed to this arrangement.[101]

Pilgrim Watch now claims that the Board, when it asked for clarification of different points, improperly "took testimony" from the Entergy and Staff experts, and then "used that evidence to support its Decision."[102] The Board's decision, however, relies on the parties' written presentations, prefiled expert testimony, and exhibits. There is only one reference (in a footnote) to the pertinent transcript, and it does not refer to any new argument, reasoning, or data that were not already presented in the written filings.[103] We cannot discern, and Pilgrim Watch does not identify, any Board finding that rests on any of the experts' responses to Board questions at the March 9 session. Therefore, if the Board committed any error related to the questioning, it amounted to harmless error and does not warrant any further review of LBP-11-18.

Pilgrim Watch additionally argues that the Board "misunderstood NEPA's Rule of Reason," and that it should have required that the SAMA analysis be performed with a variable trajectory plume model, and then the results compared "to see what difference a variable model would make."[104] Pilgrim Watch's demand that the MACCS2 code be rewritten to contain a variable wind trajectory plume model goes far beyond NEPA requirements.[105] The issue in this case has never been what precise differences a variable wind trajectory model would make, but rather, whether the plume modeling was sufficiently conservative for purposes of the Pilgrim SAMA analysis. The Board found that it was, based on evidence that included comparisons of the straight-line Gaussian plume model to more complex models. NEPA does not require the NRC to engage in an extensive revision of the MACCS2 code, particularly when the Board concluded — based on considerable

---

[100] *Id.* Entergy and the Staff brought their experts to the session; Pilgrim Watch did not.

[101] *See* Transcript, Pre-Hearing Conference (Feb. 18, 2011), at 771. In its petition, Pilgrim Watch claims that it did object to other parties' being able to bring experts to answer Board questions. *See* Petition at 15 (citing oral argument on late-filed contentions, Hearing Transcript (Mar. 9, 2011) at 815)). But Pilgrim Watch cites to its objection to experts addressing the Board at the oral argument on admissibility of Pilgrim Watch's new Fukushima-related contentions, a different matter altogether than the Board's consideration of the remanded plume issue. Moreover, Pilgrim Watch's representative participated vigorously during the questioning, frequently herself asking questions of the experts. *See, e.g.,* Transcript, Oral Argument on New Contentions and Closing Statements on Contention 3 (Mar. 9, 2011), at 901, 904-05, 907, 910-12, 927, 919-20, 923-24, 938-40, 945-46, 955-57, 983-84, 990.

[102] Petition at 4-5.

[103] *See* LBP-11-18, 74 NRC at 51 n.125.

[104] *See* Petition at 20.

[105] Testimony in the proceeding included description of the effort that would be necessary to rewrite the MACCS2 code to include another atmospheric transport and dispersion model. *See, e.g.,* Exh. ENT000001, O'Kula/Hanna Testimony, at 58-59; Exh. PWA000023, Egan Testimony, at 4-5.

expert evidence — that a different plume model would not change the overall results. Simply put, no need for a different plume model was shown.

We close with the final observation that, ultimately, Entergy's Environmental Report serves to inform the SAMA analysis in the final SEIS prepared for the Pilgrim license renewal application. While the Board's decision focuses on the adequacy of Entergy's Environmental Report,[106] NEPA compliance is determined by the adequacy of the SEIS, not the applicant's Environmental Report. Therefore, the ultimate issue in determining NEPA compliance is the adequacy of the Staff's environmental review, not the applicant's Environmental Report.[107] The Board's focus on the Environmental Report does not present any significant error, however. While it is more comprehensive and identifies two additional potentially cost-beneficial SAMAs (seven instead of five), the final SEIS does not represent any significant change to the analysis in the Environmental Report. Accordingly, the Board's decision essentially confirms and endorses the reasoning in the final SEIS, which addressed Pilgrim Watch's SAMA claims.[108]

In an NRC adjudicatory proceeding, the adjudicatory record, Board decision, and any Commission decision become effectively part of the environmental review document (here, a final supplemental EIS).[109] Therefore, the SEIS is deemed supplemented by the Board's decision, and by this decision.

III. CONCLUSION

For reasons given in this decision, we *deny* Pilgrim Watch's petition for review of LBP-11-18.

---

[106] *See, e.g.,* LBP-11-18, 74 NRC at 56 ("we conclude that the modeling and data used in the Pilgrim SAMA analysis by Entergy are reasonable and adequate for use by the NRC in satisfaction of its obligations under NEPA"). *See also id.* at 31 n.4, 38. Our decision remanding Contention 3 included references to the final SEIS. *See, e.g.,* CLI-10-11, 71 NRC at 314-15.

[107] The Board stated at the outset that it would consider "whether the meteorological modeling in the Pilgrim SAMA analysis is adequate and reasonable to satisfy NEPA . . ." Board Order (Scheduling Telephone Conference) (Sept. 2, 2010) (unpublished). We have observed that a contention, like the one here, challenging an Environmental Report "may be viewed as a challenge to the NRC Staff's subsequent" draft or final environmental impact statement. *McGuire/Catawba,* CLI-02-28, 56 NRC at 382. If the intervenor seeks to raise "*new* claims," based on the Staff documents, then the intervenor can file a new or amended contention. *See id.* (emphasis in original).

[108] *See, e.g.,* Exh. NRC000002, Pilgrim SEIS, Vol. 2, at G-14 to G-21.

[109] *See Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-28, 62 NRC 721, 731 (2005) (citations omitted).

IT IS SO ORDERED.[110]

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 9th day of February 2012.

[110] Commissioner Apostolakis did not participate in this matter.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of **Docket Nos. 52-025-COL**
52-026-COL

SOUTHERN NUCLEAR
OPERATING COMPANY
(Vogtle Electric Generating Plant,
Units 3 and 4) **February 9, 2012**

MANDATORY HEARINGS

In this proceeding, the Commission considers safety issues pursuant to Atomic Energy Act (AEA) § 189a, and environmental issues as required by section 102(2)(A), (C), and (E) of the National Environmental Policy Act of 1969, as amended (NEPA).

MANDATORY HEARINGS

The Notice of Hearing for this uncontested proceeding sets the parameters for the Commission's review. The Commission must determine whether the review of the application by the NRC Staff has been adequate to support the findings listed in 10 C.F.R. § 52.97 and 10 C.F.R. § 51.107(a), for each of the combined operating licenses (COLs) to be issued, and in 10 C.F.R. § 50.10 and 10 C.F.R. § 51.107(d) with respect to the limited work authorizations (LWAs).

MANDATORY HEARINGS

The Commission does not review a COL application *de novo* in a mandatory hearing; it considers instead the sufficiency of the Staff's review of that application. *See generally Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 39 (2005); *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-06-20, 64 NRC 15, 21-22 (2006).

MANDATORY HEARINGS

SAFETY ISSUES

With respect to the safety of the proposed facility, the Commission examines whether the Staff's review of the COL application has been adequate to support its findings, including whether: (1) the applicable standards and requirements of the AEA and our regulations have been met; (2) any required notifications to other agencies or bodies have been made; (3) there is reasonable assurance that the facility will be constructed and will operate in conformity with the license, the provisions of the AEA, and our regulations; (4) the applicant is technically and financially qualified to engage in the activities authorized; and (5) issuance of the license will not be inimical to the common defense and security or the health and safety of the public. 10 C.F.R. § 52.97(a)(1)(i)-(v).

MANDATORY HEARINGS

For an LWA application, the Commission examines whether the Staff's review of the application has been adequate to support its findings, including whether: (1) the applicable standards and requirements of the AEA and our regulations applicable to the activities to be conducted under the LWA have been met; (2) the applicant is technically qualified to engage in the activities authorized; (3) issuance of the LWA will provide reasonable assurance of adequate protection to public health and safety and will not be inimical to the common defense and security; and (4) there are unresolved safety issues relating to the activities to be conducted under the LWA that would constitute good cause for withholding the authorization. 10 C.F.R. § 50.10(e)(iii)-(iv).

MANDATORY HEARINGS

With respect to the environmental impacts of the COL for the proposed facility, the Commission (1) determines whether the requirements of NEPA § 102(2)(A), (C), and (E), and the applicable regulations in 10 C.F.R. Part 51, have been met; (2) independently considers the final balance among conflicting

factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; (3) determines, after weighing the environmental, economic, technical, and other benefits against environmental and other costs, and considering reasonable alternatives, whether the combined license should be issued, denied, or appropriately conditioned to protect environmental values; and (4) determines whether the NEPA review conducted by the NRC Staff has been adequate. 10 C.F.R. § 51.107(a)(1)-(4).

MANDATORY HEARINGS

NATIONAL ENVIRONMENTAL POLICY ACT

With respect to a limited work authorization (LWA), the Commission (1) determines whether the requirements of NEPA § 102(2)(A), (C), and (E), and the regulations in 10 C.F.R. Part 51, Subpart A, have been met, with respect to the activities to be conducted under the LWA; (2) independently considers the balance among conflicting factors with respect to the LWA, which is contained in the record of the proceeding, with a view to determining the appropriate action to be taken; (3) determines whether the site redress plan will adequately redress the activities performed under the LWA, should LWA activities be terminated by the holder or the LWA revoked by the NRC, or upon effectiveness of our final decision denying the COL application; and (4) determines whether the NEPA review conducted by the NRC Staff for the LWA has been adequate. 10 C.F.R. § 51.107(d)(1)(i)-(iv).

MANDATORY HEARINGS

NATIONAL ENVIRONMENTAL POLICY ACT

To satisfy requirements of NEPA, the Commission independently considers the final balance among conflicting factors in the record.

LICENSE CONDITIONS

SQUIB VALVES

In order to reach a finding of reasonable assurance that the public health and safety will be protected, the Commission imposed a license condition relating to a testing program for squib valves.

COMBINED LICENSE PROCEEDINGS

DESIGN CONTROL DOCUMENT

Analyses of severe accidents, aircraft impacts, and probabilistic risk assessment are covered in the design control document for the referenced reactor (AP1000) and are incorporated by reference into the combined license application. In contrast, external event risks are site dependent, and therefore must be reevaluated in the COL application.

COMBINED LICENSE PROCEEDINGS

CYBER SECURITY

After NRC review and acceptance, an applicant's or licensee's cyber security plan becomes a condition of the plant's license. The cyber security plan becomes a part of the plant's licensing basis.

EARLY SITE PERMIT

COMBINED LICENSE PROCEEDINGS

Because applicant addressed topics that are optional at the early site permit (ESP) stage — including analyses of the economic, technical, and other costs and benefits of the project, and the evaluation of alternative energy sources — those issues were resolved in the early site permit proceeding, leaving no unresolved environmental issues. As a result, environmental review for the COL application was limited to identifying new and significant information that would have the potential to alter the conclusions reached in the early site permit environmental impact statement.

LIMITED WORK AUTHORIZATION

Because work encompassed in the applicant's second request for a limited work authorization was originally part of the first request for a limited work authorization, the early site permit environmental impact statement evaluated all relevant environmental impacts of the requested limited work authorization. The COL FSEIS referenced this analysis, and verified the adequacy of the site redress plan for the second LWA.

NATIONAL ENVIRONMENTAL POLICY ACT

ENDANGERED SPECIES

Backfill borrow sources located onsite in previously undisturbed areas were added to the COL and thus not evaluated in the ESP. The applicant voluntarily mitigated impacts to two Georgia state-listed threatened species — the sandhill milkvetch and southeastern pocket gopher — by relocating them away from the backfill borrow area.

LICENSE CONDITIONS

The Commission imposed no license conditions relating to future requirements that may be imposed as a result of its lessons learned from the Fukushima Dai-ichi accident. Because the NRC continues to develop the technical basis for Fukushima-related requirements, any license condition would lack sufficient details necessary to impose meaningful requirements.

MEMORANDUM AND ORDER

Our decision today concludes the uncontested portion of this proceeding, conducted pursuant to section 189a of the Atomic Energy Act of 1954, as amended (AEA). We consider today the sufficiency of the NRC Staff's review of the application submitted by Southern Nuclear Operating Co. (Southern) for combined licenses (COLs) for two new nuclear generation facilities, Units 3 and 4, at the existing Vogtle Electric Generating Plant (Vogtle) site near Waynesboro, Georgia. We also consider the sufficiency of the Staff's review of Southern's October 2, 2009 request for limited work authorizations (LWAs) to engage in certain construction activities in connection with proposed Units 3 and 4.

As discussed below, we conclude that the Staff's review has been adequate to support the findings set forth in 10 C.F.R. §§ 52.97, 51.107(a) and (d), and 50.10. We also direct the NRC Staff to include in the Vogtle licenses the condition discussed below.

I. BACKGROUND

On September 27 and 28, 2011, we presided over the uncontested hearing for this proceeding at our Rockville, Maryland headquarters. This evidentiary hearing represented one of the final steps in the NRC's comprehensive evaluation of Southern's proposed new Vogtle site units. Consistent with 10 C.F.R. § 52.73,

Southern's COL application references the AP1000 standard design certification,[1] and the early site permit (ESP) granted in August 2009.[2] The agency held formal rulemaking proceedings in connection with the AP1000 standard design certification and its associated amendments. The Vogtle ESP application was the subject of both contested and uncontested adjudications, and the COL application also was the subject of a contested adjudication. Issues resolved in the AP1000 design certification rulemaking, the ESP proceeding, or the contested portion of this COL proceeding are closed and will not be revisited here; however, a brief discussion of these matters is included to provide context for today's decision. We also provide a brief history of this proceeding.

A. Related Adjudications

1. ESP Proceeding

Southern applied for an ESP for proposed Units 3 and 4 on August 15, 2006. In response to the NRC's notice of hearing,[3] a coalition of community action organizations filed a request for hearing and petition to intervene proffering a series of environmental contentions, portions of which the Board reformulated as two contentions and admitted.[4] After issuance of the final environmental impact statement (FEIS), the same petitioners submitted a new contention, which the Board admitted in modified form.[5] The Board ruled against the intervenors on the merits of all three contentions.[6] We denied the intervenors' appeal of the Board's merits ruling on two of these contentions (the ruling on the third was not appealed), ending the contested portion of the ESP proceeding.[7]

In the uncontested portion of the ESP proceeding, the Board asked questions and heard presentations on a number of specific topics. The Board issued its final initial decision in August 2009.[8] As the Board indicated in its decision, it considered the sufficiency of all of the elements of the Staff's review of the ESP, whether or not it asked specific questions or heard a presentation at the

---

[1] *See* 10 C.F.R. Part 52, App. D.

[2] "Southern Nuclear Operating Company, Vogtle Electric Generating Plant ESP Site Docket No. 52-011 Early Site Permit and Limited Work Authorization," Aug. 26, 2009 (ADAMS Accession No. ML092290157).

[3] Southern Nuclear Operating Company; Notice of Hearing and Opportunity to Petition for Leave to Intervene on an Early Site Permit for the Vogtle ESP Site, 71 Fed. Reg. 60,195 (Oct. 12, 2006).

[4] *See* LBP-07-3, 65 NRC 237, 246, 279 (2007).

[5] *See* LBP-09-7, 69 NRC 613, 629 (2009) (referring to Licensing Board Memorandum and Order (Ruling on Motion to Admit New Contention) (Oct. 24, 2008) at 20 (unpublished)).

[6] LBP-09-7, 69 NRC at 733-35.

[7] *See* CLI-10-5, 71 NRC 90 (2010).

[8] *See* LBP-09-19, 70 NRC 433 (2009).

hearing on a particular topic.[9] The Board also made summary findings of fact and conclusions of law, including safety and environmental findings on both the ESP application and the request for an LWA.[10] The COL application references this ESP, by which the NRC approved the suitability of the site.

2. Contested COL Proceeding

In response to Southern's March 31, 2008 COL application, five organizations — the Center for a Sustainable Coast, Savannah Riverkeeper, the Southern Alliance for Clean Energy, Atlanta Women's Action for New Directions, and the Blue Ridge Environmental Defense League (BREDL) — petitioned for a hearing, proposing three contentions. The Board admitted one contention (SAFETY-1), and declined to admit the other two.[11] The intervenors later sought admission of a new environmental contention, which the Board declined to admit.[12] In October 2009, the intervenors sought to amend SAFETY-1; the Board admitted a revised version of the amended contention.[13] In May 2010, the Board granted Southern's motion for summary disposition of SAFETY-1.[14] The contested portion of this proceeding ended in June 2010.

3. Second COL Licensing Board

A second licensing board was established in August 2010 after three public interest groups — BREDL, Georgia Women's Action for New Directions (formerly known as Atlanta Women's Action for New Directions), and the Center for a Sustainable Coast — sought admission of a new contention related to Southern's

---

[9] *Id.* at 560.

[10] *Id.* at 560-63. Southern requested an LWA with its ESP, in order to conduct certain site-preparation activities at the Vogtle site. Southern later expanded its request to include additional activities, including placement of engineered backfill, mudmats, and retaining walls. This LWA, together with a second LWA requested as part of the COL application, is discussed *infra.*

[11] *See* LBP-09-3, 69 NRC 139, 146, 167-68 (2009). The Board referred to us its rulings on the rejected contentions. *Id.* at 159, 167-68. We declined to review the Board's rulings. CLI-09-13, 69 NRC 575, 576, 579 (2009).

[12] Memorandum and Order (Ruling on Motion to Admit New Contention) (Sept. 24, 2009) (unpublished) at 2, 6-7.

[13] Memorandum and Order (Ruling on Motion to Amend Contention) (Jan. 8, 2010) (unpublished) at 2, App. A. A separate set of petitioners (Vince Drescher, Kenneth Ward, John C. Horn, Jr., William S. Bashlor, and James Eddie Partain) sought to intervene in October 2009, proposing an environmental contention, which the Board rejected. LBP-10-1, 71 NRC 165, 173-74, 185 (2010). The Board's decision was not appealed.

[14] LBP-10-8, 71 NRC 433, 436, 446-47 (2010).

containment coating inspection program.[15] The second board denied the request to admit this new contention.[16] We affirmed the Board's decision.[17]

4. Post-Fukushima Event Petitions

Additional pleadings directed at the Vogtle COL application were filed in the aftermath of the Fukushima Dai-ichi events. The Vogtle COL proceeding was one of the captioned proceedings subject to petitions that requested the suspension of "all decisions" regarding the issuance of COLs, pending completion of several actions associated with the nuclear events in Japan. We granted that petition in part and denied it in part.[18] Later, in August 2011, BREDL and, separately, the Center for a Sustainable Coast, Georgia Women's Action for New Directions, and Southern Alliance for Clean Energy (collectively, CSC Petitioners), filed substantially similar motions to reopen the record and admit a new Fukushima-event-based contention in the *Vogtle* COL proceeding.[19] The Board denied these motions as premature.[20] The petitioners have appealed the Board's decision; the matter is pending before us.[21] We will address that petition as a separate matter from today's decision, which pertains only to the uncontested hearing.

---

[15] *See* Proposed New Contention by Joint Intervenors Regarding the Inadequacy of Applicant's Containment/Coating Inspection Program (Aug. 12, 2010) (Attachments amended Aug. 13, 2010) at 1, 4.

[16] LBP-10-21, 72 NRC 616 (2010).

[17] *See* CLI-11-8, 74 NRC 214 (2011).

[18] *See generally Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141 (2011).

[19] *See generally* Motion to Reopen the Record and Admit Contention Regarding the Safety and Environmental Implications of the Nuclear Regulatory Commission Task Force Report on the Fukushima Dai-ichi Accident (Aug. 11, 2011), and Contention Regarding NEPA Requirement to Address Safety and Environmental Implications of the Fukushima Task Force Report (Aug. 11, 2011) (BREDL Petitioners); Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4): Motion to Reopen the Record and Admit Contention to Address the Safety and Environmental Implications of the Nuclear Regulatory Commission Task Force Report on the Fukushima Dai-ichi Accident (Aug. 11, 2011), and Contention Regarding NEPA Requirement to Address Safety and Environmental Implications of the Fukushima Task Force Report (Aug. 11, 2011) (CSC Petitioners).

[20] *See PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), LBP-11-27, 74 NRC 591 (2011).

[21] A single petition for review has been filed in this matter, as well as on the *Comanche Peak* and *W.S. Lee* COL dockets, and the *Columbia Generating Station* license renewal docket. *See generally* Petition for Review of LBP-11-27 (Nov. 2, 2011) at 1 n.1 (naming BREDL and the CSC Petitioners as appellants in this proceeding).

The same two sets of petitioners filed motions to reinstate the contention and to supplement its basis.[22] The Board denied these motions.[23]

B. AP1000 Design Certification Rulemaking

The AP1000 is a standard design, certified in 10 C.F.R. Part 52, Appendix D. An amendment to the certified design recently was published in the *Federal Register,* and became final on December 30, 2011.[24] The currently approved version of the standard design is contained in Revision 19 to the design control document (DCD), which is incorporated by reference into Appendix D.

C. Uncontested Proceeding

The majority of the environmental issues associated with proposed Vogtle Units 3 and 4 were resolved during the Staff's ESP review. As part of its COL review, the Staff prepared a supplement to the early site permit final environmental impact statement (ESP FEIS)[25] to evaluate whether there is new and significant information that might affect the Staff's environmental conclusions. The NRC Staff issued this final supplemental environmental impact statement (FSEIS) on March 18, 2011.[26] Following review by the Advisory Committee on Reactor Safeguards (ACRS),[27] the Staff issued its final safety evaluation report (FSER)

---

[22] *See* Motion to Reinstate and Supplement the Basis for Fukushima Task Force Report Contention (Oct. 28, 2011) (BREDL Petitioners). *See* Motion to Reinstate and Supplement the Basis for Fukushima Task Force Report Contention (Oct. 28, 2011) (CSC Petitioners).

[23] Memorandum and Order (Denying Motions to Reinstate Contention), LBP-11-36, 74 NRC 768 (2011).

[24] Final Rule: "AP1000 Design Certification Amendment," 76 Fed. Reg. 82,079, 82,079 (Dec. 30, 2011). The applicability date of the rule for those entities who receive actual notice of the rule is the date of receipt. *Id.*

[25] *See generally* "Final Environmental Impact Statement for an Early Site Permit (ESP) at the Vogtle Electric Generating Plant (VEGP) ESP Site," NUREG-1872 (Aug. 2008) (ADAMS Accession No. ML082260190).

[26] *See* Southern Nuclear Operating Company, Inc.; Notice of Availability of the Final Supplemental Environmental Impact Statement for Vogtle Electric Generating Plant Units 3 and 4; Combined License Application Review, 76 Fed. Reg. 16,645 (Mar. 24, 2011) (COL FSEIS).

[27] *See* Armijo, J.S., ACRS Vice Chairman, letter to Gregory B. Jaczko, Chairman, NRC, "Report on the Safety Aspects of the Southern Nuclear Operating Company Combined License Application for Vogtle Electric Generating Plant, Units 3 and 4" (Jan. 24, 2011) (ADAMS Accession No. ML110170006) (ACRS Letter). As noted in the letter, the ACRS reviewed the Staff's Advanced Safety Evaluation Report (ASER) for Vogtle Units 3 and 4 during its meeting on January 13-15, 2011. The letter states that the ACRS's AP1000 subcommittee held meetings on June 24-25, July 21-22, September 20-21, and December 15-16, 2010, to review chapters of the COL application and of the

(Continued)

on August 9, 2011.[28] The Staff submitted its information paper on August 9, 2011.[29] As directed by the Commission, the Staff's information paper identified and discussed nonroutine matters, unique facility features, and novel issues related to the Vogtle application.[30] In terms of safety issues, the Staff discussed cyber security, loss of large areas (LOLA) of the plant due to explosions or fires, and licenses for byproduct, source, and special nuclear materials under 10 C.F.R. Parts 30, 40, and 70.[31] For environmental issues, the Staff explained that the analysis conducted in connection with the ESP, together with Southern's decision to reference the AP1000 certified design instead of using the plant parameter envelope approach, limited the COL environmental analysis to "new and significant" information.[32] The Staff's paper briefly reviewed the process the Staff used in conducting its environmental analysis for the COL application and described the effects on its process of the ESP license amendment requests submitted after the ESP was issued.[33]

We issued a Notice of Hearing on August 16, 2011.[34] This notice was followed by an order of the Secretary transmitting the Commissioners' prehearing questions to the Staff and to Southern.[35] Southern and the Staff filed their responses to the Commissioners' prehearing questions on September 13, 2011.[36] Southern and the

---

Staff's ASER. *Id.* at 1. The Staff responded to the Vice Chairman's letter. *See* Borchardt, R.W., Executive Director for Operations, letter to Dr. J.S. Armijo, Vice Chairman, ACRS, "Report on the Safety Aspects of the Southern Nuclear Operating Company Combined License Application for Vogtle Electric Generating Plant, Units 3 and 4" (Mar. 3, 2011) (ADAMS Accession No. ML110480429).

[28] *See* Exh. NRC000004, "Final Safety Evaluation Report for Combined License for Vogtle Electric Generating Plant, Units 3 and 4" (Aug. 2011) (COL FSER).

[29] *See* Exh. NRC000003, "Staff Statement in Support of the Uncontested Hearing for Issuance of Combined Licenses and Limited Work Authorizations for Vogtle Electric Generating Plant, Units 3 and 4 (Docket Nos. 52-025 and 52-026)," Commission Paper SECY-11-0110 (Aug. 9, 2011) (Staff Testimony). *See also* Internal Commission Procedures at IV-13 (ICPs).

[30] *See* ICPs at IV-13; Staff Requirements — SECY-10-0082 — Mandatory Hearing Process for Combined License Application Proceedings Under 10 C.F.R. Part 52 (Dec. 23, 2010) (ADAMS Accession No. ML103570203).

[31] *See* Exh. NRC000003, Staff Testimony, at 16-21.

[32] *See id.* at 21.

[33] *See id.* at 22-23.

[34] Southern Nuclear Operating Co., et al.; Combined Licenses for Vogtle Electric Generating Plant, Units 3 and 4, and Limited Work Authorizations; Notice of Hearing, 76 Fed. Reg. 50,767 (Aug. 16, 2011) (Notice of Hearing).

[35] Order (Transmitting Pre-Hearing Questions) (Aug. 31, 2011) (unpublished) (Pre-Hearing Order).

[36] Exh. SNC000005, Southern Nuclear Operating Company's Response to the Commission's Order of August 31, 2011 (Sept. 13, 2011) (Southern Pre-Hearing Response); Exh. NRC00008A, NRC Staff Responses to Commission Pre-Hearing Questions (Sept. 13, 2011) (Staff Pre-Hearing Response); Exh. NRC00008B, Corrected Page 15 (Sept. 20, 2011) (Staff Corrected Pre-Hearing Response).

Staff also submitted their witness and exhibit lists for the September 27-28, 2011 hearing.[37]

Prior to the hearing, the Secretary issued a scheduling order detailing matters such as the identification and swearing-in of witnesses, the process that would be used for formally admitting evidence, and the format of presentations.[38] This was followed by a Scheduling Note prescribing the content and time allotment of the presentations to be provided at the hearing by Southern and by the Staff.[39]

At the outset of the hearing, after the Staff's and Southern's witnesses were sworn in,[40] the parties' prefiled testimony and exhibits were admitted into the evidentiary record.[41] We heard opening statements, followed by testimony from Staff and Southern witness panels, and questioned the witnesses, in accordance with the order of presentations set out in the Scheduling Note. The hearing ended with closing statements.

After the hearing, the Secretary issued orders setting deadlines for proposed transcript corrections, and for responses to additional questions.[42] The Staff and Southern filed a joint motion proposing transcript corrections.[43] The parties timely submitted supplemental responses to the additional questions.[44] The Secretary

---

[37] Southern Nuclear Operating Company's Witness List for the Vogtle Units 3 & 4 COL Mandatory Hearing (Sept. 12, 2011); Southern Nuclear Operating Company's Supplemented Witness List for the Vogtle Units 3 & 4 COL Mandatory Hearing (Sept. 20, 2011); NRC Staff Witness List (Sept. 13, 2011); Revised NRC Staff Witness List (Sept. 22, 2011); Southern Nuclear Operating Company's List of Proposed Exhibits (Sept. 20, 2011); Southern Nuclear Operating Company's Revised List of Proposed Exhibits (Sept. 24, 2011); Southern Nuclear Operating Company's Revised and Updated List of Proposed Exhibits (Sept. 26, 2011); NRC Staff Exhibit List (Sept. 20, 2011); Revised NRC Staff Exhibit List (Sept. 23, 2011).

[38] Scheduling Order (Sept. 13, 2011) (unpublished).

[39] Vietti-Cook, Annette, Secretary of the Commission, Memorandum to Counsel for Applicant and Staff (Enclosure: Scheduling Note) (Sept. 20, 2011); Scheduling Note (Revised) (Sept. 23, 2011) (Revised Scheduling Note).

[40] There were eleven Southern witnesses and forty-nine Staff witnesses. *See* Tr. at 11-16.

[41] *See* Tr. at 17-18. Southern's Exhibits SNC000002 through SNC000007, SNC000009, SNCR-20001, SNCR00008, and SNCR00010, and the Staff's Exhibits NRC000001 through NRC000006, NRC00007A-7D, NRC00008A-8B, NRC000009, NRCR00010-13, and NRC000014, were admitted into the record. *Id.*

[42] Order (Setting Deadline for Proposed Transcript Corrections) (Oct. 3, 2011) (unpublished); Order (Supplemental Responses and Post-Hearing Questions) (Oct. 6, 2011) (unpublished) (Post-Hearing Order) (providing for answers to questions posed during the hearing, and propounding additional post-hearing questions).

[43] Joint Motion for Transcript Corrections (Oct. 11, 2011).

[44] Exh. NRC000015, NRC Staff Responses to Commission Post-Hearing Questions (Oct. 17, 2011) (Staff Post-Hearing Response); Exh. SNC000011, Southern Nuclear Operating Company's Response to the Commission's Order of October 6, 2011 (Oct. 17, 2011). Southern later filed a revised version of its post-hearing responses. *See* Exh. SNCR00011, Southern Nuclear Operating Company's Request

(Continued)

subsequently issued an order admitting all additional exhibits into the record, adopting transcript corrections, and closing the evidentiary record.[45]

II. DISCUSSION

A. Review Standards

In this proceeding, we consider safety issues pursuant to AEA § 189(a), and environmental issues as required by section 102(2)(A), (C), and (E) of the National Environmental Policy Act of 1969, as amended (NEPA).[46] The Notice of Hearing for this uncontested proceeding sets the parameters for our review. The determination we must make "is whether the review of the application by the Commission's [S]taff has been adequate to support the findings found in 10 CFR [§] 52.97 and 10 CFR [§] 51.107(a), for each of the COLs to be issued, and in 10 CFR [§] 50.10 and 10 CFR [§] 51.107(d) with respect to the LWAs."[47] We do not review Southern's application *de novo*; we consider instead the sufficiency of the Staff's review of that application.[48]

On the safety side, we examine whether the Staff's review of the combined license application has been adequate to support its findings, including whether: (1) the applicable standards and requirements of the AEA and our regulations have been met; (2) any required notifications to other agencies or bodies have been made; (3) there is reasonable assurance that the facility will be constructed

---

for Leave to File Revised Exhibit (Oct. 21, 2011); Southern Nuclear Operating Company's Response to the Commission's Order of October 6, 2011 (dated Oct. 17, 2011, served Oct. 21, 2011) (Southern Post-Hearing Response). In addition, the Staff filed a letter making revisions to the Final SER and to the draft combined license. Moulding, Patrick A., Counsel for the NRC Staff, letter to Chairman and Commissioners, U.S. Nuclear Regulatory Commission (Oct. 28, 2011) (Enclosure 1: NRC Staff Clarifications to the Mandatory Hearing Record). This letter (with its enclosure) was assigned Exhibit number NRC000016.

[45] Order (Adopting Proposed Transcript Corrections, Admitting Post-Hearing Responses, and Closing the Record of the Proceeding) (Nov. 1, 2011) (unpublished).

[46] AEA § 182(c) requires the publication of notice of the application in the *Federal Register* for 4 consecutive weeks. *See also* 10 C.F.R. § 50.43(a)(3). This requirement has been satisfied. *See* Southern Nuclear Operating Company; Notice of Availability of Application for a Combined License, 76 Fed. Reg. 11,822 (Mar. 3, 2011); Southern Nuclear Operating Company; Notice of Availability of Application for a Combined License, 76 Fed. Reg. 13,241 (Mar. 10, 2011); Southern Nuclear Operating Company; Notice of Availability of Application for a Combined License, 76 Fed. Reg. 14,699 (Mar. 17, 2011); Southern Nuclear Operating Company; Notice of Availability of Application for a Combined License, 76 Fed. Reg. 16,645 (Mar. 24, 2011).

[47] Notice of Hearing, 76 Fed. Reg. at 50,768.

[48] *See generally Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 39 (2005); *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-06-20, 64 NRC 15, 21-22 (2006).

and will operate in conformity with the license, the provisions of the AEA, and our regulations; (4) the applicant is technically and financially qualified to engage in the activities authorized; and (5) issuance of the license will not be inimical to the common defense and security or the health and safety of the public.[49]

For the LWA application, we examine whether the Staff's review of the application has been adequate to support its findings, including whether: (1) the applicable standards and requirements of the AEA and our regulations applicable to the activities to be conducted under the LWA have been met; (2) the applicant is technically qualified to engage in the activities authorized; (3) issuance of the LWA will provide reasonable assurance of adequate protection to public health and safety and will not be inimical to the common defense and security; and (4) there are unresolved safety issues relating to the activities to be conducted under the LWA that would constitute good cause for withholding the authorization.[50]

On the environmental side, with respect to the COL application, we (1) determine whether the requirements of NEPA § 102(2)(A), (C), and (E), and the applicable regulations in 10 C.F.R. Part 51, have been met; (2) independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; (3) determine, after weighing the environmental, economic, technical, and other benefits against environmental and other costs, and considering reasonable alternatives, whether the combined license should be issued, denied, or appropriately conditioned to protect environmental values; and (4) determine whether the NEPA review conducted by the NRC Staff has been adequate.[51]

Finally, with respect to an LWA, we (1) determine whether the requirements of NEPA § 102(2)(A), (C), and (E), and the regulations in 10 C.F.R. Part 51, Subpart A, have been met, with respect to the activities to be conducted under the LWA; (2) independently consider the balance among conflicting factors with respect to the LWA, which is contained in the record of the proceeding, with a view to determining the appropriate action to be taken; (3) determine whether the site redress plan will adequately redress the activities performed under the LWA, should LWA activities be terminated by the holder or the LWA revoked by the NRC, or upon effectiveness of our final decision denying the COL application; and (4) determine whether the NEPA review conducted by the NRC Staff for the LWA has been adequate.[52]

---

[49] 10 C.F.R. § 52.97(a)(1)(i)-(v).
[50] 10 C.F.R. § 50.10(e)(iii)-(iv).
[51] 10 C.F.R. § 51.107(a)(1)-(4).
[52] 10 C.F.R. § 51.107(d)(1)(i)-(iv).

B. Analysis

Our consideration of the evidentiary record in this uncontested proceeding is predicated on the review parameters discussed above, and is focused on determining whether the Staff's review of the COL application and LWA request was sufficient to support the Staff's safety and environmental findings. To satisfy NEPA requirements, we also independently consider the final balance among conflicting factors in the record. With these ends in mind, we review and analyze the information we received in this proceeding.

We asked a series of prehearing questions to inform our consideration of the sufficiency of the Staff's review of the COL application,[53] and received detailed responses from the parties.[54] During the hearing, we heard panel presentations on a series of topics, which we consider in detail below. The panel presentation topics were selected to correspond to areas of the Staff's FSER or FSEIS where we sought additional information or clarifications as part of our evaluation of the sufficiency of the Staff's review. We asked detailed questions during the hearing to further inform our consideration of the issues, and followed up in areas of concern by asking post-hearing questions,[55] again receiving detailed responses from the parties.[56] All of this information, as well as the Staff's FSER and FSEIS, is part of the record on which we base today's decision.

The following witnesses testified for Southern during the hearing (in order of appearance): Joseph (Buzz) Miller, Charles (Chuck) Pierce, Wesley Sparkman, Amy Aughtman, Eddie Grant, Donald Moore, Theodore Amundson, Jerry Sims, and Dale Fulton. The following witnesses testified for the Staff during the hearing (also in order of appearance): Michael Johnson, Frank Akstulewicz, Robert Schaaf, Gregory Hatchett, Bret Tegeler, Barry Zalcman, Ravindra Joshi, Denise McGovern, Mohamed Shams, Sarah Tabatabai, Michael Dusaniwskyj, Barry Wray, Jill Caverly, Thomas Scarbrough, John McKirgan, Lynn Mrowca, Mark Caruso, Malcolm Patterson, Terry Jackson, Tania Martinez-Navedo, Om Chopra, Eric Lee, Michael Shinn, Bruce Musico, Juan Peralta, Craig Erlanger, and Mallecia Sutton. Other witnesses were available to respond to our questions on an as-needed basis.

To provide context for the application, the first panels provided an overview that included information on the status of the AP1000 design certification amendment, and on the ESP and LWA issued in 2009. In our decision today, we do not

---

[53] *See* Pre-Hearing Order.

[54] *See* Exh. SNC000005, Southern Pre-Hearing Response; Exh. NRC00008A, Staff Pre-Hearing Response; Exh. NRC00008B, Staff Corrected Pre-Hearing Response.

[55] *See* Post-Hearing Order.

[56] *See* Exh. SNCR00011, Southern Post-Hearing Response; Exh. NRC000015, Staff Post-Hearing Response.

revisit the safety and environmental findings made by the Board in connection with the previously granted ESP and LWA. We also do not delve into AP1000 design issues, which are subject to formal rulemaking processes, except for areas of interface between the AP1000 design and Vogtle site-specific characteristics.

1. Overview Panels

a. Southern

Southern's witnesses provided a general overview of the Vogtle construction program. Southern began excavations for the foundations of the nuclear islands and the turbine buildings in 2009. After the NRC issued the ESP, which included the first LWA, Southern began the activities authorized under that LWA: placement of engineered backfill, construction of the nuclear island mudmats, construction of mechanically stabilized earth retaining walls, and application of the waterproof membrane.[57] Southern described the development of the Vogtle COL application, and the application's role as the reference COL application for the AP1000 fleet,[58] and briefly previewed the information it would provide in its other presentations.[59] Southern confirmed that it and its partner NuStart, together with contractors, "expended several hundred thousand man hours to develop the application and support its review by the NRC [S]taff since 2005."[60]

We asked questions regarding the interface between the COL and the additional LWA application review processes, and Southern's construction schedule. Southern explained its perspective that construction continuity, and thus "personnel safety and nuclear quality," would benefit from prompt issuance of the LWAs.[61] We also asked about the linkage between the LWAs and the AP1000 design certification amendment. Southern explained that the activities included in the LWAs depend on approval of the AP1000 design certification amendment.[62]

In response to questions regarding its intentions for using the preliminary acceptability review (PAR) process for changes during construction that is under development,[63] Southern stated that it does not expect to use that process initially. Southern indicated that the specific changes it currently has under consideration fall instead within the guidance provided in COL Interim Staff Guidance document

---

[57] Tr. at 21.

[58] Tr. at 23-26.

[59] Tr. at 26-28.

[60] Tr. at 347 (Miller).

[61] Tr. at 29 (Miller).

[62] *See* Tr. at 31.

[63] *See* "Interim Staff Guidance on Changes During Construction Under Part 52," COL-ISG-025 (Draft) (ADAMS Accession No. ML111390385).

11 (ISG-11).[64] On the other hand, Southern's witness added, after construction starts, situations may arise where the PAR process will be appropriate.[65]

b. Staff

We asked the Staff panel to provide an overview specifically including:

> [S]tatus of AP1000 design certification amendment, summary of key safety information associated with the AP1000 design certification, use of design centered review approach for the AP1000 COLs, relationship to the review for the [ESP] and LWA issued in 2009, status of the second LWA request, and summary of regulatory findings. The [S]taff should also discuss how it analyzed deviations and exemptions.[66]

The Staff opened its presentation by describing the scale of its review of the Vogtle COL application. The Staff's review began in the first half of 2008, when Southern submitted its application, and continued through August 2011. The Staff stated that it spent approximately 26,000 hours on its safety review and 5000 hours on its environmental review, employing well over 100 scientists, engineers, and technical specialists in the process. Technical support contractors, under Staff supervision, provided approximately 8000 hours to the review effort. The Staff conducted more than sixty public meetings and conference calls in support of its review, and required Southern to respond to over 500 questions, including 460 safety-related questions and 70 questions on environmental issues. In addition, the Staff received and considered over 300 comments on its draft supplemental environmental impact statement (DSEIS).[67]

The Staff explained that the COL application incorporates by reference the AP1000 design certification rule, contained in 10 C.F.R. Part 52, Appendix D, as well as Revision 19 to the DCD. The COL application also incorporates by reference the ESP and the first LWA.[68] As a result, the Staff's review did not address issues resolved in connection with either the ESP or the AP1000

---

[64] Tr. at 36-37. *See* "Interim Staff Guidance, Finalizing Licensing-Basis Information," DC/COL-ISG-011 (Nov. 2, 2009) (ADAMS Accession No. ML092890623) (clarifying the Staff's position on applicants' "freeze point," that is, the point where licensing-basis information is considered final for review purposes, and the control of licensing-basis information during and after the initial review of applications for design certification or COLs).

[65] Tr. at 37.

[66] Revised Scheduling Note at 2 (unnumbered).

[67] Tr. at 41-42.

[68] Tr. at 43. The Staff explained that it granted three amendments to the ESP, related to the sources and categories of the backfill material used for the nuclear island foundation, during the course of its review of the COL application. *See* Exh. NRC000003, Staff Testimony, at 4; Tr. at 43-44.

certified design. Instead, the Staff's safety review concentrated on site-specific issues like "[COL] information items, design information, replacing conceptual design information and programmatic elements that are the responsibility of the applicant."[69] The Staff's environmental review was limited to identifying new information, developed since preparation of the ESP FEIS, and evaluating its significance.[70]

Another area of importance for this particular COL application, as the Staff explained, is its status as the reference COL application, consistent with the NRC's design-centered review approach to the AP1000 COL reviews.[71] The Vogtle COL application contains standard content that future COL applicants using the AP1000 design may choose to incorporate by reference. Those future applicants will be able to rely on the review of these standard content items completed by the Staff for this reference COL application.[72]

The Vogtle COL application did not start out as the reference application for the AP1000 design. That distinction initially belonged to the Tennessee Valley Authority's Bellefonte COL application.[73] As a result, parts of the Staff's standard review were performed in connection with the Bellefonte application. The Staff transitioned this standard review from the Bellefonte application to the Vogtle application after it issued its Bellefonte safety evaluation with open items. Information in certain areas of the two applications was similar, in accordance with the level of standardization needed to support the design-centered review approach. The Staff determined that this information would be similar for all of the AP1000 applications, and that the evaluation of standard content performed for the Bellefonte application was directly applicable to the review of the Vogtle application.[74]

The Staff concluded the safety portion of its overview presentation by reviewing the required findings for COL and LWA issuance, and the findings it made, that led to its conclusion that the COL and the second LWA should be

---

[69] Tr. at 44-45 (Akstulewicz).

[70] Tr. at 45.

[71] Under the "design-centered review approach," the NRC uses, to the maximum extent practical, a "one issue, one review, one position" strategy to promote effective use of resources for performing reviews, and to optimize application review schedules. In particular, "the [S]taff will conduct one technical review for each reactor design issue and use this one decision to support the decision on a [design certification] and on multiple COL applications." NRC Regulatory Issue Summary 2006-06, "New Reactor Standardization Needed to Support the Design-Centered Licensing Review Approach" (May 31, 2006), at 1 (ADAMS Accession No. ML053540251).

[72] Tr. at 45. Standard content material is specifically identified in both Exh. NRC000001, Vogtle Electric Generating Plant, Units 3 & 4, COL Application, Part 2, "Final Safety Analysis Report" (FSAR) and Exh. NRC000004, COL FSER. *Id.*

[73] Tr. at 45.

[74] Tr. at 47.

granted. The Staff summarized the support for its findings, which it previously documented in its testimony.[75]

The Staff explained that it initiated its environmental review of the COL application by publishing in the *Federal Register* a Notice of Intent to prepare a supplemental EIS; the notice explained that the analysis would be performed in the same manner as for the ESP EIS, except that a formal scoping process would not be conducted.[76] The Staff stated that it contacted federal, state, tribal, and local agencies, and conducted two detailed site audits, to obtain information on new and potentially significant information related to the proposed action.[77] The DSEIS was published in September 2010; a public meeting followed in October 2010.[78] Comments received, and the Staff's responses to these comments, were incorporated into Appendix E of the FSEIS, which was issued in March 2011.[79]

The Staff concluded in the FSEIS that the COL and LWA should be issued.[80] The Staff concluded its environmental overview presentation by summarizing the findings it made to reach this conclusion, as well as the support it relied on for making these findings.[81]

The Staff's overview presentation ended with a brief status update, provided solely for context, of AP1000 rulemaking activities.[82]

We asked whether the Staff considered the events at Fukushima Dai-ichi to be "new and significant" information for NEPA purposes.[83] In this respect, the Near-Term Task Force stated: "The current [U.S.] regulatory approach, and more importantly, the resultant plant capabilities, allow the Task Force to conclude that a sequence of events like the Fukushima accident is unlikely to occur in the United States and some appropriate mitigation measures have been implemented, reducing the likelihood of core damage and radiological releases. Therefore, continued operation and continued licensing activities do not pose an imminent

---

[75] Tr. at 48-51. *See* Exh. NRC000003, Staff Testimony, at 24-27, 30-31.

[76] Tr. at 52. *See* Southern Nuclear Operating Company Vogtle Electric Generating Plant, Units 3 and 4 Combined License Application; Notice of Intent to Prepare a Supplemental Environmental Impact Statement, 74 Fed. Reg. 49,407 (Sept. 28, 2009).

[77] Tr. at 52.

[78] *Id.*

[79] *Id. See* Southern Nuclear Operating Company, Inc.; Notice of Availability of the Final Supplemental Environmental Impact Statement for Vogtle Electric Generating Plant Units 3 and 4; Combined License Application Review, 76 Fed. Reg. 16,645 (Mar. 24, 2011).

[80] Tr. at 53. *See* Exh. NRC000006, "Final Supplemental Environmental Impact Statement for Combined Licenses (COLs) for Vogtle Electric Generating Plant Units 3 and 4, Final Report," NUREG-1947 (Mar. 2011), § 11.7, at 11-6.

[81] Tr. at 53-56. *See* Exh. NRC000003, Staff Testimony, at 28-30, 31-32.

[82] Tr. at 56-57.

[83] Tr. at 57-58.

risk to public health and safety."[84] Based on this assessment, the Staff stated that it did not consider the events in its supplemental NEPA review.[85] The Staff further stated that it was awaiting the conclusion of the agency's ongoing evaluations and would apply any new requirements developed from those evaluations, whether safety or environmental in nature.[86] The Staff emphasized that the AP1000 design certification and the Vogtle COL application satisfy current requirements, and that the agency has processes in place to apply final actions that the Commission might take with respect to long-term recommendations for reactor designs or COLs, as appropriate.[87]

We asked how COL information items are incorporated — whether as commitments or license conditions. The Staff indicated that the answer depended upon the specifics of the information item. We requested a followup response indicating the breakdown of how COL items were resolved.[88] As part of its followup, the Staff provided a table indicating the status of each COL information item: either "resolved," "FSAR commitment," "license condition," or "ITAAC [inspections, tests, analyses, and acceptance criteria]."[89] The Staff stated that none of these deferred the receipt of information necessary to the Staff's findings supporting issuance of the COL.[90]

We also asked about the interface between changes during construction, including those done using the PAR process, and inspections, particularly with respect to how inspectors will know what changes are expected to occur or have occurred. The Staff indicated that one benefit of the PAR process is that it will know the things that the licensee wants to change ahead of time and will, therefore, have advance notice about things that would impact the inspection program. The Staff also explained that there is a regulatory requirement to update the FSAR so that the agency is aware of changes that are made that do not require prior NRC approval.[91]

---

[84] "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 (Near-Term Report) (transmitted to the Commission via Commission Paper SECY-11-0093, "Near-Term Report and Recommendations for Agency Actions Following the Events in Japan" (July 12, 2011) (ADAMS Accession No. ML11186A950) (package).

[85] Tr. at 58. *See generally* Near-Term Report at 71-72.

[86] Tr. at 58.

[87] Tr. at 71.

[88] Tr. at 58-60.

[89] Exh. NRC000015, Staff Post-Hearing Response, at 13 (Question 3); *id.* at 29-37, identified as Staff Table 1.

[90] *Id.* at 13 (Question 3).

[91] Tr. at 72-74. *See generally* 10 C.F.R. § 52.98(c); 10 C.F.R. Part 52, App. D, § VIII.B.5.b; 10 C.F.R. § 50.71(e).

2. *Safety Panel 1*

We directed Safety Panel 1 to discuss relevant sections of the COL application and the following chapters of the COL FSER:

- Chapter 1, "Introduction and Interfaces," including novel issues associated with licenses for byproduct, source and special nuclear material.
- Chapter 2, "Site Characteristics," including overview of information incorporated by reference from the ESP.
- Chapter 3, "Design of Structures, Components, Equipment and Systems," including waterproofing membrane departure and key safety information incorporated by reference from the AP1000 design certification (e.g., shield building redesign and containment pressure relief system).[92]

a. Introduction and Interfaces

Southern explained that the COL application included a request for licenses, pursuant to 10 C.F.R. Parts 30, 40, and 70, to allow the "receipt, possession, and use of by-product, source, and special nuclear material," but that Part 52 did not include specific guidance identifying the information that should be provided.[93] During the course of the Staff's review, Southern responded to a series of requests for additional information related to the materials licenses. For some of these requests, Southern stated that it was able to direct the Staff to other portions of the application. For others, Southern supplied new information. For example, Southern supplied descriptions of programs to satisfy the requirements for: control and accounting of special nuclear material; new fuel receipt and storage before an operational storage area is established; and transfer of control of new fuel to a qualified shipper in the event of a return to the manufacturer.[94]

As part of its discussion of Chapter 1, the Staff stated that it evaluated and approved three exemptions from the NRC's regulations: 10 C.F.R. Part 52, Appendix D, § IV.A.2 (COL application organization and numbering); 10 C.F.R. § 52.93(a)(1) (exemption criteria); and 10 C.F.R. §§ 70.22(b), 70.32(c), 74.31, 74.41, and 74.51 (special nuclear material control and accounting (MC&A) program description).[95] The Staff evaluated six proposed departures from AP1000 DCD Revision 19: an administrative departure for organization and numbering

[92] Revised Scheduling Note at 2 (unnumbered).

[93] Tr. at 84 (Sparkman).

[94] Tr. at 85.

[95] Tr. at 93, referring to Exh. NRCR00010, Safety Panel 1, Staff Slide 7. *See also* Exh. NRC000003, Staff Testimony, at 12.

of the FSAR; mudmat thickness; waterproofing membrane material; class 1E voltage regulating transformer current limiting features; potable water system filtration; and emergency response facility locations.[96]

The Staff also evaluated six requested variances from the ESP: three variances corresponding to areas where the COL application incorporates AP1000 DCD Revision 19 rather than Revision 15 (as in the ESP); a variance that provides for updated site layout information, including relocation of the technical support center; a variance that provides for updated information regarding hazardous chemicals in the site vicinity; and a variance that provides for updated climatological data.[97]

The Staff next summarized its review of Southern's financial and technical qualifications.[98] In response to questions, the Staff explained that Southern is required to select its decommissioning funding assurance mechanism — e.g., sinking fund, prepayment, parent company guarantee — and provide the proper certification for that mechanism prior to fuel load.[99] The Staff later confirmed and amplified this answer. Southern is required to submit a report after the COLs are issued and no later than 30 days after the NRC publishes notice of intended operation in the *Federal Register.*[100] The Staff explained that this report will certify the amount of financial assurance for decommissioning that is provided and will include a copy of the financial instrument that will be used.[101]

In connection with its evaluation of Southern's technical qualifications to hold a Part 52 license,[102] the Staff explained that an applicant's status as a current power reactor licensee generally provides the necessary support for the Staff's finding that the applicant is technically qualified for a new license.[103] The Staff explained that if it found problems material to an applicant's qualifications during the course of its review of the application, then it might conduct further review before reaching its conclusion on the technical qualification issue.[104] The Staff explained further that this approach is consistent with past treatment of the adequacy or "integrity" of an entity's corporate organization or management, "confirming that

---

[96] Tr. at 93, referring to Exh. NRCR00010, Safety Panel 1, Staff Slide 8. *See also* Exh. NRC000003, Staff Testimony, at 13-15.

[97] Tr. at 93, referring to Exh. NRCR00010, Safety Panel 1, Staff Slide 9. *See also* Exh. NRC000003, Staff Testimony, at 16.

[98] Tr. at 94-95.

[99] Tr. at 120-21.

[100] Exh. NRC000015, Staff Post-Hearing Response, at 2 (Item C) (referencing 10 C.F.R. §§ 50.75(e)(3) and 52.103(a)).

[101] Exh. NRC000015, Staff Post-Hearing Response, at 2 (Item C).

[102] *See* Exh. NRC000004, COL FSER § 1.5; 10 C.F.R. § 52.97(a)(1)(iv).

[103] Exh. NRC000015, Staff Post-Hearing Response, at 2 (Item D).

[104] *Id.*

issues such as past violations of NRC regulations would indicate a deficiency in an application only if they are directly germane to the licensing action, rather than being of simply historical interest."[105]

The Staff discussed in detail its evaluation of the special nuclear MC&A program description exemption identified above as the third requested exemption from NRC regulations.[106] In response to a question, the Staff confirmed that this exemption was in essence an administrative exemption intended to treat Part 52 applicants and licensees in the same manner as Part 50 applicants and licensees, and that the affected program activities do not relate to operation of the nuclear power plant itself.[107]

The Staff also discussed details of Southern's physical security plan.[108] Southern provided extensive details on the security measures it is implementing to ensure physical security at the site during construction.[109] Each new unit will transition to 10 C.F.R. § 73.55 security standards before fuel load.[110]

b. Site Characteristics

In connection with Chapter 2, Southern explained that three site characteristics were not fully resolved at the ESP stage: maximum and minimal normal air temperatures; atmospheric dispersion values; and local intense precipitation.[111] In addition, one seismic parameter was supplemented at the COL stage "to provide a more detailed evaluation demonstrating [that] the in-structure response spectra [are] bounded by the DCD's certified seismic design response spectra . . . ."[112]

In connection with the "local intense precipitation" issue, the Staff explained that the point of this analysis is to verify that drainage ditches can handle potential rainfall and move the water away from site structures.[113] In terms of methodology, the Staff indicated that it made "an independent determination of the depth of rainfall and . . . used the applicant's hydraulic model . . . as [a] baseline."[114] The

---

[105] *Id.* at 2-3 (Item D) (citing *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 365 (2001); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 120 (1995); *USEC Inc.* (American Centrifuge Plant), LBP-05-28, 62 NRC 585, 618-19 (2005)).

[106] Tr. at 95-102.

[107] Tr. at 124.

[108] Tr. at 102-03.

[109] *See* Exh. SNCR00011, Southern Post-Hearing Response, at 8-11 (Question 8).

[110] *Id.* at 10 (Question 8).

[111] Tr. at 87-89.

[112] Tr. at 89.

[113] Tr. at 129.

[114] Tr. at 129-30 (Caverly).

Staff checked and verified the model, applied different parameters to the model, and tested the sensitivity of the model to assess the validity of the applicant's conclusions.[115]

The Staff summarized its evaluation of Chapter 2, highlighting the distinction between standard content information applicable to all AP1000 COL applicants and plant-specific information.[116] The Staff explained that it "reviewed and compared the Vogtle site-specific characteristic values presented in [the] Vogtle FSAR against the AP1000 site parameters presented in the AP1000 DCD," and "confirmed that the AP1000 site parameters were enveloped by [the] corresponding Vogtle site characteristic values."[117] The Staff discussed its review of Southern's evaluation of AP1000 standard chemicals, including potential hazards to control room habitability.[118] The Staff explained that clarifications to the AP1000 normal temperature site parameter values made after the Vogtle ESP was issued led Southern to propose a variance from the ESP normal air temperature site values.[119] The Staff found the variance acceptable because of the prior evaluation during the ESP review and because "the revised site values remain[ed] bounded by the AP1000 normal temperature site parameter values."[120]

c. Chapter 3: Design of Structures, Components, Equipment, and Systems

Southern identified key DCD information incorporated by reference into the COL application. Southern noted particularly the shield building redesign and several ITAAC related to the nuclear island structures.[121]

The Staff provided a detailed overview of the AP1000 shield building design and its evaluation of that design. The shield building is a safety-related Seismic Category I[122] structure that: provides structural and radiological shielding and protection from external events for the containment vessel; radiation shielding; support for "the passive containment cooling water storage tank"; and "natural air circulation cooling for the containment vessel."[123] The shield building design was

[115] Tr. at 130.

[116] Tr. at 105.

[117] Tr. at 106 (Joshi). The Staff noted one exception related to the Vogtle site's ground motion response spectra, and indicated that this would be discussed in connection with Chapter 3. *Id.*

[118] Tr. at 106-07.

[119] Tr. at 107-08.

[120] Tr. at 108 (Joshi).

[121] Tr. at 90.

[122] A "Seismic Category I" structure must be designed to remain functional if the safe shutdown earthquake occurs. *See* Regulatory Guide 1.29, Rev. 4, "Seismic Design Classification" (Mar. 2007) (ADAMS Accession No. ML070310052), at 2.

[123] Tr. at 109 (Shams).

revised by Westinghouse to use steel concrete composite modules; this resulted in extensive reanalysis and testing of the building's structural capacity, factoring in the effect of water load on the roof of the building, to resist aircraft impacts and to cope with seismic, tornado, and wind loads.[124] After comprehensive Staff review, confirmed by independent expert consultants and by the ACRS, the Staff "concluded that the AP1000 shield building design is safe and provides . . . reasonable assurance that the building will remain functional under design basis loads."[125]

The Staff explained that, to prevent a damaging external pressure load on the containment vessel, a "containment vacuum relief system was added to an existing vent line penetration."[126] This added system "consists of redundant vacuum relief devices sized to prevent differential pressure between [the] containment and the shield building from exceeding the design value."[127] The Staff stated that this ensures that a single failure of any relief devices would not prevent the relief flow path.[128]

Southern briefly discussed the departure from the AP1000 DCD for the waterproofing membrane installed under the first LWA. Southern stated that the selected waterproofing option is consistent with the DCD design, although not specifically described in the DCD. Southern pointed out that the membrane is governed by "a site-specific ITAAC, which will confirm the specified coefficient of friction of 0.7."[129] In response to a question regarding the timing and process for verifying compliance with this ITAAC, the Staff explained that Southern would produce a report documenting compliance of the waterproofing membrane with the acceptance criteria, including the 0.7 coefficient of friction. The Staff stated that inspectors visited the site to observe the actual installation, and that the documentation provided in the report was examined to verify that the waterproofing membrane satisfied the requirement.[130]

The Staff also discussed this departure, noting that AP1000 DCD Revision 15 did not specify a material for the membrane and that the material selected was approved in the ESP. Revision 18, issued later, did specify a particular material that differed from that approved for the ESP. Because this is classified as "Tier 2" information, the use of a different material required a departure

---

[124] Tr. at 109-10.

[125] Tr. at 111-12 (Shams). *See generally* Exh. NRC000004, COL FSER § 3.8.4.

[126] Tr. at 112 (McGovern).

[127] *Id.* (McGovern).

[128] *Id.*

[129] Tr. at 89 (Aughtman). *See* Exh. NRC000004, COL FSER § 3.8.5.4, at 3-59 (the ESP ITAAC will be included as an ITAAC in the COL).

[130] Tr. at 122.

from the DCD.[131] In response to questions, the Staff explained that while some chemical and physical properties of the two materials differ, the differences are not substantive.[132] The Staff also explained that while the applicant stated in its application that this Tier 2 departure from the DCD did not require prior approval, the Staff reviewed this departure because it was part of the COL application.[133]

In connection with piping, we asked the Staff to identify any commitments, programs, or license conditions that are in place to ensure that as-installed piping will match as-designed piping, so that the Staff's safety conclusions remain valid. The Staff identified two site-specific ITAAC intended to verify that the design complies with the AP1000 DCD. These two ITAAC, and two license conditions related to timing, address the piping design acceptance criteria.[134] The Staff identified two additional ITAAC, also incorporated by reference, that reconcile the as-built piping to ensure that it complies with the American Society of Mechanical Engineers (ASME) code and the NRC's regulations.[135]

3. Safety Panel 2

We asked Safety Panel 2 to discuss relevant sections of the COL application and the following chapters of the COL FSER:

- Chapter 3 continuation, including the following COL review topics: Analysis of soil structure interaction, the second LWA request, and the [ACRS's] recommendation regarding inservice testing and inservice inspection for squib valves from the ACRS letter report on the Vogtle COL application.
- Chapter 6, "Engineered Safety Features," an overview of the contents of the license application and the [S]taff's review and regulatory conclusions, including key safety information incorporated by reference from the AP1000 design

---

[131] Tr. at 113. "Tier 2" information is defined as:

> [T]he portion of the design-related information contained in the generic DCD that is approved but not certified by this appendix (Tier 2 information). Compliance with Tier 2 information is required, but generic changes to and plant-specific departures from Tier 2 are governed by Section VIII of [Appendix D].

10 C.F.R. Part 52, App. D, § II.E.

[132] Tr. at 114.

[133] Tr. at 114-15.

[134] Exh. NRC000015, Staff Post-Hearing Response, at 23 (Question 10). *See* Exh. NRC000004, COL FSER, at 3-99, Table 3.6.2-1 (Pipe Rupture Hazards Analysis ITAAC) (also at A-16); Exh. NRC000004, COL FSER, at 3-100, Table 3.12-1 (Piping Design ITAAC) (also at A-17); Exh. NRC000004, COL FSER, at A-3, License Condition 3-1; and Exh. NRC000004, COL FSER, at A-5, License Condition 3-9.

[135] Exh. NRC000015, Staff Post-Hearing Response, at 23-24 (Question 10). *See also* Exh. NRC-000001, Part 2, FSAR § 14.3.3.3, at 14.3-4.

certification. This discussion will also address the ACRS recommendations on the Vogtle COL with respect to the containment cleanliness program, and control room habitability from a toxic gas perspective.[136]

a. Chapter 3 Continuation: Soil Structure, Second LWA Request, Squib Valves

Southern described the site-specific soil structure interaction (SSI) analyses performed during the ESP and COL stages.[137] For the COL application, Southern performed a 3-D analysis, including lower-bound, upper-bound, and best-estimate site-specific soil profiles, to provide a direct comparison to the AP1000 design envelope and in-structure response spectra.[138] Southern concluded that the Vogtle site-specific seismic demand "is enveloped by the AP1000 standard seismic demand used for the design and therefore satisfied the [T]ier [1] requirement for seismic ground motion."[139]

The Staff performed a detailed review of Southern's modeling approach and its input parameters and determined that Southern's analysis conformed to the Standard Review Plan guidance.[140] The Staff's comparisons of Southern's in-structure response spectra at the key locations "showed that above one [h]ertz [(Hz)] there were no exceedances [from] the standard design."[141] The Staff found that "below one [Hz] there were exceedances in the 0.55 [Hz] range" but "found that these exceedances were not significant because there were no AP1000 structure[s,] systems or components with resonant frequencies in this range."[142] The Staff also described its methodology for evaluating the justification Southern provided to ensure that the AP1000 design was not compromised by the exceedances.[143]

The Staff explained that even though the Vogtle ground motion response spectra exceeded the AP1000 certified seismic design response spectra above the 10-Hz point, this was not a concern. The AP1000 DCD provides a process for site-specific analysis of identified exceedances. This exceedance was in the free field — at Vogtle, the nuclear island functions as a massive vibration absorber

---

[136] Revised Scheduling Note at 3 (unnumbered).

[137] Tr. at 134-35.

[138] Tr. at 135.

[139] Tr. at 135-36 (Moore).

[140] *See generally* "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition" (NUREG-0800, formerly issued as NUREG-75/087) § 3.8.5 (June 1996) (May 2010 for this section of NUREG-0800).

[141] Tr. at 142 (Tegeler).

[142] *Id.* (Tegeler).

[143] *See* Exh. NRC000015, Staff Post-Hearing Response, at 24-25 (Question 11).

with the result that very little energy is released into the structures, systems, and components at frequencies above 10 Hz.[144] When the response spectra are compared, the site-specific results are "clearly enveloped by [the] standard design by a factor of almost two to three in most locations."[145] The standard design also has margin over the AP1000's certified seismic design response spectra, and if the Vogtle site is compared to a site with no exceedances, the relative reduction in margin would be very small.[146]

The Staff explained that it also reviewed Southern's decision to use 4%, instead of 5%, for structural damping in the model, and confirmed that 4% "was representative of the predicted levels of stress and strain."[147] Additionally, 4% is more conservative than 5% because 4% "credit[s] less energy dissipation in the structural mechanical system . . . [and] using lower values of damping [yields] . . . a slightly higher response."[148] The Staff verified that changes to the AP1000 design, including changes to the shield building design, were reflected in the modeling. The Staff concluded that the AP1000 design was adequate, from a structural perspective, for use at the Vogtle site.[149]

In response to a question about the Staff's process for validating a 3-D model like the model Southern used to perform its 3-D SSI analysis, the Staff explained that it made a direct comparison between Southern's model and the model used for the AP1000 standard design. The Staff directed Southern to perform additional evaluations using its model with the same base motion input values used for the AP1000 standard design model. The results generated by Southern's model using these input values closely matched the results of the AP1000 standard design at six key locations. As a result, the Staff concluded that Southern's model adequately represented the AP1000 design. The Staff explained that as part of its evaluation of Southern's model, it also looked at other metrics as part of its validation process, such as "total model mass, frequency response, element properties with respect to material properties and element types."[150]

---

[144] Tr. at 172-73.

[145] Tr. at 173 (Tegeler).

[146] *Id.*

[147] Tr. at 142 (Tegeler).

[148] Tr. at 168 (Tegeler).

[149] Tr. at 143.

[150] Tr. at 165 (Tegeler). The Staff also explained why certain technical and software quality assurance concerns raised by the Defense Nuclear Facilities Safety Board (DNFSB) in connection with DOE construction projects have no safety significance here. *See* Exh. NRC000015, Staff Post-Hearing Response, at 22-23 (Question 9). Among other evidence, the Staff noted that "[s]purious results indicated by abrupt changes in the response spectra, indicative of the behavior cited in the DNFSB letter, were not observed" in the Vogtle seismic demand modeling. *Id.* at 23. *See also* Exh. SNC000011, Southern Post-Hearing Response, at 11-13 (Question 9).

Southern stated that the second LWA seeks authorization to perform safety-related work, specifically, the "installation of reinforcing steel, sumps[,] and drain lines and other embedded items in the nuclear island foundation base mat and placement of concrete for the nuclear island foundation base slab."[151] The Staff explained that it assessed the LWA using NUREG-0800 § 3.85.[152] The Staff accepted Southern's "proposal based on the DCD commitment to use [American Concrete Institute standard] ACI 349 for the design of the base slab and the finding that the standard plant design is acceptable for Vogtle."[153] Based on Southern's commitment, and on the site-specific seismic analysis, the Staff found "that there is reasonable assurance that the base slabs will have adequate strength, stiffness[,] and ductility under the Vogtle seismic demands."[154]

Both the Staff and Southern provided an extensive discussion of "squib valves." Squib valves are "explosive actuated valves . . . [used] in the [AP1000] automatic depressurization system to reduce reactor pressure . . . in the event of a loss of [coolant] accident."[155] Squib valves also are used as part of the passive core cooling system for the purpose of injecting cooling water into the reactor vessel, "for natural recirculation [from] the containment sump to the reactor cooling system, and to increase the containment water level if necessary in the event of a severe accident."[156] Southern stated that the design and qualification of the squib valves is an AP1000 DCD element incorporated by reference into the COL application.[157] The squib valves are subject to ITAAC specified in Tier 1 of the AP1000 DCD. The ITAAC require testing of squib valves to demonstrate operational capability under design conditions.[158]

The ACRS expressed concerns about the inspection and testing program for these squib valves and recommended that "a regulatory requirement be established[,] focused on the development of the [inservice inspection/inservice testing] program, including a review of the lessons-learned from the valve design and qualification process."[159] The ACRS stated that "[p]eriodic removal and firing of the explosive charge that initiates operation of the valve may not be sufficient for these critical components."[160] To address concerns raised by the ACRS, Southern stated that the inservice testing (IST) program for the squib valves will integrate

---

[151] Tr. at 136 (Sparkman).
[152] Tr. at 144.
[153] *Id.* (Tegeler).
[154] *Id.* (Tegeler).
[155] *Id.* (Scarbrough).
[156] Tr. at 144-45 (Scarbrough).
[157] Tr. at 137.
[158] Tr. at 145.
[159] ACRS Letter at 3.
[160] *Id.*

lessons learned from the design and qualification process to maintain reasonable assurance that the squib valves are operationally ready to perform their safety functions.[161] The Staff is monitoring the squib valve design and qualification process, has observed the valve vendor's prototype testing, and is scrutinizing the development of surveillance provisions, including inservice testing and internal inspections.[162] The Staff explained that it will conduct pre-startup inspections to verify that the squib valves can perform their safety functions, as part of the closure process for the ITAAC.[163]

We questioned this explanation because the squib valve inspection program has not been finalized. The inspection program is contingent on an ASME code provision that is still under development.[164] Although the Staff conceded that the current version of the code is insufficient,[165] the Staff reached its 10 C.F.R. § 52.97 reasonable assurance finding based on the following.

The Staff explained that specific testing, inservice inspection, and surveillance plans could be developed now, but it would be more effective and practical to wait until after the ASME code development effort, the industry's ongoing development of surveillance requirements, and the testing program scheduled for 2012 are complete.[166] We asked two post-hearing questions related to squib valves. First, we asked the Staff to explain the relevance of the findings that will be made pursuant to the inspection of the operational testing program that will be conducted prior to fuel load, and any NRC decision regarding operation of the plant, including the regulatory basis for actions under 10 C.F.R. § 52.103. Second, we asked the Staff to provide reasons for not including a finalized testing process now, as well as the basis for nonetheless concluding that the Staff's approach complies with 10 C.F.R. § 52.97.[167]

In its response to the post-hearing questions, the Staff cited several references, including Commission papers, Staff requirements memoranda, and NRC Inspection Manual Chapter 2504 that, according to the Staff, require it to perform inspections of operational programs before fuel load.[168] The Staff stated that its

---

[161] Tr. at 137-38.

[162] Tr. at 145-46.

[163] Tr. at 146.

[164] Tr. at 161-62.

[165] Tr. at 162.

[166] Tr. at 175-76.

[167] *See* Post-Hearing Order at 3 (Questions 5a and 5b).

[168] Exh. NRC000015, Staff Post-Hearing Response, at 16 (Question 5a) (citing "Review of Operational Programs in a Combined License Application and Generic Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria," Commission Paper SECY-05-0197 (Oct. 28, 2005); Staff Requirements — SECY-02-0067 — Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)

(Continued)

evaluation of Southern's squib valve inservice testing program is "consistent with [the] approach" in these references "for the review, implementation, and inspection of operational programs."[169] The Staff also explained the bases for its present conclusion "that there is reasonable assurance of the operational readiness of [the] squib valves to perform their safety functions."[170] First, the Staff observed that 10 C.F.R. § 50.55a requires applicants to implement the edition and addendum of the ASME *Code for Operation and Maintenance of Nuclear Plants* (OM Code) that is incorporated by reference in 10 C.F.R. § 50.55a twelve months before fuel loading.[171] The Staff explained that the IST operational program described in the Vogtle FSAR is based on the currently incorporated ASME OM Code (2001 Edition through the 2003 Addenda, which includes provisions for IST surveillance of explosive-actuated valves for current operating plants).[172] The Staff is also working on a proposed rule to incorporate by reference into section 50.55a the 2011 addenda to the ASME OM Code. The proposed rule also would specify additional squib valve surveillance requirements — not otherwise included in the 2011 addenda — based on lessons learned at that time from the squib valve design and qualification process.[173] In parallel, the ASME is working on additional OM Code updates; the Staff is participating in that effort, which could lead to additional rulemakings in the future.[174]

Second, the Staff noted that the FSAR description of the inservice testing program states that the program will incorporate lessons learned during the design and qualification process for these valves.[175] Therefore, according to the Staff, while it has confidence at this time that the relevant requirements will be prescribed by rulemaking, the Vogtle FSAR commitment provides sufficient regulatory control to ensure that the IST program for squib valves will provide reasonable assurance even if the rulemaking is still in progress.[176]

---

for Operational Programs (Programmatic ITAAC) (Sept. 11, 2002); Inspection Manual Chapter 2504, "Construction Inspection Program — Inspection of Construction and Operational Programs," especially section 08.02.e, "Confirmation of Operational Programs" (Oct. 15, 2009); and Staff Requirements — SECY-04-0032 — Programmatic Information Needed for Approval of a Combined License Without Inspections, Tests, Analyses[,] and Acceptance Criteria (May 14, 2004)).

[169] Exh. NRC000015, Staff Post-Hearing Response, at 16 (Question 5a).

[170] *Id.* at 17 (Question 5a).

[171] *Id.* at 16-17 (Question 5a).

[172] *Id.* at 17 (Question 5b).

[173] *Id.* at 18 (Question 5b).

[174] *Id.* at 18-19 (Question 5b). Such rules, if implemented, might remove some of the additional squib valve surveillance requirements that will be part of the Staff's proposed rule now, provided the ASME OM Code is revised to cover these requirements. *Id.* at 19.

[175] *Id.* at 16-17 (Question 5a).

[176] *Id.* at 19 (Question 5b).

Further, other factors led the Staff to have reasonable assurance that the squib valves will be operationally ready to perform their intended function. First, any change to the IST program for squib valves as described in the FSAR would likely require a license amendment.[177] In that case, the NRC Staff would have an opportunity to review the changes to the IST requirements for squib valves. Second, if the IST program for the squib valves ultimately is found to be insufficient, the Staff indicated that it can take enforcement action to prohibit or delay fuel load.[178] Alternatively, the NRC could require modifications to the inservice testing program pursuant to the compliance backfit provisions of 10 C.F.R. § 50.109(a)(4)(i).[179] Third, the Staff stated that it is planning to conduct a vendor inspection to evaluate the design and qualification process.[180] Finally, the Staff reiterated that it will conduct ITAAC inspections of squib valves as part of its ITAAC closure process before the Commission confirms that all ITAAC are completed and issues its 10 C.F.R. § 52.103(g) finding prior to fuel load and operation.[181] Therefore, based upon the totality of the reasons explained above, including the FSAR commitment that the inservice test and inspection program for the squib valves will incorporate the lessons learned during the design and qualification process, the Staff was able to reach its 10 C.F.R. § 52.97 reasonable assurance finding on this issue.[182]

Although we find that the Staff's review of the squib valve issues was rigorous, we have a concern similar to that initially raised by the ACRS regarding the status of the inservice inspection/inservice testing program for this component. As such, we find that including a license condition directing the implementation of a surveillance program, with the requirements described below, prior to fuel load, is appropriate.[183] We therefore impose the following condition on the licenses for Units 3 and 4:

> Before initial fuel load, the licensee shall implement a surveillance program for explosively actuated valves (squib valves) that includes the following provisions in addition to the requirements specified in the edition of the ASME *Code for Operation and Maintenance of Nuclear Power Plants* (OM Code) as incorporated by reference in 10 CFR 50.55a.

---

[177] *Id.* at 18 (Question 5b).

[178] *Id.* at 17 (Question 5a).

[179] *Id.* (Question 5a).

[180] *Id.* (Question 5b).

[181] *Id.* (Question 5b).

[182] *Id.* at 19-20 (Question 5b).

[183] *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-13, 52 NRC 23, 29-31 (2000).

a. Preservice Testing

All explosively actuated valves shall be preservice tested by verifying the operational readiness of the actuation logic and associated electrical circuits for each explosively actuated valve with its pyrotechnic charge removed from the valve. This must include confirmation that sufficient electrical parameters (voltage, current, resistance) are available at the explosively actuated valve from each circuit that is relied upon to actuate the valve. In addition, a sample of at least 20% of the pyrotechnic charges in all explosively actuated valves shall be tested in the valve or a qualified test fixture to confirm the capability of each sampled pyrotechnic charge to provide the necessary motive force to operate the valve to perform its intended function without damage to the valve body or connected piping. The sampling must select at least one explosively actuated valve from each redundant safety train. Corrective action shall be taken to resolve any deficiencies identified in the operational readiness of the actuation logic or associated electrical circuits, or the capability of a pyrotechnic charge. If a charge fails to fire or its capability is not confirmed, all charges with the same batch number shall be removed, discarded, and replaced with charges from a different batch number that has demonstrated successful 20% sampling of the charges.

b. Operational Surveillance

Explosively actuated valves shall be subject to the following surveillance activities after commencing plant operation:

(1) At least once every 2 years, each explosively actuated valve shall undergo visual external examination and remote internal examination (including evaluation and removal of fluids or contaminants that may interfere with operation of the valve) to verify the operational readiness of the valve and its actuator. This examination shall also verify the appropriate position of the internal actuating mechanism and proper operation of remote position indicators. Corrective action shall be taken to resolve any deficiencies identified during the examination with post-maintenance testing conducted that satisfies the preservice testing requirements.

(2) At least once every 10 years, each explosively actuated valve shall be disassembled for internal examination of the valve and actuator to verify the operational readiness of the valve assembly and the integrity of individual components and to remove any foreign material, fluid, or corrosion. The examination schedule shall provide for both of the two valve designs used for explosively actuated valves at the facility to be included among the explosively actuated valves to be disassembled and examined every 2 years. Corrective action shall be taken to resolve any deficiencies identified during the examination with post-maintenance testing conducted that satisfies the preservice testing requirements.

(3) For explosively actuated valves selected for test sampling every 2 years in accordance with the ASME OM Code, the operational readiness of the actuation logic and associated electrical circuits shall be verified for each sampled explosively actuated valve following removal of its charge. This must include confirmation that sufficient electrical parameters (voltage, current, resistance) are available for each valve actuation circuit. Corrective action shall be taken to resolve any deficiencies identified in the actuation logic or associated electrical circuits.

(4) For explosively actuated valves selected for test sampling every 2 years in accordance with the ASME OM Code, the sampling must select at least one explosively actuated valve from each redundant safety train. Each sampled pyrotechnic charge shall be tested in the valve or a qualified test fixture to confirm the capability of the charge to provide the necessary motive force to operate the valve to perform its intended function without damage to the valve body or connected piping. Corrective action shall be taken to resolve any deficiencies identified in the capability of a pyrotechnic charge in accordance with the preservice testing requirements.

This license condition shall expire upon (1) incorporation of the above surveillance provisions for explosively actuated valves into the facility's inservice testing program, or (2) incorporation of inservice testing requirements for explosively actuated valves in new reactors (i.e., plants receiving a construction permit, or combined license for construction and operation, after January 1, 2000) to be specified in a future edition of the ASME OM Code as incorporated by reference in 10 CFR 50.55a, including any conditions imposed by the NRC, into the facility's inservice testing program.

This license condition supplements the current requirements in the ASME OM code for explosively actuated valves, and sets forth requirements for both preservice testing and operational surveillance, as well as any necessary corrective action. The license condition will expire when either (1) the license condition is incorporated into the Vogtle IST program; or (2) the updated ASME OM Code requirements for squib valves in new reactors, as accepted by the NRC in 10 C.F.R. § 50.55a, are incorporated into the Vogtle IST program.[184] For the purpose of satisfying the license condition, the licensee retains the option of including in its IST program either the requirements stated in this condition, or including updated ASME Code requirements.

We note, however, that regardless of the option chosen to satisfy the license condition, the relevant provisions of the OM Code may be subject to further

[184] While the proposed condition is based on a revision to the ASME OM Code currently under consideration, the Code requirements ultimately might differ from the license condition when the full ASME review process is complete.

revision in the future, and IST requirements for the squib valve component may change. We do not expect the IST program for squib valves necessarily to be a static one. As with any facility, the Vogtle units will be subject to our rules providing for the application of future Code revisions to operating plants; Southern ultimately may be required to comply with a later version of the OM Code, as accepted by the NRC and incorporated by reference into 10 C.F.R. § 50.55a. In particular, section 50.55a(f)(4) requires that, throughout the service life of the plant, valves such as squib valves must, to the extent practical, meet the IST requirements set forth in the ASME OM Code and addenda that become effective during that time. Even in the case where Southern chooses to satisfy the license condition by incorporating the condition into his IST program, Southern will still be required to comply with section 50.55a(f)(4) throughout the life of the plant.

b. Engineered Safety Features

By way of background, the Staff described the AP1000 engineered safety features that are incorporated by reference in the COL application. The Staff provided details regarding the passive core cooling system, including the in-containment refueling water storage tank, passive heat exchangers, the automated depressurization system, and core makeup tanks, among other features.[185] The Staff discussed AP1000 design features that address Generic Issue 191 (Assessment of Debris Accumulation on PWR Sump Performance); these were part of the DCD amendment rulemaking proceeding.[186] The Staff reviewed the ACRS's assessment of the AP1000 design's long-term core cooling performance, including the effects of debris.[187] The Staff also presented details about the passive main control room emergency habitability system.[188]

The Staff then reviewed its evaluation of two items: the containment cleanliness program and risks to control room habitability associated with the applicant's toxic gas inventory.[189] With respect to the first of these, the Staff explained that it found the containment cleanliness program to be consistent with applicable guidance documents. The Staff also explained that, while it agreed with the ACRS that the NRC's stringent latent fiber limits should not be changed by the licensee without NRC approval, it was more appropriate to resolve this "by designating

[185] Tr. at 148-52.

[186] Tr. at 152-54.

[187] Tr. at 153-54. *See* Abdel-Khalik, S., ACRS Chairman, Letter to Gregory B. Jaczko, Chairman, NRC, "Long-Term Core Cooling for the Westinghouse AP1000 Pressurized Water Reactor" (Dec. 20, 2010).

[188] Tr. at 155-56.

[189] Tr. at 156-58.

the information as Tier 2[*] in the AP1000 [DCD], rather than including [it] in the [technical specifications section] of the COL."[190]

We asked a series of questions about the differences, in terms of monitoring and repercussions/corrective actions, between handling this as a Tier 2* rather than a technical specification issue.[191] Southern stated that if the containment debris limit is exceeded, the plant will be outside its design basis and would have to remain shut down until restoration of the design basis, whether the limit is treated as a technical specification, or identified as Tier 2 or Tier 2* information.[192] The Staff provided a more detailed answer in its post-hearing response.[193] According to the Staff, there is no practical advantage in using a technical specification instead of the Tier 2* designation in this situation. Technical specifications and Tier 2* items are both requirements imposed on licensees, and both are subject to regulatory oversight. The timing of detecting out-of-tolerance conditions would be the same, the corrective action imposed would be basically the same, and changes to the requirement would use the same change provisions.[194] The Staff explained that the limit on debris "is not a process variable that is continuously monitored and thus [it] would not benefit from additional control room attention," which a technical specification generally would receive.[195] Instead, "[t]he general housekeeping or maintenance activities associated with the [containment] cleanliness program are better controlled by maintenance personnel through maintenance programs."[196] The Staff also pointed out that the AP1000 design has eliminated most sources of debris, and the containment cleanliness program is directed at controlling and tracking the removal of debris inadvertently brought into the containment during maintenance.[197] In any event, whether debris limits are set in a technical specification or are designated as Tier 2* items, any corrective action program that might be needed down the road will be subject to inspection under the reactor oversight program.[198]

With respect to control room habitability, the Staff evaluated Southern's toxic chemical inventory, reviewed Southern's analysis, and performed independent

---

[190] Tr. at 157 (McKirgan). "Tier 2*" means "the portion of the Tier 2 information, designated as such in the generic DCD, which is subject to the change process in [10 C.F.R. Part 52, App. D, §] VIII.B.6." 10 C.F.R. Part 52, App. D, § II.F.

[191] Tr. at 158-60.

[192] Tr. at 348.

[193] *See* Exh. NRC000015, Staff Post-Hearing Response, at 14 (Question 4). *See also id.* at 25-26 (Question 12).

[194] *Id.* at 14 (Question 4).

[195] *Id.* (Question 4).

[196] *Id.* (Question 4).

[197] *Id.* (Question 4).

[198] *Id.* at 14-15 (Question 4).

confirmatory calculations. The Staff concluded that the design of the control room ventilation system precluded excessive concentrations of these chemicals in the control room, and that the control room would remain habitable.[199]

4. Safety Panel 3

Safety Panel 3 focused on relevant sections of the COL application and the following chapters from the COL FSER:

- Chapter 19, "Probabilistic Risk Assessment," seismic margin analysis and external event frequencies within the scope of the COL and the novel issue within the scope of the COL review associated with Appendix 19.A, "Loss of Large Areas of the Plant Due to Explosions or Fires."
- Chapter 15, "Accident Analysis," including the ACRS'[s] recommendation associated with reactor power uncertainty measurement.
- Chapter 7, "Instrumentation and Controls," including key safety information incorporated by reference from the AP1000 design certification.
- Chapter 8, "Electric Power," including an overview of offsite power, underground cable review, and departures from the [DCD].[200]

a. Probabilistic Risk Assessment (PRA), Seismic Margin Analysis, External Events, LOLA, Severe Accident Analysis

The Staff explained that severe accidents, aircraft impact assessment, and probabilistic risk assessment are issues covered in the AP1000 DCD; this information is incorporated by reference into the COL.[201] On the other hand, external event risks are site dependent, and therefore must be reevaluated in the COL application.[202] The Staff reviewed the Vogtle-specific risk assessments of seismic, high

---

[199] Tr. at 157-58.

[200] Revised Scheduling Note at 4 (unnumbered). We also asked this Staff panel to be prepared to answer questions on the following:

- Chapter 5, "Reactor Coolant System and Connected Systems."
- Chapter 16, "Technical Specifications."
- Chapter 17, "Quality Assurance."
- Chapter 18, "Human Factors Engineering."

Id.

[201] Tr. at 192-93.

[202] Tr. at 194.

wind, flooding, and fire events; transportation accidents; and potential hazards from nearby facilities.[203] Southern also discussed these topics.[204]

In connection with seismic risk, this panel continued the seismic margin discussion begun by the previous panel. Southern presented an overview of its process for assessing the seismic margin at the Vogtle site. Southern compared the seismic margins at the Vogtle site to the assessed standard margins for the AP1000 design, and determined that the site-specific seismic demand is enveloped by the AP1000 standard seismic demand, and that the site-specific safety margins applicable to potential sliding and overturning were larger than the calculated limiting safety factors for the AP1000 design cases. Southern stated that, for purposes of seismic margin assessment, the review-level earthquake "is defined as 1.67 times the Vogtle" ground motion response spectra.[205] Southern's engineering evaluations "demonstrated that the seismic margins against soil failure due to soil liquefaction and soil bearing were well above the review-level earthquake."[206]

The Staff explained that "certified design response spectra" refers to "the shaking that results from a safe shutdown earthquake, or SSE. . . . [T]he SSE is a 0.3[*g*] earthquake."[207] The Staff explained that the review-level earthquake, required to be 1.67 times the SSE (as Southern indicated), is a 0.5*g* earthquake, "during which the equipment [that is] needed to shut down safely must function [successfully]."[208]

Southern determined that site-specific susceptibilities to external events, including high winds and floods, were bounded by the corresponding analyses conducted for the AP1000 design, as documented in the DCD.[209] The AP1000 design basis for safety-related structures assumes the load from a 300-mph tornado; winds greater than 230 mph occur at a frequency of 1×10^{-7} per year in the United States.[210] In addition, Vogtle's plant grade is 220 feet above sea level.[211] The design basis flood, which assumes "cascading upstream dam failures coincident

[203] Tr. at 194-200.

[204] Tr. at 183-90.

[205] Tr. at 184 (Moore).

[206] *Id.* (Moore).

[207] Tr. at 194-95 (McGovern).

[208] Tr. at 195 (McGovern) (citing SECY-93-087 — Policy, Technical, and Licensing Issues Pertaining to Evolutionary and Advanced Light-Water Reactor (ALWR) Designs (July 21, 1993) (staff requirements memorandum)). The cited staff requirements memorandum provides that "[a] PRA-based seismic margins analysis will consider sequence-level High Confidence, Low Probability of Failures . . . and fragilities for all sequences leading to core damage or containment failures up to approximately [1.67 times] the ground motion acceleration of the Design Basis SSE." *Id.* at 9-10.

[209] Tr. at 185.

[210] Tr. at 198.

[211] Tr. at 198-99.

with wind setup and wave run-up," is over 40 feet below plant grade.[212] The Staff confirmed that, while the probable maximum precipitation event approaches the plant grade, Southern's calculation was sufficiently conservative to justify the conclusion that the analysis was bounding.[213]

The Staff also examined Southern's analysis of nearby transportation accidents, onsite hazardous chemicals, external and offsite fires, and radiological hazards from the other two nuclear facilities located at the Vogtle site. The Staff confirmed that all of these potential external events either were bounded by the DCD, were not applicable, or had negligible consequences.[214]

As the Staff stated in its presentation, 10 C.F.R. § 50.54(hh)(2) requires licensees to "develop and implement guidance and strategies . . . to maintain or restore core cooling, containment[,] and spent-fuel pool cooling capabilities" to address LOLA from fires or explosions that arise from a beyond-design-basis event.[215] A COL application must include a description and plan for implementing these requirements.[216] The Staff's review of these issues currently is governed by an interim Staff guidance document.[217] The Staff issued over ninety requests for additional information to Southern related to the Staff's LOLA review; these questions resulted in clarifications, comments, and significant changes to Southern's mitigation strategies.[218]

To provide context for its mitigation strategy commitments, Southern reviewed relevant AP1000 design features, including: the "permanent hard-piped spent-fuel pool spray system" and "ground-level external hard-piped connections to the spent fuel pool spray and makeup piping" designed for direct connection to fire department pumper trucks or portable pumps; the "passive containment cooling water storage tank located above the containment structure"; and the elimination of the need for emergency power sources during the initial 72-hour period after a LOLA event.[219] Southern explained its commitments for mitigation strategies related to LOLA of the plant due to explosions or fire, and provided a description of each of its commitments.[220] The Staff confirmed that, at the Staff's request, Southern provided a draft license condition, to be incorporated into the Vogtle

---

[212] Tr. at 199 (McGovern).

[213] *Id.*

[214] Tr. at 199-200; Exh. NRCR00012, Safety Panel 3, Staff Slide 8.

[215] Tr. at 201 (Caruso). *See* 10 C.F.R. § 50.54(hh)(2).

[216] Tr. at 201. *See* 10 C.F.R. § 52.80(d).

[217] Tr. at 202. *See* "[Final] Interim Staff Guidance, Compliance with 10 CFR 50.54(hh)(2) and 10 CFR 52.80(d) Loss of Large Areas of the Plant Due to Explosions or Fires from a Beyond-Design Basis Event," DC/COL-ISG-016 (June 9, 2010) (ADAMS Accession No. ML101940484).

[218] Tr. at 205-07.

[219] Tr. at 188 (Sparkman).

[220] *See* Exh. SNC000005, Southern Pre-Hearing Response, at 6-9, Attachment 1 (Question 31).

COLs, that "establishes a schedule for completing . . . full implementation of the operational and programmatic elements of responding to a LOLA event" prior to initial fuel load.[221]

b. Instrumentation and Controls

The Staff explained that the AP1000 DCD "assumes a [one] percent power uncertainty for the initial reactor power for the large break [loss-of-coolant accident]."[222] Southern explained that the AP1000 DCD Chapter 15 contains COL Information Item 15.0-1, which requires verification that the installed instruments conform to the DCD and are consistent with the assumptions underlying it.[223] Southern stated that it addressed the DCD COL Information Item requiring verification that installed instruments will provide reactor power calorimetric uncertainty at 1% by calibrating the instrumentation in the laboratory prior to installation and testing it in place after installation.[224] Southern noted that plant-specific ITAAC on the instrumentation, installation, and analysis are in place, and that the Staff has proposed a COL license condition related to schedule information on documentation for the analysis of the instrumentation and for maintenance procedures.[225] The Staff "confirmed that appropriate license conditions, and ITAAC, were established for verifying the installation and ensuring proper administrative controls."[226] The Staff also explained that the draft license "includes a license condition that requires the availability of administrative controls to implement maintenance and contingency activities related to the power calorimetric uncertainty instrumentation, prior to fuel load."[227]

c. Electric Power

Southern described the offsite power system, noting that a standard plant-specific ITAAC was established for offsite power.[228] The Staff explained that this ITAAC, included in response to a request for additional information, "provides that the as-built offsite portion of the power supply, from the transmission

[221] Tr. at 208-09 (Caruso).
[222] Tr. at 211 (Joshi).
[223] Tr. at 189.
[224] *Id.*
[225] Tr. at 190.
[226] Tr. at 211-12 (Joshi).
[227] Exh. NRC000015, Staff Post-Hearing Response, at 27 (Question 13).
[228] Tr. at 191.

network, that interfaces with plant onsite power, will be verified to perform as designed."[229]

Southern noted the one departure from the DCD taken in Chapter 8. This departure is related to class 1E voltage-regulating transformers, where the isolation and protection function is provided by circuit breakers.[230] The Staff examined Southern's justification for the departure, finding "it acceptable because the isolation function provided by use of breakers/fuses for regulating transformers is consistent with criteria for independence of electrical safety systems."[231]

The Staff's presentation included additional details about the Vogtle site's switchyard configuration.[232] The Staff also reviewed Southern's grid stability analysis, and confirmed that, "as specified in the DCD, the grid will remain stable to maintain reactor coolant pump operation for three seconds following a turbine trip."[233]

In connection with underground cables, Southern explained that it based its inspection, test, and monitoring criteria on lessons learned from industry operating experience, regulatory guidance, including the information in Generic Letter 2007-01, and AP1000 design information.[234] The Staff also explained that, as part of its response to a series of requests for additional information, Southern "revised its FSAR to include condition monitoring of underground or inaccessible cables in its Maintenance Rule program."[235]

5. Safety Panel 4

Safety Panel 4 discussed relevant sections of the COL application and the following chapters of the COL FSER:

- Chapter 13, "Conduct of Operations," including, with respect to Section 13.3, "Emergency Planning," an overview of the information incorporated by reference from the ESP and COL information related to the relocation of the technical support center. In addition, the [S]taff [ ] discuss[ed] the novel issue associated with cyber security as evaluated in FSER Section 13.8.

---

[229] Tr. at 219 (Joshi). The ITAAC, which will be included in the license, are described in Exh. NRC000004, COL FSER, Table 8.2A-1.

[230] Tr. at 191.

[231] Tr. at 220 (Joshi).

[232] Tr. at 217.

[233] Tr. at 218 (Joshi).

[234] Tr. at 192. *See generally* NRC Generic Letter 2007-01: "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients" (Feb. 7, 2007) (ADAMS Accession No. ML070360665).

[235] Tr. at 219 (Joshi).

- Chapter 9, "Auxiliary Systems," including key safety information incorporated by reference from the AP1000 design certification associated with redesign of the spent fuel pool, and COL information associated with the raw water system.
- Chapter 12, "Radiation Protection," including As Low As is Reasonably Achievable (ALARA) program for construction workers and minimization of contamination.
- Chapter 14, "Initial Test Programs," including [first] plant-only tests and first three plant-only tests.[236]

a. Conduct of Operations, Emergency Planning, Technical Support Center, Cyber Security

The Staff provided an overview of emergency planning for the Vogtle site; emergency planning issues were resolved in the AP1000 DCD and the ESP.[237] The Staff explained that seven ESP permit conditions relate to emergency planning, namely, the development of emergency action levels (EALs). Permit Conditions 2 and 3 require the development of an EAL scheme that reflects industry guidance; Southern offered a license condition, to be incorporated into the Vogtle COLs, to ensure that these permit conditions are satisfied.[238] Permit Conditions 4 and 5 require the EAL scheme to be consistent with completed AP1000 design details, while Conditions 6 and 7 relate "to as[-]built plant conditions and interfaces with offsite governmental agencies."[239] The Staff explained that Southern will provide the EALs, detailed procedures for implementing the emergency plan, including an implementation schedule, after the COL issues. Southern must conduct successful onsite and full-participation exercises, and must close all of the emergency planning ITAAC before initial fuel load can occur.[240] Southern indicated that Vogtle Unit 3's exercises are tentatively scheduled for January 2015.[241] In response

---

[236] Revised Scheduling Note at 4-5 (unnumbered). We also asked this Staff panel to be prepared to answer questions related to:

- Chapter 4, "Reactor."
- Chapter 10, "Steam and Power Conversion."
- Chapter 11, "Radioactive Waste Management."

Id. at 5 (unnumbered).

[237] Tr. at 257-59. An ESP applicant may, at its option, propose "complete and integrated emergency plans" for review and approval in conjunction with its application, although it is not required to do so. *See* 10 C.F.R. § 52.17(b)(2), (3). Southern submitted a "complete and integrated emergency plan" as part of its ESP application. *See* Tr. at 258.

[238] Tr. at 259-60.

[239] Tr. at 259.

[240] Tr. at 262.

[241] Tr. at 291.

to post-hearing questions, the Staff confirmed that no exemption was required for the Vogtle EAL program because Vogtle's EAL scheme — its standard emergency classification and action level scheme — was sufficiently detailed to support a finding that the requirements of 10 C.F.R. § 50.47(b)(4) and Part 50, Appendix E are satisfied.[242] The Staff explained that the ITAAC process will provide additional verification of the EAL scheme: ITAAC 1.1.2 requires analysis of the EAL technical bases to confirm the as-built, site-specific implementation of the EAL scheme; and ITAAC 8.1 "requires a full participation exercise prior to fuel load that will demonstrate the use and adequacy of the EAL scheme for both the licensee and State and local officials."[243] The Staff also clarified that it did not accept any plan "in lieu of" the requirements of 10 C.F.R. § 52.79(a)(21) and confirmed that the fully developed EALs will be reviewed by the Staff.[244]

Southern explained that regulatory action on the location of the technical support center (TSC) was deferred from the ESP to the COL, even though the Staff found the location to be acceptable during the ESP review, because of differences in information between DCD Revisions 15 and 19.[245] The Staff explained that Permit Condition 8 was directed to the resolution of these differences.[246] The location of the TSC became a departure that the Staff approved in the COL FSER.[247] Radiological and nonradiological control room habitability issues also were resolved in the COL phase, with the result that an ITAAC was added to verify that the habitability issues would be addressed in the TSC design.[248] Southern explained that the control room will have separate staffing, with two specific sets of positions dedicated to Units 1 and 2, and to Units 3 and 4.[249] The Staff also explained that it approved a variance from the ESP that moved the location of the TSC by 150 feet.[250] In response to questioning, Southern explained that just as the TSC is designed to handle all four units, the emergency operations facility and the emergency plan will be able to handle events at multiple sites.[251]

The Staff next presented a short history of the NRC's cyber security regu-

---

[242] Exh. NRC000015, Staff Post-Hearing Response, at 20-21 (Question 6).

[243] *Id.* at 21 (Question 6).

[244] *Id.* (Question 6).

[245] Tr. at 250.

[246] Tr. at 260.

[247] Tr. at 250.

[248] Tr. at 251.

[249] Tr. at 251-52.

[250] Tr. at 261-62.

[251] Tr. at 297. In response to a post-hearing question, Southern provided a detailed description of emergency plan coordination between the Vogtle and DOE Savannah River sites. *See* Exh. SNC000011, Southern Post-Hearing Response, at 5-7 (Question 7).

lations.[252] The agency's overarching requirements for the protection of digital computer and communication systems and networks are found in 10 C.F.R. § 73.54.[253] The cyber security plan must take into account site-specific conditions.[254] The plan must be submitted for NRC approval,[255] and the written "[p]olicies, implementing procedures, site-specific analysis, and other supporting technical information" developed to implement the plan are subject to periodic inspection by NRC Staff.[256] The Staff explained that, after NRC review and acceptance, an applicant's or licensee's cyber security plan becomes a condition of the plant's license. In other words, "the cyber security plan becomes a part of the plant's licensing basis, just like the physical security plan."[257]

In its presentation, Southern described its cyber security plan for Vogtle, which is a modified version of a standard AP1000 cyber security plan. The modifications, or deviations, from the AP1000 standard reflect the objectives of Regulatory Guide 5.71, and the template provided in Appendix A of the guide.[258] Southern indicated that it provided a justification for each deviation as part of its cyber security plan, and that it proposed a license condition that will require regular updates to the cyber security program implementation schedule to assist with the scheduling of preimplementation inspections.[259] The Staff evaluated each deviation and confirmed that the deviations did not reduce the level of protection for critical digital assets.[260]

We asked a series of questions regarding cyber security controls as they relate to the TSC. The Staff explained that the TSC must communicate bilaterally with state and local agencies, and that this factor drove Southern's decision to place the TSC at level 2 in the cyber security plan. (The term "level" refers to the placement of a digital system within the applicant's cyber security architecture. It does not refer to the amount of protection the system will receive.) The Staff explained that all critical digital assets, regardless of their placement within the cyber security architecture, must receive adequate protection from cyber attacks, up to and including the design basis threat.[261]

---

[252] Tr. at 264-68.

[253] *See* Tr. at 265-67 (discussion of the rule's requirements).

[254] *See, e.g.,* 10 C.F.R. § 73.54(e)(1).

[255] 10 C.F.R. § 73.54 (initial paragraph).

[256] 10 C.F.R. § 73.54(f).

[257] Tr. at 266 (Lee).

[258] Tr. at 252. *See* Regulatory Guide 5.71, "Cyber Security Programs for Nuclear Facilities" (Jan. 2010) (ADAMS Accession No. ML090340159).

[259] Tr. at 252-53.

[260] Tr. at 270.

[261] Exh. NRC000015, Staff Post-Hearing Response, at 4 (Item J).

The Staff next addressed spent fuel pool design issues. The Staff observed that the spent fuel storage pool design is incorporated by reference from the AP1000 DCD into the COL application, and described the basics of the AP1000 spent fuel pool design.[262] The Staff explained that COL applicants no longer have to provide a confirmatory structural analysis of the spent fuel pool storage racks. Westinghouse, as part of the AP1000 amendment rulemaking, redesigned the racks, and the Staff performed a comprehensive evaluation of the new design as part of the rulemaking.[263] Southern explained that some site-specific COL information items remain. COL Information Item 3.7-2 describes the procedures for verification of spent fuel pool "rack to wall gap dimensions following a seismic event."[264] Supplemental Information Item 9.1-3 "addresses safe load paths for heavy loads near the spent fuel pool."[265] Finally, standard COL Information Item 9.1-7 "addresses Metamic coupon monitoring to check for swelling and boron depletion."[266]

The Staff noted that Southern's Metamic coupon monitoring program incorporates tests to watch for bubbling, blistering, cracking, or flaking on the neutron-absorbing materials, in addition to a test to catch corrosion of the neutron absorbers in the spent fuel pool.[267] The Staff explained that the requirement for a Metamic coupon monitoring program derives from operating plant experience, where similar neutron-absorbing materials were discovered to have degraded.[268] A proposed license condition, which would be incorporated into the Vogtle COLs, would require Southern to implement its Metamic coupon monitoring program prior to initial fuel load.[269] In response to questioning, Southern confirmed that its Metamic coupon monitoring program serves to provide an early warning system to catch degradation if it occurs, rather than simply providing proof that degradation has been prevented.[270]

b. Auxiliary Systems

Southern first discussed the raw water system.[271] The system has two subsystems, a river water subsystem and a well water subsystem. The river water

---

[262] Tr. at 271-72.
[263] Tr. at 271.
[264] Tr. at 253 (Sparkman).
[265] *Id.* (Sparkman).
[266] *Id.* (Sparkman).
[267] Tr. at 273.
[268] *Id.*
[269] *Id. See* Exh. NRC000004, COL FSER, Proposed License Condition 9.1, App. A at A-6.
[270] Tr. at 282.
[271] Tr. at 253.

subsystem provides "water for makeup to the circulating water system, natural draft cooling tower basins[,] and fill water for the circulating water system," as well as "dilution water for the Units 3 and 4 blowdown sump, [and] for [radioactive] waste discharge when the circulating water system is not available."[272] The well water subsystem "provides make-up for the service water system, mechanical draft cooling tower basins, the potable water system, fire protection system, yard fire water systems, and demineralized water treatment system," as well as "lubrication cooling water to the circulating water system pumps and . . . for miscellaneous plant uses."[273]

The Staff provided a similar description, noting in addition that the design of the raw water system is outside the scope of the AP1000 DCD.[274] The Staff explained that its review focused on ensuring that the raw water system, which is not a safety-related system, will not have an adverse effect on systems that perform safety-significant functions.[275] To this end, the Staff issued a series of requests for additional information; the Staff represented that Southern's responses led the Staff to conclude that failure of the raw water system would not affect the ability of safety-related structures, systems, and components to perform their safety-related functions. The Staff noted particularly that the raw water system is not situated close to any safety-related structures, systems, or components, and therefore water from a postulated break in the system would not affect them.[276]

The Staff also determined that the design of the raw water system is adequate to prevent contamination of the facility and the environment. To explain the bases for this determination, the Staff indicated, first, that the raw water system operates at a higher system pressure than the systems with which it has direct interface; because of this pressure differential, flow of contamination into the raw water system is not feasible.[277] Second, the Staff pointed out that there is no direct interconnection between this system and any potential sources of contamination.[278]

---

[272] Tr. at 254 (Sparkman).
[273] *Id.* (Sparkman).
[274] Tr. at 273-74.
[275] *Id.*
[276] Tr. at 274.
[277] *Id. See, e.g.,* Exh. NRC000004, COL FSER § 9.2.11.4, at 9-37.
[278] Tr. at 274-75.

c. Radiation Protection

Regarding the "as low as is reasonably achievable," or ALARA program,[279] which is part of the Radiation Protection Program, Southern explained that the COL application incorporates the DCD by reference, but supplements it "to address radiation exposure to construction workers."[280] The Staff explained that exposure to construction workers assigned to Unit 4 is the most conservative or bounding (between Units 3 and 4) and thus formed the basis for its analysis.[281] The annual whole-body dose to these workers, of 23.8 millirem, is well below the annual 100-millirem limit for members of the public (defined to include these workers).[282] The Staff confirmed that the information included in the FSAR demonstrated compliance with dose requirements as well as radiation survey requirements.[283]

Southern stated that the COL application includes operational procedures to "minimize contamination of the facility and environment, facilitate eventual decommissioning[,] and minimize generation of radioactive waste."[284] The Staff confirmed that it is a COL applicant's responsibility to demonstrate how procedures for operation will comply with the regulatory requirements for minimizing contamination, set out in 10 C.F.R. § 20.1406. In finding that Southern meets these requirements, the Staff noted that Southern developed a groundwater monitoring program that extends beyond typical programs used in operating plants. The Staff evaluated and accepted this program as part of its evaluation of the COL application.[285] The Staff also noted that Southern's site-specific exterior radioactive waste discharge piping design includes features that will control the unplanned or undetected release of radioactivity into the environment.[286]

---

[279] ALARA:

> means making every reasonable effort to maintain exposures to radiation as far below the dose limits . . . as is practical consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest.

10 C.F.R. § 20.1003.

[280] Tr. at 254 (Sparkman). *See* Exh. NRC000001, Part 2, COL FSAR, at 12.4-7, Table 12.4-201.

[281] Tr. at 276.

[282] *Id. See* 10 C.F.R. §§ 20.1003 and 20.1301.

[283] Tr. at 276. *See* 10 C.F.R. §§ 20.1301 and 20.1302.

[284] Tr. at 255 (Sparkman). *See* 10 C.F.R. § 20.1406.

[285] Exh. NRC000004, COL FSER §§ 12.3.4 to 12.3.5, at 12-19 to 12-23.

[286] Tr. at 275.

d. Initial Test Programs

The Staff explained that there are seven first-plant-only tests and two first-three-plant-only tests.[287] All of these tests will be mandated by license conditions.[288] Three of the first-plant-only tests are preoperational: (1) In-Containment Refueling Water Storage Tank Heatup; (2) Pressurizer Surge Line Stratification Evaluation; and (3) Reactor Vessel Internals Vibration Testing. Two apply during initial criticality and low-power testing: (1) Natural Circulation Tests; and (2) Passive Residual Heat Removal Heat Exchanger. The final two first-plant-only tests occur during power ascension testing: (1) Rod Cluster Control Assembly Out of Bank Measurements; and (2) Load Follow Demonstration.[289] The two first-three-plant-only tests are conducted prior to fuel load: (1) Core Makeup Tank Heated Recirculation Tests; and (2) Automatic Depressurization System Blow-Down Test.[290]

In response to a question about the relationship between the "Natural Circulation Test" and the station blackout rule, 10 C.F.R. § 50.63, the Staff explained that the "Natural Circulation Test" is specific to the AP1000 design, and that other tests demonstrate that the AP1000 design features will perform as required to mitigate the effects of a station blackout.[291] The Staff identified the following DCD-mandated tests related to station blackout: (1) Plant Trip from 100 Percent Power; (2) Passive Core Cooling System Testing; (3) Passive Containment Cooling System Testing; (4) Class 1E DC Power and Uninterruptible Power Supply Testing; (5) Loss of Offsite Power; and (6) Main Control Room Emergency Habitability System Testing.[292] The Staff explained that the AP1000 does not rely on AC power sources during design-basis events. The AP1000 passive systems automatically establish safe-shutdown conditions, and can maintain safe shutdown for 72 hours after a loss of onsite and offsite power sources, without operator action.[293] As additional background information, the Staff listed a number of features of the AP1000 design that mitigate the consequences of a station blackout.[294]

---

[287] *Id.* at 277 (discussing Exh. NRCR00013, Safety Panel 4, Staff Slides 39 and 40). Southern reviewed testing incorporated by reference from the DCD; the testing reviewed includes some testing required only for the first plant, and some required for the first three plants to be constructed using the AP1000 design. Tr. at 255-57.

[288] Tr. at 277.

[289] Exh. NRC000013, Safety Panel 4, Staff Slide 39.

[290] *Id.,* Staff Slide 40.

[291] Tr. at 293-94.

[292] Exh. NRC000015, Staff Post-Hearing Response, at 5-6 (Item K).

[293] *Id.* at 5 (Item K).

[294] *Id.* (Item K).

6. Environmental Overview Panel

We asked this panel to describe the process used to develop the Vogtle COL SEIS given the referenced ESP, and to summarize the Staff's SEIS analysis and conclusions with respect to certain resource areas, as follows:

- Overview of the [S]taff's conclusions in the SEIS, including a general explanation of the role of the Vogtle ESP FEIS;
- Description of the [S]taff's evaluation process, including:
  - Staff guidance
  - Assessment of the applicant's process for identifying new and significant information
  - How the [S]taff's analysis was informed by interactions with the public and with local governmental agencies at the Federal, State, and local level;
- Summary of the [S]taff's analysis and conclusions in the SEIS with respect to novel or non-routine environmental areas encompassed by the review.
  - The [ ] novel issue of how the COL environmental review accounted for ESP amendment requests that the applicant submitted during the COL review, with a focus on the resulting change in the [S]taff's conclusion from the ESP FEIS regarding impacts to terrestrial ecology.[295]

a. Overview

The EIS prepared in connection with the ESP evaluated the impacts at the Vogtle site of building and operating two new units of the AP1000 reactor design. Because Southern addressed additional topics that are optional for ESP applicants, including analyses of the economic, technical, and other costs and benefits of the project, and the evaluation of alternative energy sources, the Staff reviewed those issues at the ESP stage, leaving no unresolved environmental issues.[296] As a result, Southern limited its environmental review for the COL application to conducting a comprehensive review of the ESP EIS to identify any new and significant information with the potential to alter the conclusions reached in the ESP EIS.[297] For context, Southern and the Staff both provided an overview of the issues considered in the ESP EIS.[298]

---

[295] Revised Scheduling Note at 5 (unnumbered).
[296] *See* Exh. NRC000003, Staff Testimony, at 21.
[297] Tr. at 299.
[298] Tr. at 299-304, 305-12.

b. The Staff's Evaluation Process

The Staff described its COL application review process, performed in accordance with 10 C.F.R. § 51.92 and the Environmental Standard Review Plan.[299] The COL environmental review was conducted by a twenty-five member multidisciplinary team drawn from the Staff and from contractors at the Pacific Northwest National Laboratory.[300] The Staff audited Southern's process for identifying new and significant information in August 2008, and conducted a second audit in September 2009 to verify Southern's adherence to this process.[301] The Staff's site audits included tours of potential transmission rights-of-way, the Savannah River intake structure location, and cultural and historic resource sites.[302]

The Staff also searched independently for new and significant information. The Staff stated that it contacted the State of Georgia Historic Preservation Officer, the Georgia Department of Natural Resources, the South Carolina Department of Natural Resources, the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, the National Marine Fisheries Service (NMFS), and roughly thirty federally recognized Indian Tribes, to collect pertinent information.[303]

The Staff explained that the Vogtle ESP application was the first to reference a certified reactor design instead of using the "plant parameter envelope" approach, where the specific reactor design will not be identified until later. This, as well as the close timing of the ESP and COL application submissions, reduced the likelihood of significant new information at the COL stage.[304] The Staff also confirmed that its analysis considered potential changes resulting from all revisions, through Revision 19, of the AP1000 DCD.[305]

c. Summary of the Staff's Analysis and Conclusions

The Staff identified new information requiring additional analysis in connection with land use; this included additional acreage required for the fire training facility and the simulator building, and acreage designated as backfill sources, which would be disrupted temporarily.[306] The Staff determined that this new information did not alter the impact level conclusion reached in the ESP EIS

---

[299] Tr. at 305-06. *See generally* "Environmental Standard Review Plan: Standard Review Plans for Environmental Reviews for Nuclear Power Plants" NUREG-1555, Vols. 1 and 2 (Oct. 1999) (ADAMS Accession No. ML003702134, ML003701937) (Environmental SRP).

[300] Tr. at 312.

[301] Tr. at 314.

[302] Tr. at 314-15.

[303] Tr. at 315-16.

[304] Tr. at 308-09.

[305] Tr. at 332.

[306] Tr. at 317.

because the new acreage is located within the Vogtle site boundaries and the intended uses for the acreage are consistent with its commercial zoning and with the Burke County comprehensive plan.[307]

The Staff evaluated information from an updated traffic study together with a new Environmental Protection Agency (EPA) ozone standard in the National Ambient Air Quality Standards (NAAQS). Here again, the Staff's conclusions were unchanged from the ESP EIS: the meteorology and air quality results from the Staff's analysis of the new traffic study were consistent with the ESP EIS results, and Burke County retains its NAAQS attainment status, despite the revised ozone standard.[308]

The COL application contains a slight modification of the intake structure design relative to the design presented in the ESP application.[309] The Staff determined that changes to the intake structure design did not significantly alter the width or the length of the intake canal, meaning that surface water and groundwater impacts during construction would remain localized and temporary, as determined in the ESP EIS.[310] The Staff concluded that the ESP EIS determinations for water-related impacts deriving from backfill material excavations remained valid for the new backfill source areas for two reasons: the new areas are included in Southern's national pollutant discharge elimination system permit, and the excavations will not intersect the water table or require dewatering.[311] Also on the topic of water quality impacts, the Staff identified a 3% increase in total effluent discharge to the Savannah River. The Staff reran its thermal plume analysis model using this increase and found no significant change in the size of the thermal plume, so the ESP EIS conclusion remained valid.[312]

Since the preparation of the ESP EIS, the NMFS proposed listing the Carolina and South Atlantic distinct population segment of the Atlantic sturgeon as an endangered species under the Endangered Species Act.[313] The Staff consulted with the NMFS and concluded that its previous analysis of impacts on the sturgeon remained valid.[314] Also related to aquatic impacts, the Staff noted that Southern confirmed its receipt of the required Clean Water Act § 401 certification from the Georgia Department of Natural Resources. Southern also confirmed receipt of the required Clean Water Act § 404 and Rivers and Harbors Act § 10 permits

---

[307] *Id.*

[308] *Id.*

[309] *See* Exh. NRC000001, Part 3, Applicant's Environmental Report § 3.2.2, at 3-17; 3-19, Figure 3.1-1; and 3-20, Figure 3.2-1. *See also* Exh. NRC000006, COL SEIS § 3.2.2, at 3-4.

[310] Tr. at 318.

[311] *Id.*

[312] *Id.*

[313] Tr. at 319.

[314] *Id.*

from the Army Corps of Engineers (Corps).[315] The Staff explained that receipt of these permits from the Corps confirmed its ESP EIS conclusion that the impacts on aquatic resources from construction and operation of the new units would be small.[316]

The Staff stated that Southern signed a memorandum of understanding with the Georgia State Historic Preservation Officer to properly preserve a newly fenced historic cemetery, demonstrating the company's commitment to protecting cultural and historic resources and mitigating impacts on those resources. As a result, the Staff found that its ESP EIS conclusion that impacts on cultural and historic resources would be moderate remained valid.[317]

The Staff also reviewed new information related to energy alternatives, such as projected electricity demand reductions due to demand-side management, and changes to the EPA's rules on new source pollutants under the Clean Air Act.[318] In connection with the former, the Staff explained that the demand reductions already were accounted for in Georgia Power Company's Integrated Resource Plan, so they were not available to offset the need for additional power.[319] With respect to the second, the Staff found that the EPA's rule change would not alter the comparative relationship between alternative energy sources in a meaningful way "because [greenhouse gas] emissions from the other energy source alternatives would not be sufficiently reduced to make them environmentally preferable to the proposed project."[320] The Staff therefore concluded that the new information would not alter its analysis.[321]

The Staff explained that because the work encompassed in the second LWA request was originally part of the first LWA request, the ESP EIS evaluated the environmental impacts of the second request. The COL FSEIS referenced this analysis, and verified the adequacy of the site redress plan for the second LWA.[322] The ESP EIS also evaluated three license amendment requests to obtain additional backfill from previously identified onsite borrow areas and to change the classification of the backfill. However, at the ESP stage the Staff did not

---

[315] *Id.*

[316] Tr. at 319-20.

[317] Tr. at 320.

[318] Tr. at 320-21.

[319] *Id. See also* Exh. NRC000006, COL FSEIS § 9.2, at 9-2 to 9-3.

[320] Exh. NRC000006, COL FSEIS § 9.2, at 9-3.

[321] Tr. at 321.

[322] Tr. at 322. The site redress plan applies in the event that construction is terminated, that the COL application is denied or withdrawn, or that the LWA is revoked. *Id.* As part of its supplemental environmental analysis, the Staff "verified that the site redress plan discussed in the ESP EIS would adequately address the impacts of the activities requested under the second LWA." Exh. NRC000006, COL FSEIS § 4.11, at 4-32.

evaluate the license amendment request to add new backfill borrow sources located onsite in previously undisturbed areas; this request was evaluated as part of the COL environmental review.[323] Here, the Staff found that the impacts on terrestrial ecology would change from small to moderate because of impacts on the sandhills milkvetch (a Georgia state-listed threatened plant species) and the southeastern pocket gopher (a Georgia state-listed threatened mammal).[324] The Staff indicated that Southern voluntarily mitigated the impacts on both of these species via onsite relocation efforts, and also committed to replant longleaf pine in disturbed areas where possible.[325] In response to questions, the Staff confirmed that its site audits were not just paper audits: "We actually walked the site, we were able to see the relocation efforts . . . for the [p]ocket [g]opher and . . . the sandhills milkvetch."[326]

d. Severe Accident Concerns

We asked a series of questions about whether the severe accident analysis conducted as part of the ESP EIS considered accidents involving multiple units at the site in disaster scenarios analogous to the multilayer disaster that occurred at Fukushima, Japan.[327] Southern indicated that its ESP environmental report considered the overall risk that two or more reactors could experience concurrent accidents; however, the assumption is that these events are independent.[328] Southern stated that given the limited external hazards, it is reasonable to expect that the risk would be dominated by an accident at a single unit.[329] The Staff also provided additional detailed answers in its post-hearing response.[330]

Consistent with current review guidance,[331] the Staff's severe accident analysis did not consider concurrent accidents at more than one unit at the Vogtle site. For the COL, the Staff's environmental analysis of severe accidents tiered off the analysis in the ESP EIS — the COL FSEIS was, in essence, an update to the ESP EIS, created for the purpose of identifying and analyzing new and significant information. In the ESP EIS, the Staff compared the severe accident risks of the proposed reactors to the risks faced by other reactors, onsite and offsite, and

---

[323] Tr. at 323. *See* Exh. NRC000006, COL FSEIS § 4.1.1, at 4-2.
[324] Tr. at 323; Exh. NRC000006, COL FSEIS § 2.7.1, at 2-6.
[325] Tr. at 324.
[326] Tr. at 332 (Sutton).
[327] Tr. at 326-30, 334-38.
[328] Exh. SNCR00011, Southern Post-Hearing Response, at 17 (Question 14).
[329] *Id.*
[330] *See* Exh. NRC000015, Staff Post-Hearing Response, at 7-9 (M, N, and O).
[331] *See generally* Environmental SRP § 7.2, "Severe Accidents."

to the safety goals in our Safety Goal Policy Statement.[332] Based on the Staff's calculations, the risks for the Westinghouse AP1000 reactor design at the Vogtle site are expected to be lower than those for current generation plants.[333] This supports the Staff's conclusion "that the probability-weighted consequences of severe accidents at the Vogtle site would be [small]."[334]

The ESP EIS also evaluated cumulative impacts. For example, "the combined population dose risk for the two existing units plus the two new AP1000 reactors is about 3.8×10^{-2} person-Sv/Ryr. . . . [This] did not constitute a significant increase in the population dose risk."[335] The Staff reached similar conclusions for risks like "cost risk, early fatalities, and decontamination areas," and ultimately determined that the cumulative severe accident impact of adding the new units would be small.[336] In the COL FSEIS, the Staff found no new and significant information to change either its severe accident, or its cumulative severe accident, conclusions.[337]

The Staff explained that its severe accident analysis includes scenarios involving radiological releases into the environment. Consistent with Commission policy and NEPA requirements, this analysis looks at probability-weighted consequences. Severe accidents, like the accident at Fukushima Dai-ichi, are potentially high-consequence but extremely low-probability accidents, so considering their consequences without simultaneously accounting for risk "would distort the purpose of disclosing the reasonably anticipated impacts of the project."[338] The Staff explained that it evaluates the impacts of severe accidents in terms of health effects, economic costs, and land contamination — all in the context of risk.[339] Moreover, the focus of the risk analysis is "on the probability and consequences of the postulated accident, not on independent damage attributable to the external event that may have initiated that accident."[340] Importantly, while the Staff has not conducted a formal probabilistic risk assessment or any other quantitative evaluation as part of the AP1000 DCD, it has considered a range of postulated severe accidents and consequences of these accidents.[341]

---

[332] *See* Safety Goals for the Operations of Nuclear Power Plants; Policy Statement; Republication, 51 Fed. Reg. 30,028 (Aug. 21, 1986).

[333] Exh. NRC000015, Staff Post-Hearing Response, at 8 (Item N).

[334] *Id.* at 7 (Item M). *See also id.* at 8 (Item N).

[335] *Id.* (Item M).

[336] *Id.* (Item M).

[337] *Id.* (Item M).

[338] Tr. at 8 (Item N).

[339] *Id.* (Item N).

[340] Tr. at 9 (Item O).

[341] Tr. at 8 (Item N).

C. Sufficiency of the Staff's Safety Review

We have conducted an independent review of the sufficiency of the Staff's safety findings, with particular attention to the topics discussed above in the Staff and Southern panel presentations. For each of the topics discussed in these presentations, we determine that the Staff's review was reasonably supported in logic and fact and sufficient to support its findings. We make the same determination for topics not explicitly discussed at the hearing or in today's decision, including topics addressed in the FSER, and topics on which we asked pre- or post-hearing questions.

In accordance with the notice of hearing for this uncontested proceeding,[342] based on our review of the rationale underlying the Staff's conclusions, we determine that the Staff's review of the combined license application was adequate to support the Staff's findings that: (1) the applicable standards and requirements of the Atomic Energy Act and our regulations have been met; (2) all required notifications to other agencies or bodies have been made; (3) there is reasonable assurance that the facilities will be constructed and will operate in conformity with the license, the provisions of the AEA, and our regulations; (4) the applicant is technically and financially qualified to engage in the activities authorized; and (5) issuance of the license will not be inimical to the common defense and security or the health and safety of the public.

We also find that the Staff's review of the application for the limited work authorizations was adequate to support the Staff's findings that: (1) the applicable standards and requirements of the Atomic Energy Act and our regulations pertinent to the activities to be conducted under the limited work authorizations were met; (2) the applicant is technically qualified to engage in the activities authorized; (3) issuance of the limited work authorizations will provide reasonable assurance of adequate protection to public health and safety and will not be inimical to the common defense and security; and (4) there are no unresolved safety issues relating to the activities to be conducted under the limited work authorizations that would constitute good cause for withholding the authorizations.

D. Sufficiency of the Staff's Environmental Review

We also conducted an independent review of the Staff's supplemental environmental analysis. Our determination on the Staff's environmental analysis — including with respect to those topics not expressly addressed at the hearing — takes into account the particular requirements of NEPA, discussed briefly below.

As a general matter, NEPA § 102(2)(A) requires that the NRC use "a systematic, interdisciplinary approach which will insure the integrated use of the natural

[342] *See* Notice of Hearing at 50,768.

and social sciences and the environmental design arts" in decisionmaking that may impact the environment.[343] Here, given that an EIS was prepared at the ESP stage, the Staff's review was framed by the requirements of 10 C.F.R. § 51.92. Under that provision, the Staff prepared a supplemental EIS, focusing on issues related to the impacts of construction and operation for which new and significant information had been identified. Our particular focus was to ensure that this as well as all other applicable NEPA requirements were met.

In the area of impacts of the proposed action[344] — here, issuance of COLs and LWAs — the Staff, in its review of new and significant information, identified a change in impacts associated with terrestrial ecology, as discussed in today's decision. Other than in the area of terrestrial ecology, however, no new and significant information was identified that would change the conclusions made in the ESP FEIS.[345] The Staff did identify new, unavoidable adverse environmental impacts that would occur during construction and operation of the new units.[346] In particular, the Staff determined that there would be an increase in the permanently disturbed land area, as well as additional land disturbance resulting from the development of additional onsite borrow areas.[347] As discussed in its COL FSEIS, the Staff identified actions to mitigate these impacts, and concluded that no other information was identified that would change its conclusions regarding these impacts.[348]

An assessment of alternatives to the proposed action was prepared at the ESP stage.[349] The Staff identified no new information in the areas of energy alternatives or system design alternatives; the Staff therefore determined that its conclusions in this area made at the ESP stage remained valid.[350] Under the no-action alternative, the NRC would not issue the COLs or the LWAs. The Staff concluded that, while there would be no environmental impacts associated with not issuing the COLs (save those associated with activities not within the definition of construction,[351] and any activities performed under an LWA prior to denial of the COLs), the power still would be needed. Environmental impacts would be associated with

---

[343] NEPA § 102(2)(A), 42 U.S.C. § 4332(2)(A).

[344] NEPA §§ 102(2)(C)(i), (2)(E), 42 U.S.C. §§ 4332(2)(C)(i), 4332(2)(E).

[345] Exh. NRC000006, COL FSEIS § 11.1.

[346] NEPA § 102(2)(C)(ii), 42 U.S.C. § 4332(2)(C)(ii).

[347] Exh. NRC000006, COL FSEIS § 11.2. Development of the new borrow areas resulted in impacts of two state-listed species, the southeastern pocket gopher and the sandhills milkvetch (discussed above).

[348] *Id. See id.* §§ 4.4.1 (discussing onsite relocation of these species, as well as Southern's efforts to replant the disturbed area with longleaf pine).

[349] NEPA § 102(2)(C)(iii), 42 U.S.C. § 4332(2)(C)(iii).

[350] Exh. NRC000006, COL FSEIS § 11.3. *See id.* §§ 9.2, 9.3.

[351] *See* 10 C.F.R. §§ 50.10(a), 51.4.

any alternative option at the site of implementation; as discussed above, the Staff determined that the alternative options evaluated would not be reasonable alternatives to providing new baseload power generation capacity.[352]

The NRC also is required to assess the relationship between local short-term uses of the environment and the long-term productivity of the environment.[353] This review was performed as part of the cost-benefit analysis discussed in the ESP EIS.[354] The Staff identified no information that would change the conclusions in the ESP FEIS.

Finally, NEPA § 102 requires us to consider the irreversible and irretrievable commitments of resources associated with the proposed action.[355] This review also was performed at the ESP stage. The Staff concluded at that time that the irretrievable commitments of resources during construction generally would be similar to that of any major construction project. During operation, uranium is the principal resource that would be irretrievably committed. Given the sufficient availability of uranium, the Staff concluded that the commitment would be of small consequence.[356] The Staff, in its review, identified no new and significant information in this area.

We find that the relevant NEPA requirements have been met. To support this determination, we have assessed the Staff's (and the applicant's) process for identifying new and significant information, and find that the process was sufficient to identify new information that might be potentially significant concerning environmental issues addressed in the ESP EIS. We paid special attention to the topics discussed at the hearing. For each of the topics discussed at hearing, we find that the Staff's review was reasonably supported in logic and fact and sufficient to support the Staff's conclusions. We also reviewed the COL FSEIS, and, based on the assessments performed in that document, together with the balance of the information in the adjudicatory record, we make the same determination for topics not directly addressed at the hearing or in today's decision. Finally, in carrying out our review, we have considered particularly each of the requirements of NEPA § 102(2)(C), and find nothing in the record that would lead us to disturb the Staff's conclusions on those requirements. Overall, nothing in the adjudicatory record

---

[352] Exh. NRC000006, COL FSEIS §§ 11.3, 9.1. Pursuant to 10 C.F.R. § 51.92(c)(3), the FSEIS did not contain a separate discussion of alternative sites; these also were assessed at the ESP stage.

[353] NEPA § 102(2)(C)(iv), 42 U.S.C. § 4332(2)(C)(iv).

[354] Exh. NRC000006, COL FSEIS §§ 11.4, 11.6. *See generally* ESP FEIS § 11.6. Overall, the Staff determined that the benefits of the action (including societal and regional benefits) generally outweighed the costs (including internal costs (costs accruing to the applicant) and external costs (such as loss of regional productivity, environmental degradation, or loss of wildlife habitat)). The Staff concluded at that time that the accrued benefits most likely would outweigh the economic, environmental, and social costs of building and operating the new units.

[355] NEPA § 102(2)(C)(v), 42 U.S.C. § 4332(2)(C)(v).

[356] Exh. NRC000006, COL FSEIS § 11.5. *See generally* ESP FEIS § 11.5.

of this proceeding (including the contested proceeding) leads us to believe that the Staff's environmental findings are unreasonable. Therefore, as a result of our review of the Staff's supplemental environmental analysis, and in accordance with the notice of hearing for this uncontested proceeding,[357] we find that the requirements of NEPA § 102(2)(A), (C), and (E), and the applicable regulations in 10 C.F.R. Part 51, have been satisfied with respect to the combined license application. We independently considered the final balance among conflicting factors contained in the record of this proceeding and find that the proposed action, issuance of the combined licenses, should be taken. We also find, after weighing the environmental, economic, technical, and other benefits against environmental and other costs, and considering reasonable alternatives, that the combined licenses should be issued. Finally, we determine that the NEPA review conducted by the NRC Staff has been adequate.

For the application for the limited work authorizations, based on our review of the Staff's supplemental environmental analysis, and with respect to the activities to be conducted under the limited work authorizations, we find that the requirements of NEPA § 102(2)(A), (C), and (E), and the regulations in 10 C.F.R. Part 51, Subpart A, have been satisfied. We independently considered the balance among conflicting factors with respect to the limited work authorizations, contained in the record of the proceeding, and find that the proposed action, issuance of the limited work authorizations, should be taken. We also find that the site redress plan will adequately redress the activities performed under the limited work authorizations, if the limited work authorization activities are terminated by the holder or the limited work authorizations are revoked by the NRC. Finally, based on our review of the Staff's consideration of new and significant information, we find that the NEPA review conducted by the NRC Staff for the limited work authorizations has been adequate.

E. Fukushima Dai-ichi

As a general matter, our review of recommended actions associated with lessons learned from the Fukushima Dai-ichi events is ongoing. The agency's Near-Term Report included twelve overarching recommendations for improving the safety of both new and operating nuclear reactors.[358] As previously stated, it also determined that "continued operation and continued licensing activities do not pose an imminent risk to public health and safety."[359] We approved and provided direction on certain near-term actions identified by the Near-Term Task Force to

---

[357] *Id.*

[358] *See, e.g.,* Near-Term Report at 69-70.

[359] *Id.* at vii. *See also supra* pp. 80-81.

be initiated without delay and shortly thereafter approved the prioritization of all of the recommendations and supported the Staff's proposed actions on the top two tiers of recommendations.[360]

As we stated in CLI-11-5, we have in place well-established regulatory processes by which to impose any new requirements or other enhancements that may be needed.[361] The applicability of any new requirement will be determined when the justification is fully developed and we evaluate the Staff's bases. While these processes are well under way, it takes time to complete the steps necessary to ensure that any new requirements are technically justified and implemented appropriately. All affected nuclear plants will be required to comply with NRC direction resulting from lessons learned from the Fukushima accident, regardless of the timing of issuance of the affected licenses.[362] We therefore expect that the new Vogtle units will comply with all applicable "post-Fukushima" requirements.

Our paramount focus, always, is protecting public health and safety. We therefore agree fully with Chairman Jaczko that our responsibility is to make the best decisions for nuclear safety. The Fukushima events were significant, warranting enhancements in nuclear safety measures and we share the Chairman's commitment to implementing Fukushima-related enhancements and to nuclear safety generally. Nonetheless, we find ourselves in disagreement with the specific approach he offers in his dissent — namely, an across-the-board license condition requiring implementation of "all" Fukushima-related requirements prior to operation of the Vogtle plant. Such a license condition, in our view, cannot now be framed in meaningful terms. The Chairman's license-condition approach also is unnecessary, given the myriad of regulatory tools available to the NRC to implement Fukushima-related requirements as they emerge, including requirements applicable to new plants like Vogtle.

We are confident that the Commission's approach — using rigorous, well-established processes rather than a loosely defined license condition — will assure timely implementation of new requirements based on Fukushima lessons learned. As described above, we have already provided direction on certain Near-Term

---

[360] *See* Staff Requirements — SECY-11-0124 — Recommended Actions to Be Taken Without Delay from the Near-Term Task Force Report (Oct. 18, 2011) (ADAMS Accession No. ML112911571) (Staff Requirements — SECY-11-0124). Among other things, we directed that the agency "should strive to complete and implement the lessons learned from the Fukushima accident within five years — by 2016." *Id.* at 1. *See also* Staff Requirements — SECY-11-0137 — Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned (Dec. 15, 2011) (ADAMS Accession No. ML113490055).

[361] *See generally Callaway,* CLI-11-5, 74 NRC at 162-63.

[362] As the Staff has stated, using our established regulatory processes for implementation of any post-Fukushima requirements on already-issued COLs would be comparable to the process used with operating reactors. *See* Exh. NRC000003, Staff Testimony, at 10.

Task Force recommendations,[363] and substantial future actions are imminent. For example, we expect to receive this month the Staff's proposal to issue orders imposing new requirements, and will take action on them shortly thereafter. These orders would apply not only to currently operating plants, but to COL holders as well.

To date, our Fukushima lessons-learned effort has proved fruitful by virtue of thoughtful Staff analysis, stakeholder input, and continuing Commission attention. Just as we have committed to undertaking a systematic and methodical review of the events at Fukushima, a review that inevitably takes time, so must we be vigilant in following a stable, predictable licensing process. Imposing the license condition suggested by Chairman Jaczko would neither improve this effort nor make a difference in the operational safety of new reactors. Indeed, Chairman Jaczko's approach may unintentionally impact the Staff's disciplined work. The proposed license condition might in the end limit the flexibility necessary to ensure that any new requirements are implemented on carefully considered schedules.

Furthermore, because the agency continues to develop the technical basis for Fukushima-related requirements, the proposed license condition would lack sufficient details necessary to impose meaningful requirements.[364] As we see the situation, a general license condition, without specific directives, that says (in effect) that the NRC is committed to applying and enforcing future, but yet-to-be-developed, safety requirements amounts largely to symbolism. Nuclear safety is not advanced by imposing overly broad, ill-defined requirements.

We therefore see no compelling reason to depart from our existing regulatory processes and, for these reasons, we respectfully decline to impose the license condition suggested in Chairman Jaczko's dissent.

III. CONCLUSION

We find that the Staff's review of the safety and environmental issues related to Southern's combined license and limited work authorization applications was

---

[363] The Task Force recommended that design certifications and COL applications under active Staff review address Recommendation 4 (regarding prolonged station blackout mitigation) and Recommendation 7 (regarding spent fuel pool makeup capability and instrumentation) before licensing. Near-Term Report at 71. To the extent that these recommendations are not already addressed in the AP1000 certified design, we expect that any applicable site-specific requirements arising from these recommendations — whether imposed by order or by rule — will be applied to the Vogtle licenses, as necessary, prior to the commencement of plant operations.

[364] Such a broad-styled license condition would be unacceptably vague. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-13, 52 NRC 23, 34 (2000) ("sufficient details should be provided in the license so that the Staff's review is not subject to meaningful debate.").

sufficient to support the findings, identified in 10 C.F.R. §§ 52.97 and 51.107(a), for each of the combined licenses to be issued, and the findings identified in 10 C.F.R. §§ 50.10 and 51.107(d), with respect to the limited work authorizations. In addition, we direct the NRC Staff to include in the Vogtle COLs the condition described in today's decision, relative to the implementation of a surveillance program for squib valves. The Director of the Office of New Reactors therefore is authorized to issue the limited work authorizations and appropriate licenses authorizing construction and operation of Vogtle, Units 3 and 4.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 9th day of February 2012.

Chairman Gregory B. Jaczko, Dissenting

I. INTRODUCTION

It is with great disappointment that I offer this dissent on the order for the uncontested portion of the hearing related to Southern Nuclear Operating Co. Vogtle Nuclear Power Plant, Units 3 and 4. This action represents years of hard work by the Staff of the NRC, and I would like nothing more than to celebrate the completion of their efforts and this historic license. But, ultimately, my responsibility is to make what I believe is the best decision for nuclear safety. I simply cannot authorize issuance of these licenses without any binding obligation that these plants will have implemented the lessons learned from the Fukushima accident before they operate.

II. DISCUSSION

My analysis begins with the significance of the Fukushima accident. On March 11, 2011, a magnitude 9.0 earthquake, known as the Great East Japan Earthquake, occurred approximately 80 miles east of the coast of Japan and precipitated a large tsunami. These events caused widespread devastation, including extensive damage to the Fukushima Dai-ichi nuclear reactor facilities and a complete, sustained loss of electrical power to five reactors. These events had serious and unacceptable consequences, causing reactor core damage and uncontrolled releases of radioactive materials into the environment. These unprecedented and catastrophic events and their aftermath have provided real-world experience that we are applying in comprehensive review of our regulatory requirements, programs, and processes and their implementation.

That review is well under way and has already identified significant safety improvements. Most importantly, the review has identified safety improvements applicable to these new Vogtle reactor units that I believe must be implemented before operation to ensure adequate protection of public health and safety. I do not support authorizing the issuance of COLs that will allow both construction and *operation,* without binding assurance that these issues will be addressed before the plant operates. Only by imposing a license condition can we ensure that all the lessons we learn from Fukushima are implemented before operation. I describe my reasoning in more detail below.

A. Nuclear Reactor Safety Enhancements Have Been Identified Based on New Information and Insights from the Fukushima Accident

The Fukushima accident was precipitated by natural disasters of historic proportions. For reasons not yet definitively established, the Fukushima reactor design and mitigation measures did not prevent serious consequences from these events. These events prompted us to take immediate action to address the safety of our nation's nuclear fleet. Within weeks of the Fukushima accident, the Commission established a task force responsible for making recommendations to the Commission on potential improvements to our regulatory system.[1] The Task Force's efforts represent an important first step in applying new insights from the Fukushima accident in our regulatory oversight of the nation's nuclear fleet.

The Task Force identified twelve overarching recommendations for improving safety of operating and new nuclear reactors.[2] These included measures to ensure protection against earthquakes and flooding, measures to minimize potential hazards from those events and measures to improve emergency preparedness and response.[3] More broadly, the Task Force recommended strengthening our regulatory framework by making it more logical, systematic, and coherent.[4] Taken together, the recommendations were intended to clarify and strengthen our regulatory framework to protect against and mitigate the consequences of natural disaster, enhance emergency preparedness, and improve the effectiveness of our regulatory programs.[5]

We remain focused on completing a comprehensive review of the events at Fukushima and ensuring that the lessons from that review are incorporated as safety enhancements without delay. To accomplish this, we have taken steps to accelerate our review and currently expect to issue orders requiring initial actions by March 2012.[6] Our goal is to complete and implement the lessons learned from the Fukushima accident by 2016.[7]

---

[1] *See* "NRC Actions Following the Events in Japan," Staff Requirement — Tasking Memorandum COMGBJ-11-0002 (Mar. 23, 2011) (ADAMS Accession No. ML110800456).

[2] *See generally* Near-Term Report.

[3] *Id.* at 69-70.

[4] *Id.* at 69.

[5] *Id.* at viii.

[6] *See* Slides from Public Meeting, Status Update on Implementation of the NTTF Recommendations (Jan. 13, 2012), at 9 (ADAMS Accession No. ML120120491).

[7] Staff Requirements — SECY-11-0124, at 1.

B. Commission-Approved Safety Enhancements Must Be Implemented to Ensure Reasonable Assurance of Safe Operation of New Vogtle Reactors

In considering whether to authorize issuance of these COLs, I am mindful of the regulatory findings underlying our decision. They require us to determine, among other things, that: (1) the applicable regulations have been met, (2) there is reasonable assurance that these new reactors will be constructed and will operate in conformity with our regulations, and (3) issuance of these licenses will not be inimical to the health and safety of the public.[8] Based on the evidence presented during this hearing, I am convinced that the Staff's review was adequate to support those findings based on our regulatory requirements in place prior to the Fukushima accident. But that accident has fundamentally altered our understanding and appreciation of the impacts of a catastrophic natural disaster. Therefore, I consider this licensing decision in light of those events.

We have already identified Fukushima recommendations that must be taken without delay.[9] Our decision was premised on the Staff's assessment of which recommendations have the greatest potential for safety improvement in the near term.[10] The Staff then took a broader look at the recommendations in the context of our regulatory framework and formed recommendations to prioritize them based on its judgment of relative safety enhancement.[11] Based on its analysis of those recommendations, the Staff has proposed moving forward under the presumption that they will be implemented as adequate protection measures.[12] Of particular relevance here, the Staff has recommended that two be implemented before issuance of a COL.[13] Further, the ACRS has determined that the need for these safety improvements will not be negated or rendered inappropriate by the acquisition of new information as the Staff completes ongoing reviews and analyses.[14] I agree with the Staff's conclusions and path forward, but the Commission has not yet determined whether implementation will be based on adequate protection.

The expectation that newly licensed reactors would incorporate new, Fukushima-related safety enhancements was an implicit underpinning of our decision not to halt new reactor licensing proceedings in response to multiple petitions asking,

---

[8] 10 C.F.R. § 52.97.

[9] *See* Staff Requirements — SECY-11-0124.

[10] *See generally* SECY-11-0124.

[11] *See generally* SECY-11-0137.

[12] SECY-11-0124, at 6.

[13] Near-Term Report at 71-72.

[14] Abdel-Khalik, Said, Chairman, ACRS, letter to Chairman Gregory Jaczko, "Initial ACRS Review of (1) the NRC Near-Term Task Force Report on Fukushima and (2) Staff's Recommended Actions to Be Taken Without Delay" (Oct. 13, 2011) (ADAMS Accession No. ML1129A006).

among other things, that we stay this proceeding.[15] We found no imminent safety reason to halt our new reactor licensing process because there was sufficient time to implement applicable new requirements before operation, saying:

> [L]icensing decisions for pending COL applications are months and, in many cases, years away and fuel loading into completed reactors is still further away; continuation of these reviews poses no immediate threat to public health and safety.
>
> Our regulatory processes provide sufficient time and avenues to ensure that design certifications and COLs satisfy any Commission-directed changes before any new power plant commences operations. This is demonstrated by the implementation strategy for new reactor licensing outlined in the Near-Term Report. Whether we adopt the Task Force recommendations or require more, or different, actions associated with certified design or COL applications, we have the authority to ensure that certified designs and combined licenses include appropriate Commission-directed changes before operation. We therefore find no imminent risk to public health and safety or to the common defense and security that necessitates a stay of new reactor licensing actions or adjudications.[16]

Now that the decision to license the first COLs is before us, we have an obligation to exercise this authority and require that all new safety enhancements be implemented before these new reactors begin operation. Knowing that new safety enhancements are under development, some of which I consider necessary for adequate protection, I cannot support authorizing operation with no more than an expectation that they will be timely implemented.

C. The Vogtle COLs Must Require Implementation of Fukushima Safety Enhancements Before Operation

We must include a binding requirement that all Fukushima-related safety enhancements be implemented before operation of the COLs. Unless we impose this requirement now, when the licenses are issued, we cannot be certain that they will be implemented before operation or, indeed, at all for two reasons. The first is our so-called "backfit" regulations that allow licensed reactors to avoid compliance with new safety enhancements based on considerations like implementation costs. The second is the difficulty of requiring timely compliance with new safety requirements that are not tied down in the license.

First, I will address the backfit regulations. These came about because of the evolving nature of our regulatory framework and the perception that it was causing unjustified regulatory instability and unpredictability. Over time, advances in our

---

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

[16] *Id.* at 161-63 (footnotes omitted).

technical capabilities and knowledge have led to regulatory refinements that have significantly enhanced the safety of our nuclear fleet. But these improvements are not applied to every nuclear reactor. For example, when we impose new regulatory requirements that are important safety enhancements but not deemed necessary to ensure adequate protection of public health and safety, the NRC often does not require existing licensees to implement them based on considerations such as whether they are cost-beneficial.[17] As a consequence, the design and level of protection from natural phenomena differ among existing operating reactors depending on when the plant was constructed and licensed for operation.

While I can appreciate reasons for using this approach for reactors that were designed and constructed long before the new requirements could have been anticipated, I see no reason to relieve new reactor licensees from compliance with safety enhancements that arise from our Fukushima review. Only limited, safety-related construction activities have been started at Vogtle Units 3 and 4.[18] Construction is expected to be completed in 2016,[19] the same year we expect to have implemented all of the Fukushima recommendations. The process of completing and implementing Fukushima-related safety enhancements is proceeding expeditiously and transparently. We expect to issue a number of orders imposing new requirements relating to flooding, seismic events, and station blackouts as well as information requests[20] in March 2012. While the content of these orders and letters has already been discussed with licensees,[21] they are only the initial phase of our post-Fukushima regulatory actions. As we move forward, we will continue to engage stakeholders and share our findings and initiatives. The accelerated pace of our work and the transparency of our regulatory processes will help minimize any disruptions or delays in the operation of the new reactors.

Secondly, I address the difficulty of requiring timely resolution of significant safety issues and prompt implementation of new requirements intended to address those safety issues. Our experience has shown that even when we identify serious safety concerns, licensee resolution of those concerns and implementation of necessary changes can be subject to lengthy delays. The starkest examples of these longstanding safety issues are fire protection and emergency core cooling system sump performance (i.e., GSI-191). In both cases, we have longstanding compliance issues. For fire protection, compliance with our rules is necessary

---

[17] *See* 10 C.F.R. §§ 52.98(a) and 50.109(a)(3).

[18] The activities under way are site-preparation activities permitted by the first LWA.

[19] http://www.southerncompany.com/nuclearenergy/plan.aspx.

[20] *See generally* 10 C.F.R. § 50.54(f).

[21] The draft section 50.54(f) letters have been made available to the public. *See* Miller, G. Edward, Project Manager, Office of New Reactor Regulation, to Robert J. Pascarelli (Jan. 13, 2012) (making publicly available the draft letter section 50.54(f) letter and enclosures) (ADAMS Accession No. ML12013A224) (package).

to ensure that a fire cannot disable or impede the function of equipment needed to safely shut down a reactor. For sump performance, resolution of the issues is necessary to ensure that accident-generated debris cannot impede the cooling of the reactor core following an accident. These longstanding safety issues have not been completely resolved for decades.

This history demonstrates the importance of using our regulatory tools to require compliance with our expectations. On the day before the Fukushima accident, any nuclear professional or regulator would likely have told you that a natural disaster causing a loss of containment at three reactors simultaneously anywhere in the world was not a credible event we need be concerned about. If nothing else, the Fukushima accident has demonstrated the potential consequences of that type of complacency. I believe one of the primary lessons we should take from the accident is the need to take proactive and decisive regulatory action. As I explain below, we have the regulatory tools to require that all Fukushima enhancements are implemented before operation in this license. We should not simply hope for the best. Any risk of incomplete implementation, delayed implementation, or both is not acceptable when we have the regulatory tools to require timely and complete implementation.

D. A License Condition Is the Appropriate Regulatory Vehicle to Require Implementation of Fukushima Safety Enhancements Before Operation

For the reasons discussed above, I am convinced we must include a condition requiring implementation of all Fukushima-related safety enhancements before operation into the COL. Anticipating the need to impose this license condition, I asked the Staff to recommend language for such a condition in my post-hearing questions. My questions followed submission of the Staff's information paper stating that the Commission could choose to adopt some or all of the Near-Term Task Force recommendations and implement them in the COLs through license conditions or, alternatively, issue the COLs and later modify, add, or delete any terms or conditions of the COLs to reflect any new Commission requirements.[22]

In its response, the Staff declined to provide the requested language, citing two reasons. First, the Staff objected that the license condition would have to be drafted "such that it could not be interpreted as evidence that the staff does not have reasonable assurance of adequate protection of the public health and safety at the time the COL is issued."[23] But this is not the Staff's decision to make in a

[22] *See* Exh. NRC00003, Staff Testimony, at 9.

[23] *See* Exh. NRC000015, Staff Post-Hearing Response, at 12.

mandatory hearing — it is a decision for the Commission. And, for the reasons discussed above, I cannot find reasonable assurance without the license condition.

The Staff also said that it did not have sufficient information to draft a viable license condition. But the Staff has performed an extensive assessment of the Tier 1 Task Force recommendations to determine the regulatory activities that will be necessary to implement them along with an estimated schedule and resource impacts.[24] To take one example, the Staff recommended issuing orders requiring licensees to reevaluate and upgrade seismic and flooding protection of structures systems and components for each operating reactor.[25] The Staff concluded that current regulatory guidance is sufficient to permit licensee reevaluations,[26] and suggested continued stakeholder interactions to discuss and define how compliance can be achieved.[27] This regulatory recommendation, like those for the remaining Tier 1 recommendations, is sufficiently concrete and specific to include in a license condition.

While we do not yet know the precise details of all new safety requirements, this does not — as the Staff suggests — mean that this license condition would be invalid. All Fukushima-related requirements are subject to review and approval by the Commission and will be implemented through our normal regulatory processes. By the time verification is necessary, we will know the precise details of those requirements. This satisfies the test set forth by the Commission in *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-13, 52 NRC 23, 34 (2000), that the Staff verification be a straightforward matter of applying a defined set of requirements, i.e., a ministerial action. I do not consider the fact we do not yet know the precise details of all those requirements to be an obstacle from requiring this or any other new licensee from coming into compliance before initiating operations. Most importantly, the timing of when those details are developed does not diminish the ability of a license condition to ensure compliance. All licensees must comply — at all times — with the conditions of their licenses. In contrast, as I discuss above, regulations issued after the license can be subject to "backfit" exceptions and, in practice, lengthy delays in licensee compliance. Therefore, a license condition is the strongest regulatory tool for ensuring that all Fukushima-related safety enhancements are imposed before operation.

My judgment is informed by the Commission's actions following the most serious accident at a reactor in the United States, the Three Mile Island (TMI) accident that occurred on March 28, 1979. Like Fukushima, the TMI accident

---

[24] SECY-11-0137.

[25] Enclosure to SECY-11-0137, "Staff Assessment and Prioritization of NTTF Recommendations," at 4.

[26] *Id.* at 5.

[27] *Id.* at 6.

prompted us to undertake a comprehensive reassessment of the safety of the operations of our nation's nuclear reactors. While that was under way, the Commission implemented a "licensing pause" to ensure that lessons learned from the accident were appropriately accounted for with respect to operating reactors and new reactor applications that were under review.

The comprehensive review following the TMI accident, like our review of the Fukushima accident, resulted in recommendations for significant safety enhancements. Following TMI, the Commission expressly considered the applicability of those recommendations to pending license applications for operation of new nuclear reactors. The Commission identified near-term recommendations that new operating licensees would be required to implement before operation. License conditions were imposed requiring compliance with those recommendations, called "near term operating license requirements," before fuel load. One such license[28] included conditions requiring completion of actions from the TMI Action Plan, Near Term Operating License (NTOL) Requirements, dated February 6, 1980.

While the license conditions described requirements generally, precise details were missing because they had not yet been developed. Notably, for all of the conditions, the license said they "shall be completed to the satisfaction of the Commission."[29] The precise details concerning implementation were developed and documented later, in NUREG-0737, "Clarification of TMI Action Plan Requirements," issued in November 1980, and 10 C.F.R. § 50.34(f), "Additional TMI-related requirements," promulgated in January 1982.[30]

Thus, within 1 year of the TMI accident, the Commission had not only identified the actions that needed to be implemented to improve safety, but had taken decisive regulatory actions to ensure those actions would be implemented prior to the operation of new reactors. Then, as now, we had identified actions to enhance safety but had not yet developed all of the implementing details. I believe we should follow that example by imposing a license condition requiring that all Fukushima recommendations are implemented before these new reactor units are allowed to operate.

Imposing this license condition should not place an undue burden on this or any future COL holder. We are working to have all Fukushima recommendations implemented by 2016, the same year that construction of these new reactors is expected to be complete. We have already shared detailed information regarding

---

[28] Ross, D.F., Office of Nuclear Reactor Regulation, NRC, Letter to J.H. Ferguson, Virginia Electric and Power Co. "North Anna Power Station, Unit No. 2 — Issuance of License NPF-7" (Apr. 11, 1980) (ADAMS Accession No. ML013520351).

[29] *Id.* at 5.

[30] *See* Final Rule: "Licensing Requirements for Pending Construction Permit and Manufacturing License Applications," 47 Fed. Reg. 2301 (Jan. 15, 1982).

our expectations in the draft 50.54(f) letters and will continue to apprise COL applicants and licensees as our work proceeds. In this critical time, when the public is naturally rethinking the future of nuclear energy, it is essential that our actions support public confidence in the safety of our nation's nuclear reactors.

I am confident that we can authorize the issuance of these COLs now with a license condition requiring compliance with Fukushima safety enhancements before operation. If, as the Staff suggests, our regulatory processes have not proceeded to a point where we can impose this license condition, then we cannot be ready to issue these COLs. Ultimately, I cannot find reasonable assurance that these reactors will be operated safely without that requirement in the license, whether it is issued now or in the future.

III. CONCLUSION

I agree with my colleagues that the Staff's review was sufficient to support issuance of these licenses under the regulatory requirements in effect before the Fukushima accident. But, unlike my colleagues, I do not believe we should authorize the operation of these new reactors without imposing a license condition that requires the implementation of all Fukushima-related safety enhancements before operation. The recent accident at Fukushima already has provided, and will continue to provide, valuable information and insights that will improve our regulatory requirements, programs, and processes and, with their implementation, improve the safety of our nuclear reactors. Fortunately, catastrophic accidents like these happen extremely rarely. But when they do, they provide invaluable real-world experience and information about events we can normally only hypothesize and consequences we can normally only project in mathematical models. In the aftermath of the catastrophic events at Fukushima, I cannot authorize the operation of these new reactors until we fully synthesize and analyze that information and ensure that all the lessons we learn are fully implemented. If our regulatory processes have not proceeded to a point where we can require implementation before operation as a license condition, then we are not yet ready to issue these licenses.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, 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) **February 22, 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 which we may deem to be in the public interest.

ADMISSIBILITY OF CONTENTIONS, STANDARD OF REVIEW

For threshold issues like contention admissibility, we give substantial deference to a board's determinations. We will affirm decisions on the admissibility of contentions where we find no error of law or abuse of discretion.

MOTIONS TO REOPEN

Motions to reopen the record are governed by 10 C.F.R. § 2.326 of our rules of practice. The movant must show that: (1) the motion is timely; (2) the motion addresses a significant safety or environmental issue; and (3) a materially different result would be or would have been likely had the newly proffered evidence been considered initially. Each of the criteria must be separately addressed, with a specific explanation of why it has been met.

MOTIONS TO REOPEN

The level of support required for a motion to reopen is greater than that required for a contention under the general admissibility requirements of 10 C.F.R. § 2.309(f)(1). The motion to reopen must be accompanied by affidavits that set forth the factual and/or technical bases for the movant's claim that the three criteria for reopening have been satisfied.

MOTIONS TO REOPEN

Evidence contained in the affidavits must meet the admissibility standards in 10 C.F.R. § 2.337. That is, it must be relevant, material, and reliable. Further, the affidavits must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised.

MOTIONS TO REOPEN

A litigant seeking to reopen a closed record necessarily faces a heavy burden. After a record has closed, finality attaches to the hearing process, and after that point, only timely, significant issues will be considered.

MOTIONS TO REOPEN

The reopening standards in section 2.326 expressly contemplate contentions that raise issues not previously litigated. In particular, subsection (d) anticipates circumstances where the motion to reopen relates to a contention not previously in controversy among the parties.

PLEADINGS, INCORPORATION BY REFERENCE

We discourage incorporating pleadings or arguments by reference; we expect briefs on appeal to be comprehensive, concise, and self-contained.

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

Federal courts leave to an agency's discretion the manner in which the agency determines whether information is new or significant to warrant supplementation of an environmental impact statement, including the application of its procedural rules.

MOTIONS TO REOPEN

Litigants seeking to reopen a record must comply fully with section 2.326(b). We do not expect boards to search the pleadings for information that would satisfy our reopening requirements.

APPEALS, SCOPE

We do not consider arguments made for the first time on appeal.

CONTENTIONS, SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS

Whether a severe accident mitigation alternative (SAMA) is worthy of more detailed analysis in an Environmental Report or supplemental environmental impact statement hinges upon whether it may be cost-beneficial to implement. It would be unreasonable to trigger full adjudicatory proceedings based merely upon a suggested SAMA under circumstances in which the petitioners have done nothing to indicate the approximate relative cost and benefit of the SAMA.

MEMORANDUM AND ORDER

Pilgrim Watch has filed a petition for review of LBP-11-23, in which the Licensing Board denied Pilgrim Watch's motions to admit two proposed new contentions challenging Entergy's Environmental Report based on the recent nuclear events in Japan.[1] For the reasons set forth below, we deny the petition for review.

[1] Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Requests for Hearing on New Contentions Relating to Fukushima Accident) Sept. 8, 2011 (Sept. 23, 2011) (Petition).

I. BACKGROUND

In May 2006, Pilgrim Watch submitted a request for hearing and petition for leave to intervene in this proceeding on Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.'s (together, Entergy) license renewal application for the Pilgrim Nuclear Power Station.[2] The Board granted the hearing request and admitted two of Pilgrim Watch's proposed contentions — Contentions 1 and 3.[3] Contention 1 challenged Entergy's aging management program for buried piping, and Contention 3 challenged certain aspects of the severe accident mitigation alternatives (SAMA) analysis in Entergy's Environmental Report.[4] Prior to the hearing, however, the Board granted summary disposition of Contention 3 in favor of Entergy.[5] About 6 months later, the Board held an evidentiary hearing on Contention 1.[6] The Board formally closed the record on June 4, 2008,[7] and the Board later resolved Contention 1 in Entergy's favor.[8] The Board terminated the proceeding.[9]

In response to Pilgrim Watch's petition for review, we reversed and remanded a portion of Contention 3 to the Board for hearing.[10] We expressly stated that the remand was "limited by [that] ruling."[11] Pilgrim Watch has since filed requests that the Board admit six new contentions,[12] two of which are at issue here: (1) the "Fukushima Recriticality Contention," which argues that Entergy's SAMA analysis must account for a release of radioactive material for longer than the 24-hour plume considered in the SAMA analysis, and longer than the MACCS2

---

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

[3] LBP-06-23, 64 NRC 257, 348-49 (2006).

[4] *See id.* at 349; Hearing Request at 3.

[5] LBP-07-13, 66 NRC 131, 154 (2007); *id.* at 156-68 (Young, J., dissenting).

[6] *See* Tr. at 557-874 (Apr. 10, 2008).

[7] 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).

[8] LBP-08-22, 68 NRC 590, 610 (2008); *id.* at 611-53 (Young, J., concurring).

[9] *Id.* at 610.

[10] CLI-10-11, 71 NRC 287, 290 (2010).

[11] *Id.*

[12] Five of the contentions, including the contentions at issue here, were filed during the pendency of the remand. On July 19, 2011, the Board issued a partial initial decision resolving Contention 3 in Entergy's favor. LBP-11-18, 74 NRC 29 (2011), *petition for review denied,* CLI-12-1, 75 NRC 39 (2012). Since that time, Pilgrim Watch has filed an additional contention that challenges Entergy's SAMA analysis, also based on information relating to the events at Fukushima Dai-ichi. *See* Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima (Nov. 18, 2011).

code's 4-day maximum plume duration;[13] and (2) the "Fukushima Direct Torus Vent Contention," which argues that Entergy's SAMA analysis must account for an increased probability of containment failure and subsequent larger offsite consequences due to failure of vents designed to relieve containment pressure.[14]

A majority of the Board, with Judge Young concurring in part and dissenting in part, rejected the contentions.[15] The majority found that Pilgrim Watch failed to address or meet the standards for reopening a closed record, that Pilgrim Watch did not timely raise the information underpinning the contentions, and that its contentions did not meet the general requirements for contention admissibility.[16] Judge Young concurred in the result with regard to the Recriticality Contention, but would have admitted the Direct Torus Vent Contention.[17] In addition to her rulings on admissibility, however, Judge Young opined that Pilgrim Watch's contentions raised significant issues warranting *sua sponte* review.[18] Judge Young therefore recommended that we "consider having the Staff look more closely — take a 'hard look' — into the issues raised in these contentions, as well as any other issues arising out of the Fukushima Daiichi accident that relate particularly to Mark I BWR reactors, prior to any decision on the license renewal application," and supplement the Pilgrim FSEIS, as necessary.[19]

Pilgrim Watch timely filed the instant petition for review. Entergy and the Staff ask us to deny the petition.[20] The Commonwealth of Massachusetts also filed an answer to Pilgrim Watch's petition, requesting that we hold our decision on the petition in abeyance, or, in the alternative, strike one of Pilgrim Watch's ref-

---

[13] Pilgrim Watch Request for Hearing on Post Fukushima SAMA Contention (May 12, 2011) at 1-3 (Recriticality Contention).

[14] Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima (June 1, 2011) at 1 (Direct Torus Vent Contention). In the final supplemental environmental impact statement (FSEIS) for this proceeding, the Staff reviewed Entergy's SAMA analysis and concluded that the analysis was "sound." "Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 29, Regarding Pilgrim Nuclear Power Station" (Final Report), NUREG-1437 (July 2007), at 5-10 (ADAMS Accession No. ML072060320) (package) (FSEIS). *See generally id.* App. G.

[15] LBP-11-23, 74 NRC 287 (2011).

[16] *See id.* at 317-18, 323.

[17] *Id.* at 324 (Administrative Judge Ann Marshall Young, Concurring in Part and Dissenting in Part) (Judge Young Separate Statement).

[18] *Id.* at 367 (Judge Young Separate Statement).

[19] *Id.*

[20] *See* Entergy's Answer Opposing Pilgrim Watch's Petition for Review (Oct. 3, 2011) at 25 (Entergy Answer); NRC Staff's Answer to Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Requests for Hearing on New Contentions Relating to Fukushima Accident) (Oct. 3, 2011) at 2, 23 (Staff Answer). Pilgrim Watch filed replies to Entergy and the Staff. Pilgrim Watch Reply to Entergy's Answer to Pilgrim Watch's Petition for Review (Oct. 11, 2011); Pilgrim Watch Reply to NRC Staff's Answer to Pilgrim Watch's Petition for Review (Oct. 11, 2011).

erences.[21] Massachusetts requests that we refrain from ruling on Pilgrim Watch's petition until the Board rules on Massachusetts' new contention, out of concern that our issuing a decision first could be prejudicial to Massachusetts' interests.[22] Alternatively, Massachusetts requests that we strike Pilgrim Watch's reference to the Thompson Declaration, which was filed in support of Massachusetts' new contention.[23] The Board has issued a decision rejecting Massachusetts' proposed contention and related filings.[24] Massachusetts' stay request and motion to strike therefore are moot.[25]

---

[21] Commonwealth of Massachusetts Answer to Pilgrim Watch Petition for Review, Request to Stay Commission Decision or in the Alternative to Strike Reference to Massachusetts' Expert (Sept. 28, 2011) (Massachusetts Answer).

[22] *See id.* at 1-2. *See generally* Commonwealth of Massachusetts' Contention Regarding New and Significant Information Revealed by the Fukushima Radiological Accident (June 2, 2011).

[23] *See* Massachusetts Answer at 2; Petition at 5 n.3 (citing Declaration of Dr. Gordon R. Thompson in Support of Commonwealth of Massachusetts' Contention and Related Petitions and Motions (June 1, 2011); New and Significant Information from the Fukushima Daiichi Accident in the Context of Future Operation of the Pilgrim Nuclear Power Plant (June 1, 2011) at 17 (Thompson Report)). The Staff opposes Massachusetts' requests. NRC Staff's Answer to Commonwealth of Massachusetts' Request to Stay Commission Decision or in the Alternative to Strike Reference to Massachusetts' Expert (Oct. 11, 2011) at 6. Massachusetts moved to reply to the Staff's answer; the Staff also opposes this request. Commonwealth of Massachusetts Motion to Reply to NRC Staff Answer to Massachusetts' Request to Stay Commission Decision on Pilgrim Watch Appeal or in the Alternative to Strike Reference to Massachusetts' Expert (Oct. 17, 2011); NRC Staff's Answer in Opposition to Commonwealth of Massachusetts' Motion to Reply to Staff Response to Motion to Stay Commission's Decision on Pilgrim Watch's Appeal of Board Decision Denying Admission of Post-Fukushima Contentions (Oct. 27, 2011). We need not address these motions because this stay request and motion to strike are now moot.

[24] LBP-11-35, 74 NRC 701 (2011).

[25] In connection with its new contention, Massachusetts filed a waiver petition and conditional petition for rulemaking. Commonwealth of Massachusetts' Petition for Waiver of 10 C.F.R. Part 51, Subpart A, Appendix B or, in the Alternative, Petition for Rulemaking to Rescind Regulations Excluding Consideration of Spent Fuel Storage Impacts from License Renewal Environmental Review (June 2, 2011) (Conditional Petition for Rulemaking). Because the Board denied Massachusetts' waiver petition, Massachusetts asks that we now treat the request as a petition for rulemaking. *See* LBP-11-35, 74 NRC at 761; Conditional Petition for Rulemaking at 30-31. Massachusetts also requests that we stay the proceeding pending consideration of its rulemaking petition. *See* Commonwealth of Massachusetts' Conditional Motion to Suspend Pilgrim Nuclear Power Plant License Renewal Proceeding Pending Resolution of Petition for Rulemaking to Rescind Spent Fuel Pool Exclusion Regulations (June 2, 2011) at 1-2. Additionally, Massachusetts and Pilgrim Watch have appealed the Board's ruling in LBP-11-35. Commonwealth of Massachusetts' Notice of Appeal of LBP-11-35 (Dec. 8, 2011); Commonwealth of Massachusetts' Brief in Support of Appeal from LBP-11-35 (Dec. 8, 2011); Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Commonwealth of Massachusetts' Request for Stay, Motion for Waiver, and Request for Hearing on a New Contention Relating to the Fukushima Accident) Nov. 28, 2011 (Dec. 8, 2011). We will address these requests, and the appeals, separately.

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) the conduct of the proceeding involved a prejudicial procedural error; or
> (v) any other consideration which we may deem to be in the public interest.[26]

For threshold issues like contention admissibility, we give substantial deference to a board's determinations.[27] We will affirm decisions on the admissibility of contentions where we find no error of law or abuse of discretion.[28]

Motions to reopen the record are governed by 10 C.F.R. § 2.326 of our rules of practice. The movant must show that: (1) the motion is timely; (2) the motion addresses a "significant safety or environmental issue"; and (3) "a materially different result would be or would have been likely had the newly proffered evidence been considered initially."[29] "Each of the criteria must be separately addressed, with a specific explanation of why it has been met."[30]

The level of support required for a motion to reopen is greater than that required for a contention under the general admissibility requirements of 10 C.F.R. § 2.309(f)(1).[31] The motion to reopen "must be accompanied by affidavits that set forth the factual and/or technical bases for the movant's claim that the . . . [three criteria for reopening] have been satisfied."[32] "Evidence contained in [the] affidavits must meet the admissibility standards [in 10 C.F.R. § 2.337]."[33]

---

[26] 10 C.F.R. § 2.341(b)(4)(i)-(v). *Cf. South Texas Project Nuclear Operating Co.* (South Texas Project, Units 3 and 4), CLI-09-18, 70 NRC 859, 862 (2009) ("As a general matter, contentions filed after the initial petition are not subject to appeal pursuant to section 2.311.").

[27] *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 119 (2009).

[28] *See Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 220 (2011); *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 260 (2009).

[29] 10 C.F.R. § 2.326(a)(1)-(3).

[30] *Id.* § 2.326(b).

[31] *Compare id. with* 10 C.F.R. § 2.309(f)(1)(v).

[32] *Id.* § 2.326(b).

[33] *Id.*

That is, it must be "relevant, material, and reliable."[34] Further, the "[a]ffidavits must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised."[35] A litigant seeking to reopen a closed record necessarily faces a "heavy" burden.[36] After a record has closed, finality attaches to the hearing process, and after that point, only timely, significant issues will be considered.[37]

A. Applicability of the Reopening Standards

Pilgrim Watch first argues that the Board erred in applying the standards for reopening the record in section 2.326.[38] Pilgrim Watch asserts that section 2.326 comes into play only when a litigant seeks to raise issues that already have been the subject of litigation before the board.[39] As Pilgrim Watch would have it, the reopening standards do not apply because its new contentions are unrelated to the two previously admitted contentions.[40] Moreover, Pilgrim Watch argues that, based on its reading of our decision in the *Vermont Yankee* license renewal proceeding, our remanding a portion of Contention 3 held this proceeding open to permit the filing of "genuinely new" contentions during the pendency of the remand.[41] Therefore, Pilgrim Watch asserts, it need not move to reopen a proceeding that is open already.[42]

---

[34] *Id.* § 2.337(a).

[35] *Id.* § 2.326(b).

[36] *Oyster Creek,* CLI-09-7, 69 NRC at 287.

[37] *See* Final Rule: "Criteria for Reopening Records in Formal Licensing Proceedings," 51 Fed. Reg. 19,535, 19,539 (May 30, 1986) ("The purpose of this rule is not to foreclose the raising of important . . . issues, but to ensure that, once a record has been closed and all timely-raised issues have been resolved, finality will attach to the hearing process.").

[38] Petition at 7.

[39] *Id.* at 9.

[40] *Id.*

[41] *See* Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Requests for Hearing on Certain New Contentions) ASLBP No. 06-848-02-LR, August 11, 2011 (Aug. 26, 2011), at 4 (August 26 Petition) (citing *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 10 n.37 (2010)); Petition at 8 (incorporating arguments from the August 26 Petition). We discourage incorporating pleadings or arguments by reference; we expect briefs on appeal to be "comprehensive, concise, and self-contained." *Vogtle,* CLI-11-8, 74 NRC at 219. *See also Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-10-9, 71 NRC 245, 278 n.205 (2010). As a practical matter, Pilgrim Watch's August 26 Petition also is currently before us; we consider its discussion concerning the applicability of the reopening standards.

[42] Pilgrim Watch further argues that the National Environmental Policy Act (NEPA) supersedes our rules, such that we are not permitted to apply our reopening criteria when a litigant in an adjudicatory

(Continued)

Contrary to Pilgrim Watch's assertions, the reopening standards in section 2.326 expressly contemplate contentions that raise issues not previously litigated. In particular, subsection (d) anticipates circumstances where the motion to open "relates to a contention not previously in controversy among the parties."[43] In that circumstance, the movant must satisfy the balancing test in 10 C.F.R. § 2.309(c), in addition to the reopening standards.[44] Moreover, Pilgrim Watch misreads our decision in *Vermont Yankee.* Although we explained that the *proceeding* remained open during the pendency of a remand in that case, we made clear that the *record* remained closed and advised that any contentions raising "genuinely new" issues would have to be accompanied by a motion to reopen.[45] We further explained that once the *proceeding* closed, the mechanism to raise a new issue no longer would be a contention accompanied by a motion to reopen, but rather a request for action under 10 C.F.R. § 2.206 or a petition for rulemaking under 10 C.F.R. § 2.802.[46]

Vermont Yankee directly applies here. The Board closed the record in June 2008. Although we remanded a portion of Contention 3 to the Board for hearing in March 2010, our remand expressly was limited to the contention at issue. As in *Vermont Yankee,* the remand held the *proceeding* open, but only for the limited purpose of litigating the remanded contention.[47] Because Pilgrim Watch submitted its new contentions with the record already closed on all matters save Contention 3, Pilgrim Watch was obliged to address and satisfy the reopening standards in section 2.326. The Board unanimously found that the reopening standards apply in the circumstances presented here.[48]

---

proceeding attempts to raise "new and significant information." Petition at 12, 22. The cases that Pilgrim Watch cites do not support this proposition. Federal courts leave to an agency's discretion the manner in which the agency determines whether information is new or significant to warrant supplementation of an environmental impact statement, including the application of its procedural rules. *See Marsh v. Oregon Natural Resources Council,* 490 U.S. 360, 373-77 (1989); *Union of Concerned Scientists v. NRC,* 920 F.2d 50, 55-56 (D.C. Cir. 1990). In any event, even assuming that the information Pilgrim Watch presents in its new contentions is truly new, Pilgrim Watch has not demonstrated the significance of the information to the environmental review in this proceeding, for the reasons discussed below.

[43] 10 C.F.R. § 2.326(d).

[44] *Id.*; *Millstone,* CLI-09-5, 69 NRC at 124. *See also New Jersey Environmental Federation v. NRC,* 645 F.3d 220, 232-33 (3d Cir. 2011) ("To accept . . . [the] argument that the motion to reopen standard may never be applied in situations where a petitioner seeks to add previously unlitigated material would effectively render the regulation meaningless.").

[45] *Vermont Yankee,* CLI-10-17, 72 NRC at 10 n.37.

[46] *Id.*

[47] *See id. See generally* 10 C.F.R. § 2.318 (describing the commencement of a proceeding); *id.* § 2.1207 (describing the taking of evidence for the record in a Subpart L hearing); *id.* Part 2, App. B.II ("Model Milestones — 10 C.F.R. Part 2, Subpart L") (describing the schedule for Subpart L proceedings, including the closing of the record).

[48] *See* LBP-11-23, 74 NRC at 295; *id.* at 324 (Judge Young Separate Statement).

Moreover, in CLI-11-5, we noted that "our procedural rules contain ample provisions through which litigants may seek admission of new or amended contentions, seek stays of licensing board decisions, appeal adverse decisions, and file motions to reopen the record, as appropriate."[49] Therefore, we found that "[n]either new procedures nor a separate timetable for raising new issues related to the Fukushima events are . . . warranted."[50] Since issuing CLI-11-5, we have continued to review the Fukushima events and have provided the Staff direction on an appropriate regulatory response that ultimately will be applied to all affected nuclear plants.[51] We continue to believe that our procedural rules can be applied effectively to address proposed new or amended contentions related to the Fukushima events, and are aware of no new information that causes us to change our view.

Based upon the above, in our view, the Board properly applied the reopening standards to these contentions.

We next address the Board's analysis of each contention below.

B. The Recriticality Contention

Pilgrim Watch asserts that data from the Tokyo Electric Power Company (TEPCO) indicated the presence of high levels of I-131, a radioactive isotope of iodine, weeks after the Fukushima Dai-ichi Nuclear Power Station was severely damaged as a result of the March 11, 2011, Great East Japan Earthquake and tsunami.[52] "The only apparent explanation" for the increased levels of I-131, Pilgrim Watch asserts, is that "at least one of the [scrammed] reactors . . . is still critical."[53] According to Pilgrim Watch, the reactors at Fukushima Dai-ichi and Pilgrim are similar in design, thus the purported recriticality at Fukushima

---

[49] *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 170 (2011). In addition to the tools available to raise Fukushima-related issues in litigation, we note that traditional nonlitigation venues for public involvement such as petitions for rulemaking initiated under 10 C.F.R. § 2.802 and requests for action initiated under 10 C.F.R. § 2.206 remain available. We have also directed the Staff to engage with stakeholders regarding the appropriate regulatory response to the events at Fukushima. *See, e.g.,* Staff Requirements — SECY-11-0093 — Near-Term Report and Recommendations for Agency Actions Following the Events in Japan (Aug. 19, 2011) (ADAMS Accession No. ML112310021).

[50] *Callaway,* CLI-11-5, 74 NRC at 171.

[51] Staff Requirements — SECY-11-0124 — Recommended Actions to Be Taken Without Delay from the Near-Term Task Force Report (Oct. 18, 2011) (ADAMS Accession No. ML112911571) (Staff Requirements — SECY-11-0124).

[52] Recriticality Contention at 1-2. The contention reads: "[t]he Environmental Report is inadequate post Fukushima Daiichi because Entergy's SAMA analysis ignores new and significant lessons learned regarding the possible off-site radiological and economic consequences in a severe accident." *Id.* at 1.

[53] *Id.* at 13.

Dai-ichi constitutes "new and significant information" that must be considered in Entergy's Environmental Report.[54] Pilgrim Watch notes that the current SAMA analysis considers a 24-hour plume duration, and that the MACCS2 code used in the SAMA analysis is limited to a 4-day plume duration.[55] Based on what it believes to be occurring at Fukushima Dai-ichi, Pilgrim Watch maintains that Entergy must revise its SAMA analysis to account for the possibility that criticality will continue for weeks or months after a severe accident.[56] Pilgrim Watch argues that "[a]s releases extend into days, weeks[,] and even months, the offsite consequence[s] will be larger, and this will affect the [SAMA] cost-benefit analysis."[57] For support, Pilgrim Watch provides the "Statement of David Chanin," who represents that he has "read and reviewed the . . . proposed contention and fully support[s] all [of] its statements."[58]

The Board based its admissibility determination in large part on section 2.326(a)(1), which concerns the timeliness of the information underlying the contention.[59] It reasoned that definitive information on what occurred at Fukushima is not yet available, and characterized Pilgrim Watch's assumptions as "generalized."[60] The Board noted that studies published decades ago analyzed the potential for recriticality,[61] and found that the contention, in essence, challenged the inability of the MACCS2 code to model releases over a period longer than 4 days — a matter that Pilgrim Watch could have raised at the outset of this proceeding, in 2006.[62] Thus, the Board found that Pilgrim Watch had not satisfied section 2.326(a)(1) because the information underlying the Recriticality Contention was not timely raised.[63]

With regard to the remaining reopening factors, the Board found that Pilgrim Watch had not demonstrated the existence of a significant safety or environmental issue, as required by section 2.326(a)(2), nor had it demonstrated the likelihood of a materially different result had the information been considered initially,

---

[54] *Id.* at 1.
[55] *Id.* at 1-3.
[56] *See id.* at 7.
[57] *Id.*
[58] *Id.* at 20-21.
[59] *See* LBP-11-23, 74 NRC at 297-301.
[60] *Id.* at 297-98.
[61] *Id.* at 299.
[62] *See id.* at 298.
[63] *Id.* at 300. The Board further found that Pilgrim Watch had not raised an "exceptionally grave" issue, which would have overcome the contention's lateness, for the same reasons that the contention did not demonstrate a significant safety or environmental issue. *Id.* at 300-01.

as required by section 2.326(a)(3).[64] The Board determined that, at bottom, the Recriticality Contention suffered from a lack of support.[65] As the Board described it, the foundation of the contention was based on layers of speculation — speculation regarding recriticality at Fukushima, speculation regarding an increased probability of a longer-term release, speculation that longer-term releases necessarily have greater offsite consequences, and speculation that if a longer-term release were modeled in the SAMA analysis, additional cost-beneficial mitigation measures would be identified.[66] "Moreover," the Board reasoned, "Pilgrim Watch offer[ed] nothing to link the events at Fukushima to the Pilgrim plant other than the similarity of their designs."[67] For reasons of lateness and lack of support, the Board also found that the contention did not meet the good cause requirement in 10 C.F.R. § 2.309(c)(1)(i), or the general contention admissibility requirements in 10 C.F.R. § 2.309(f)(1)(i) through (vi).[68]

In its petition for review, Pilgrim Watch asserts that the Board majority incorrectly concluded that its contention was late.[69] Following the reasoning in Judge Young's separate statement, Pilgrim Watch explains that although it references information that predates the March 11, 2011 earthquake and tsunami, it does so to provide context for the new information arising from the events at Fukushima Dai-ichi.[70] And arguing that its contention raises significant issues, Pilgrim Watch alternates between environmental and safety significance, arguing that "'months of releases would be significant on some level,'" and that "'it is difficult to believe'" that inputs to the SAMA analysis would not change.[71]

All of the factors in section 2.326 must be met in order for a motion to reopen to be granted.[72] Here, there is some dispute regarding the timeliness of the information raised in the Recriticality Contention. We need not decide

---

[64] *See id.* at 301-04. *See also id.* at 324, 348 (Judge Young Separate Statement) (finding that although the contention met the requirements in subsections 2.326(a)(1) and (a)(2), it did not "measure up" to the requirements in subsection 2.326(a)(3)).

[65] *See id.* at 301-04. In addition, the Board found the support referenced in the Recriticality Contention, including the Statement of David Chanin, insufficient to satisfy the section 2.326(b) affidavit requirements. *Id.* at 303-04. *See also id.* at 348 (Judge Young Separate Statement).

[66] *See id.* at 302.

[67] *Id.*

[68] *See id.* at 306-09.

[69] *See* Petition at 10.

[70] *See id.* at 10-11. *See also* LBP-11-23, 74 NRC at 324-25 (Judge Young Separate Statement).

[71] Petition at 12 (quoting LBP-11-23, 74 NRC at 348 (Judge Young Separate Statement)).

[72] *See* 10 C.F.R. § 2.326(a) ("A motion to reopen a closed record to consider additional evidence will not be granted unless the . . . criteria [in subsections (1) through (3)] are satisfied."). Pilgrim Watch purposely did not address the reopening criteria, maintaining that reopening is not required. Failure to address the reopening criteria is enough to reject contentions that are filed after a record has closed. *See Vogtle,* CLI-11-8, 74 NRC at 221-22; *Millstone,* CLI-09-5, 69 NRC at 124-25.

the timeliness issue, however, because the Recriticality Contention fails on an independent ground also cited by the Board — lack of adequate support. Pilgrim Watch does not demonstrate, with the level of support required under section 2.326(b), that a materially different result would have been likely had the possibility of recriticality over a period longer than 24 hours, or even 4 days, been considered in the SAMA analysis initially.[73]

As the Board points out, Pilgrim Watch focuses on what it perceives to be the reason for increased levels of I-131, asserting that the only possible explanation is that recriticality is occurring.[74] But Pilgrim Watch concedes that information from the events at Fukushima Dai-ichi continues to evolve, stating that it will continue to provide updates as it receives additional information.[75] Indeed, the pleadings in this case demonstrate the iterative nature of the information;[76] as time passes, assumptions about what happened at Fukushima Dai-ichi continue to change. For example, based on affidavits attached to Entergy's answer to Pilgrim Watch's Recriticality Contention, Entergy asserts that "the evidence cited by Pilgrim Watch (the relatively higher observed levels of Iodine-131 . . .) is hardly conclusive that post-scram criticalities have occurred at any of the Fukushima reactors."[77] Entergy offers explanations other than recriticality for the increased levels of I-131.[78]

But even were we to assume that Pilgrim Watch's recriticality hypothesis is true, we still would find the support for Pilgrim Watch's Recriticality Contention lacking. As the Board observed, Pilgrim Watch made no attempt to link the events at Fukushima Dai-ichi, with sufficient support, to a material change in the Pilgrim

---

[73] *See* 10 C.F.R. § 2.326(a)(3).

[74] *See* Recriticality Contention at 3 (claiming that "[w]e know that criticality was continuing at Fukushima Unit 2 through April 27, 2011, and [for a] shorter duration at Unit 1, because of their continued post-scram high findings of I-131 reported by TEPCO"); *id.* at 13 (asserting that "[t]he only apparent explanation [for the reported I-131 levels] is that, after almost two months, at least one of the [scrammed] reactors . . . is still critical").

[75] *See id.* at 14; Petition at 17 n.11.

[76] *See* Pilgrim Watch Request for Leave to Supplement Pilgrim Watch Request for Hearing on a New Contention Regarding the Inadequacy of the Environmental Report, Post Fukushima Filed June 1, 2011 (Aug. 8, 2011) (seeking to supplement the Direct Torus Vent contention to incorporate excerpts from the NRC's Near Term Task Force Report). *See generally* "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) (transmitted to the Commission via "Near-Term Report and Recommendations for Agency Actions Following the Events in Japan," Commission Paper SECY-11-0093 (July 12, 2011) (ADAMS Accession No. ML11186A950) (package)) (Near-Term Report). Although Pilgrim Watch filed the motion to supplement the Direct Torus Vent Contention, it illustrates the evolution of the issues involved here.

[77] Entergy's Answer Opposing Pilgrim Watch Request for Hearing on Post-Fukushima SAMA Contention (June 6, 2011) at 17 (Entergy Answer to Recriticality Contention).

[78] *See id.*

SAMA analysis.[79] Other than generalized assertions that a longer release period will cause greater offsite consequences and subsequent changes in the SAMA analysis, Pilgrim Watch makes no attempt to indicate how the consequences would be greater than currently assumed, or what changes would occur.[80]

As Entergy points out, "[t]he duration of an accident release is not the controlling factor for a SAMA analysis."[81] Rather, the "type and amount of radionuclides, the heat energy in the plume associated with the release, the height of the release, the timing of the release, and the maximum plume duration considered," all factor into its evaluation of consequences.[82] Entergy explains that although its SAMA analysis considers a single plume over a 24-hour period, the source term used to represent the radioactive material released is greater than what has been released from Fukushima Dai-ichi Units 1, 2, and 3 combined.[83] Thus, Entergy illustrates the possibility that releases over weeks or months might be cumulatively smaller than a large single release over a short duration.[84] Pilgrim Watch offers nothing to contradict this analysis.[85] Without more than Pilgrim Watch's conclusory statements, there is no basis to establish how the purported recriticality at Fukushima Dai-ichi would affect the Pilgrim SAMA analysis, therefore showing that a materially different result would have occurred had this information been considered initially.[86] We find that the Board appropriately rejected the contention for failing to make the necessary link between the events

---

[79] LBP-11-23, 74 NRC at 302.

[80] *See* Petition at 9, 11-12 (hypothesizing that continuing criticality would be "'significant on some level'" (quoting LBP-11-23, 74 NRC at 348 (Judge Young Separate Statement))); Recriticality Contention at 7 (asserting that "[a]s releases extend into days, weeks[,] and even months, the offsite consequence[s] will be larger, and this will affect the cost-benefit analysis"). We find that Pilgrim Watch has not demonstrated the existence of a "significant" issue, for the same reason. *See* 10 C.F.R. § 2.326(a)(2).

[81] Entergy Answer to Recriticality Contention at 20.

[82] *Id.*

[83] *See id.* at 18-21; Entergy Answer at 18.

[84] *See* Entergy Answer to Recriticality Contention at 18-21.

[85] In its petition for review, Pilgrim Watch continues to assert that a longer release time will result in greater offsite consequences, with a resulting impact on the cost-benefit balance for the identified mitigation measures, still without support. *See* Petition at 9, 11-12.

[86] *See* 10 C.F.R. § 2.326(a)(3). The Recriticality Contention fails on another, related ground — failure to meet the affidavit requirements in section 2.326(b). Pilgrim Watch's "Statement of David Chanin" does not address the reopening criteria, nor — more importantly — does it "set forth the factual and/or technical bases for the movant's claim that the criteria . . . have been satisfied." *See id.* § 2.326(b). Mr. Chanin's statement merely provides that he has "read and reviewed the . . . contention and fully support[s] all [of] its statements." Recriticality Contention at 21. Litigants seeking to reopen a record must "comply fully with [section] 2.326(b)." *Vogtle,* CLI-11-8, 74 NRC at 222. We do not expect boards to search the pleadings for information that would satisfy our reopening requirements. *See id.*

at Fukushima Dai-ichi and the Pilgrim environmental review. Accordingly, we decline to disturb the Board's ruling on the Recriticality Contention.[87]

C. The Direct Torus Vent Contention

Like the Recriticality Contention, the Direct Torus Vent Contention also challenges Entergy's SAMA analysis.[88] Pilgrim Watch asserts that vents designed to relieve containment pressure did not function in Fukushima Dai-ichi Units 1, 2, and 3.[89] According to Pilgrim Watch, operators were reluctant to release radiation outside of the plant by opening the vents, but when operators later decided to operate the vents, they were unable to do so.[90] Pilgrim Watch argues that Entergy now must account for an increased probability of vent failure and subsequent containment failure, and asserts that Entergy must include a cost-benefit analysis of additional mitigation measures, including radiation filters, additional vents, and additional backup power supply.[91] Pilgrim Watch also argues that piping for Pilgrim's direct torus vent system is underground and susceptible to corrosion, which could disable the vent.[92] The consideration of an increased probability of vent failure and subsequent containment failure, Pilgrim Watch maintains, will justify additional mitigation measures.[93] Pilgrim Watch concludes that "[t]he offsite consequences [of a severe accident], without addressing the deficiencies [noted in its contention], would far outweigh the cost of mitigation[ ] to reduce

---

[87] For both the Recriticality and the Direct Torus Vent Contentions, Pilgrim Watch argues, for the first time, that "Pilgrim's SAMA analysis underestimates the extent of core damage ([core damage frequency]) by an order of magnitude." Petition at 5. Pilgrim Watch cites the Thompson Report, which is attached to Massachusetts' new contention. *Id.* at 5 n.3 (citing Thompson Report at 17). (This is the subject of Massachusetts' stay request/alternative motion to strike. *See supra* note 23.) We do not consider arguments made for the first time on appeal. *See South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 5 n.20 (2010). In any event, Pilgrim Watch does not discuss how this change to the core damage frequency, assuming it is true, would alter the SAMA analysis.

[88] Direct Torus Vent Contention at 1. The contention states: "[b]ased on new and significant information from Fukushima, the Environmental Report is inadequate post Fukushima Daiichi. Entergy's SAMA analysis ignores new and significant issues raised by Fukushima regarding the probability of both containment failure, and subsequent larger off-site consequences due to failure of the direct torus vent . . . to operate." *Id.*

[89] *Id.* at 6.

[90] *Id.* at 6, 11.

[91] *See id.* at 2, 9, 13, 17 & n.17, 20.

[92] *Id.* at 20-21.

[93] *Id.* at 5.

risk of containment failure."[94] As part of the support for its contention, Pilgrim Watch attaches the "Affidavit of Arnold Gundersen."[95]

For reasons similar to its rejection of the Recriticality Contention, the Board rejected Pilgrim Watch's Direct Torus Vent Contention.[96] The Board determined that Pilgrim Watch had not met any of the three reopening requirements, finding that the information on which the contention was based already had been analyzed in Entergy's license renewal application or concerned "issues that have been widely recognized for many years."[97] The Board again observed that Pilgrim Watch's contention was based on speculation, with "nothing to link either the asserted failure of the Fukushima [direct torus vents] to operate . . . [with] what might reasonably be expected of the [direct torus vents] at Pilgrim," and nothing "to support [Pilgrim Watch's] implication that adding this possibility would alter the probability [of direct torus vent] failure and thereby materially alter the SAMA cost-benefit analysis."[98] For the same reasons, the Board also found that Pilgrim Watch had not met the timeliness and contention admissibility requirements of subsections 2.309(c)(1) and 2.309(f)(1).[99]

Pilgrim Watch contends that the Board erred in finding the Direct Torus Vent Contention late.[100] According to Pilgrim Watch, Entergy's SAMA analysis "clearly assumed that the [direct torus vent] would work, and that theoretical assumption was the underpinning of its assumed probabilities in accident sequences."[101] In other words, Pilgrim Watch argues, the experience at Fukushima is a "real-world test" of what was known only "'theoretically'" before, thus making it new and significant information that must now be considered in the SAMA analysis.[102] Arguing that the Board incorrectly found that Pilgrim Watch had not established an environmentally significant issue, Pilgrim Watch generally references the safety significance of containment failure.[103] In addition, Pilgrim Watch faults the Board for not finding in its favor on the "materially different result" prong of the reopening standards, arguing that it "knows for certain that Pilgrim's SAMA analysis underestimated, by a large order of magnitude, probable

---

[94] *Id.* at 29.

[95] *See id.* at 33-34.

[96] *See* LBP-11-23, 74 NRC at 315.

[97] *See id.*

[98] *Id.* The Board also found fault with the Gundersen Affidavit, finding it insufficient to satisfy the requirements of section 2.326(b). *Id.* at 316-17.

[99] *See id.* at 317-20.

[100] *See* Petition at 13-17.

[101] *Id.* at 14.

[102] *Id.* at 15 (citing LBP-11-23, 74 NRC at 325 (Judge Young Separate Statement)).

[103] *See id.* at 17-19.

releases in a severe accident based on real experience."[104] Pilgrim Watch maintains that consideration of an increased probability of vent failure and subsequent containment failure will change the SAMA analysis and possibly lead to delay of license issuance until the problems raised in this and the Recriticality Contention have been fixed.[105]

As is the case with the Recriticality Contention, we need not address the timeliness of the information raised in the Direct Torus Vent Contention. The Direct Torus Vent Contention fails on an independent ground. We agree with the Board that Pilgrim Watch has not demonstrated, with the level of support required by our rules, that a materially different result would have been likely had the contention been considered initially, as required by section 2.326(a)(3).

Pilgrim Watch provides nothing to back up its generalized claims that the SAMA analysis underestimates the consequences of a severe accident "by a large order of magnitude," nor does Pilgrim Watch offer any detail as to how an unspecified increase in consequences would lead to the identification of additional cost-beneficial mitigation measures.[106] Although Pilgrim Watch asserts in its petition that Entergy "clearly assumed" that the direct torus vent would work, Pilgrim Watch is, on this point, simply incorrect. As Entergy notes in its answer, the SAMA analysis "explicitly analyzes all of the issues that Pilgrim Watch claims are significant from Fukushima regarding [this] contention (i.e., pressure buildup, operator error and [direct torus vent] failure, hydrogen explosions, containment breach, and large radioactive releases)."[107] In its Direct Torus Vent Contention, Pilgrim Watch acknowledged that Entergy's SAMA analysis considered the possibility of an operator's failure to open the direct torus vent, but asserted that Entergy now must consider an operator's affirmative decision not to open the vent.[108] But Pilgrim Watch does not explain how an operator's failure to open the vent is any different from a decision not to open it. The result in either case is a closed vent, a possibility that Entergy already has included in the SAMA analysis.[109] In our view, the Board appropriately rejected the contention because Pilgrim Watch does not show the likelihood of a material change to the SAMA

---

[104] *Id.* at 20.

[105] *Id.* at 19.

[106] *See* LBP-11-23, 74 NRC at 314-20.

[107] Entergy Answer at 18.

[108] *See* Direct Torus Vent Contention at 23.

[109] *See* Entergy Answer at 18. Pilgrim Watch also argues that Entergy must consider vent failure due to other contributors, including corrosion in the buried pipes that make up the direct torus vent system, lack of vent filters, lack of redundant battery power, and lack of redundant vents. *See* Direct Torus Vent Contention at 9, 13, 17 & n.17, 20-21. But again, Pilgrim Watch does not confront the existing SAMA analysis.

analysis, particularly where Entergy already has considered the issues raised in the contention.[110]

Pilgrim Watch's remaining claims amount to unsupported assertions that Fukushima provides different information, that the probability of vent failure has increased, and that the SAMA analysis, when considering these facts, is "certain" to change.[111] However, such bare assertions are insufficient to demonstrate a genuine dispute on a material issue of law or fact under our general contention admissibility requirements in section 2.309(f)(1)(vi), let alone a motion to reopen under section 2.326, which sets a higher evidentiary standard.[112] We therefore decline to disturb the Board's ruling on the Direct Torus Vent Contention.[113]

---

[110] For the same reason, Pilgrim Watch has not demonstrated the existence of a "significant" issue, as required by 10 C.F.R. § 2.326(a)(2).

[111] Pilgrim Watch claims that the SAMA analysis now must consider additional mitigation measures like vent filters, additional vents, and additional vent backup power, but fails to approximate the relative costs and benefits of these proposed measures. *See Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 11-12 (2002) ("[W]hether a SAMA . . . is worthy of more detailed analysis in an Environmental Report or SEIS hinges upon whether it may be cost-beneficial to implement . . . . It would be unreasonable to trigger full adjudicatory proceedings based merely upon a suggested SAMA under circumstances in which the Petitioners have done nothing to indicate the approximate relative cost and benefit of the SAMA."). At most, referencing the existing analysis in Entergy's Environmental Report, Pilgrim Watch generally asserts that the cost of a filter is $3,000,000, without approximating the corresponding benefits of a filtered vent. *See* Direct Torus Vent Contention at 17, 32. And Pilgrim Watch vaguely asserts that "more SAMAs (such as [direct torus vent] filters and redundant vent lines) are likely to be justified and the risk for the public will be reduced significantly" if Entergy revises its SAMA analysis. *Id.* at 22. *See also id.* at 30 (asserting that "the 'fixes' [Pilgrim Watch] recommend[s] would be cost effective"). These statements fall short of the support required both by 10 C.F.R. §§ 2.309(f)(1)(v) and 2.326. *See generally* FSEIS at G-25 (explaining that in response to requests for additional information from the Staff, Entergy revised the cost-benefit estimates for filtered vents, which then satisfied the Staff's concerns).

[112] *See* 10 C.F.R. § 2.326(b). In a related vein, similar to the Recriticality Contention, the Direct Torus Vent Contention fails because the "Affidavit of Arnold Gundersen" does not "comply fully" with section 2.326(b). *See id.; Vogtle,* CLI-11-8, 74 NRC at 222. Mr. Gundersen states that he supports the content of Pilgrim Watch's request, and concludes, without explanation, that "[t]he explosions at Fukushima show that Pilgrim's [direct torus vent] is unlikely to save Pilgrim's containment and huge amounts of radiation will be released. The subsequent offsite costs incurred from such an event justify additional mitigations to reduce the risk of [vent] failure and loss of containment." Direct Torus Vent Contention at 34. These statements are insufficient to meet the section 2.326(b) requirement that the affidavit "set forth the factual and/or technical bases for the movant's claim that the [reopening criteria] have been satisfied."

[113] Pilgrim Watch recently requested to supplement its petition based on a December 9, 2011 report issued by Congressman Edward Markey. Pilgrim Watch's Request to Supplement Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Requests for Hearing on Certain New Contentions) ASLBP No. 06-848-02-LR, August 11, 2011 (Filed August 26, 2011) and Pilgrim

(Continued)

D. Judge Young's Recommendation

As discussed above, Pilgrim Watch has not made a sufficient case to litigate its two contentions in this adjudication; for those reasons, we decline to direct the Board to further address them in this adjudication. We otherwise decline to take up Judge Young's recommendation and exercise our supervisory authority to direct the Staff to consider separately the issues raised by Pilgrim Watch's contentions prior to any decision on the license renewal application.[114] We have considered expressly the question whether our Fukushima lessons-learned review must be completed prior to a decision on any pending license renewal application, and have concluded that any rule or policy changes we may make as a result of our post-Fukushima review may be made irrespective of whether a license renewal application is pending, or has been granted. Particularly with respect to license renewal, we observed that our ongoing regulatory and oversight processes provide reasonable assurance that each plant continues to comply with its "'current licensing basis,' which can be adjusted by future Commission order or by modification to the facility's operating license outside the renewal proceeding."[115]

Outside of this proceeding, our review of the events at the Fukushima Dai-ichi Nuclear Power Station is ongoing; that review includes not only a number of

---

Watch's Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Requests for Hearing on New Contentions Relating to Fukushima Accident) Sept. 8, 2011 (Filed September 23, 2011) (Dec. 12, 2011). Entergy and the Staff oppose Pilgrim Watch's request. Entergy's Answer Opposing Pilgrim Watch's Request to Supplement Petitions for Review (Dec. 22, 2011); NRC Staff's Answer to Pilgrim Watch's Request to Supplement Petition for Review of LBP-11-20 and LBP-11-23 (Dec. 22, 2011). Pilgrim Watch seeks leave to reply to Entergy's and the Staff's answers. Pilgrim Watch Reply to Entergy's and NRC Staff's December 22, 2011 Answers Opposing Pilgrim Watch's Request to Supplement Petitions for Review of LBP-11-20 and LBP-11-23 (Dec. 29, 2011). Entergy filed an answer in opposition; Pilgrim Watch also seeks leave to reply to that answer. Entergy's Answer Opposing Pilgrim Watch's Motion to File a Reply to Entergy's and NRC Staff's Answers (Jan. 9, 2012); Pilgrim Watch Reply to Entergy's Answer Opposing Pilgrim Watch's Motion to File a Reply to Entergy's and NRC Staff's Answers (Jan. 14, 2012). We do not consider Pilgrim Watch's replies because Pilgrim Watch has not shown compelling circumstances. *See* 10 C.F.R. § 2.323(c). And Pilgrim Watch has not explained how the Markey Report — which relates to internal NRC governance — supports its contentions; we deny its request. On February 15, 2012, Pilgrim Watch again requested to supplement its petition, this time based on an Associated Press article. Supplement to Pilgrim Watch Petitions for Review of LBP-12-01, LBP-11-23 (Feb. 15, 2012). Again, Pilgrim Watch fails to explain how this article, which concerns public access to a report detailing a possible "worst-case scenario" at Fukushima Dai-ichi, supports, or even relates to, its contentions. Accordingly, we also deny this request.

[114] *See* LBP-11-23, 74 NRC at 367 (Judge Young Separate Statement).

[115] *Callaway,* CLI-11-5, 74 NRC at 164 (citing Final Rule: "Nuclear Power Plant License Renewal," 56 Fed. Reg. 64,943, 64,949, 64,953-54 (Dec. 13, 1991)). The Board issued LBP-11-23 one day before our decision in CLI-11-5.

generic issues, but also certain "issues arising out of the Fukushima Daiichi accident that relate particularly to Mark I BWRs [Boiling Water Reactors]."[116] Recently, we approved the Staff's recommended actions to be taken without delay from the Near-Term Task Force.[117] Although we have made, and continue to make, significant progress in identifying and implementing lessons learned and prioritizing regulatory actions, the NRC continues to analyze the Fukushima events, to engage stakeholders, and to develop further recommendations.[118] We have in place well-established regulatory processes by which to impose any new requirements or other enhancements that may be needed following completion of regulatory actions associated with the Fukushima events.[119] All affected nuclear plants ultimately will be required to comply with NRC direction resulting from lessons learned from the Fukushima accident, regardless of the timing of issuance of the affected licenses.

III. CONCLUSION

Pilgrim Watch asserts that the events at Fukushima Dai-ichi shed new light on the evaluation of alternatives to mitigate severe accidents in Entergy's En-

---

[116] LBP-11-23, 74 NRC at 367 (Judge Young Separate Statement). The Near-Term Report addresses a number of issues not specific to Mark I BWRs, but also addresses reliable hardened vents, an issue specific to Mark I and II BWRs, in section 4.2.2. *See* Near-Term Report at 39-41.

[117] *See* Staff Requirements — SECY-11-0124. *See generally* "Recommended Actions to Be Taken Without Delay from the Near-Term Task Force Report," Commission Paper SECY-11-0124 (Sept. 9, 2011) (ADAMS Accession Nos. ML11245A127, ML11245A144) (paper and attachment); Staff Requirements — SECY-11-0137 — Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned (Dec. 15, 2011) (ADAMS Accession No. ML113490055) (Prioritization of Recommended Actions, SRM); "Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned," Commission Paper SECY-11-0137 (Oct. 3, 2011) (ADAMS Accession No. ML11272A111) (package) (Prioritization of Recommended Actions, SECY-11-0137).

[118] These efforts include the engagement of internal and external stakeholders. *See* Staff Requirements — COMWDM-11-0001/COMWCO-11-0001 — Engagement of Stakeholders Regarding the Events in Japan (Aug. 22, 2011) (ADAMS Accession No. ML112340693). For example, the Staff's prioritization of Near-Term Task Force recommended actions included a discussion of additional recommendations for "further consideration and potential prioritization" that stakeholders, as well as the Staff, have identified. *See* Prioritization of Recommended Actions, SECY-11-0137, at 4-5. *See also* Prioritization of Recommended Actions, SRM, at 2. (Although the Staff included "[f]iltration of containment vents" — one of the SAMAs that Pilgrim Watch proposes in its Direct Torus Vent Contention — as an item for further consideration and potential prioritization, the Staff noted that its "assessment of these issues is incomplete at this time." Prioritization of Recommended Actions, SECY-11-0137, at 5. We acted on the Staff's recommendation and provided direction regarding "the analysis and interaction with stakeholders needed to inform a decision" on the filtered vents issue. Prioritization of Recommended Actions, SRM, at 2.)

[119] *See Callaway,* CLI-11-5, 74 NRC at 162-63, 166.

vironmental Report. Ultimately, however, Pilgrim Watch fails to demonstrate, with sufficient support, the implication of the Fukushima events on the existing environmental mitigation analysis for the Pilgrim Nuclear Power Station. As discussed above, we *deny* Pilgrim Watch's petition for review.

IT IS SO ORDERED.[120]

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 22d day of February 2012.

[120] Commissioner Apostolakis did not participate in this matter.

Chairman Gregory B. Jaczko, Dissenting

I dissent from the majority decision, upholding the Board's application of the standard reserved for reopening a closed hearing record, in 10 C.F.R. § 2.326(a), to Pilgrim Watch's Fukushima contentions. Fundamentally, I believe that the reopening standard is not appropriate for Fukushima-related contentions. Therefore, I believe the admissibility of these contentions should have been considered solely under the criteria applicable to nontimely filings in 10 C.F.R. § 2.309(c). As the majority observes, the higher threshold for contention admissibility imposed for reopening a record places a heavy burden on a litigant seeking the admission of new contentions. In my view, this more stringent contention admissibility standard is not appropriate for contentions arising from the unprecedented and catastrophic accident at Fukushima.

We are in the process of conducting a comprehensive review of the Fukushima events from which we have learned, and will continue to learn, new information and gain new insights on the safety of our nuclear fleet. Given the significance of that accident and the potential implications for the safety of our nuclear reactors, we should allow members of the public to obtain hearings on new contentions on emerging information if they satisfy our ordinary contention standards. Applying more stringent admissibility standards to Fukushima contentions because a Board has taken the administrative action of closing the record on an unrelated hearing will lead to inconsistent outcomes and, more importantly, unfairly limit public participation in these important safety matters. When we considered whether our modifications to our adjudicatory processes should be modified for Fukushima-related contentions, we said we would monitor our proceedings and issue additional guidance as appropriate.[1] I believe that we should do so now and direct that the reopening criteria should not be applied.

[1] *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 171 (2011).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of **Docket No. 40-8943**
(License Renewal)

CROW BUTTE RESOURCES, INC.
(In Situ Leach Facility, Crawford,
Nebraska) **February 22, 2012**

NRC STAFF REVIEW

The Board lacks the authority to supervise the Staff's review.

DELAY OF PROCEEDINGS

Absent compelling circumstances, the Staff is expected to accord sufficient priority and devote sufficient resources to meeting its estimated safety and environmental review schedules.

MEMORANDUM AND ORDER

This proceeding stems from the November 27, 2007 license amendment application of Crow Butte Resources, Inc. (Crow Butte), requesting renewal of source materials license SUA-1534 for its *in situ* leach uranium recovery facility

in Crawford, Nebraska.[1] In November 2008, the Atomic Safety and Licensing Board granted the hearing requests of the Oglala Sioux Tribe (the Tribe) and several consolidated petitioners.[2] Since that time, the adjudicatory portion of this proceeding has seen little activity, while the Board and parties await issuance of the Staff's review documents. In this vein, the Board recently issued a Memorandum bringing certain issues to our attention.[3]

The Board raises essentially two concerns. The first is the protracted nature of this proceeding.[4] Originally, the Staff estimated that it expected to complete the Safety Evaluation Report (SER) in the summer or fall of 2009, and the final environmental review document in December 2009.[5] According to the Staff's latest estimates, the SER will not be issued until April 2012, and the final environmental review document is expected to be completed in August 2012.[6] Provided this schedule holds, a hearing on the license renewal application will be held approximately 4 years after the Board granted the hearing requests.[7]

The Board's second, related concern is that the significant delays in the Staff's review potentially deprive the Tribe of its hearing rights under section 189a of the Atomic Energy Act of 1954, as amended.[8] The license, which was set to expire on February 28, 2008, is in timely renewal; *in situ* leach recovery operations

---

[1] *See generally* Notice of Opportunity for Hearing, Crow Butte Resources, Inc., Crawford, NE, In Situ Leach Recovery Facility, and Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information (SUNSI) for Contention Preparation, 73 Fed. Reg. 30,426 (May 27, 2008).

[2] LBP-08-24, 68 NRC 691 (2008), *aff'd in part and rev'd in part,* CLI-09-9, 69 NRC 331 (2009).

[3] LBP-11-30, 74 NRC 627 (2011) (Board Memorandum). No party sought our leave to respond to the Board Memorandum, although Crow Butte submitted a letter to the Board providing its views. Smith, Tyson R., Winston & Strawn LLP, Letter to the Administrative Judges (Nov. 4, 2011) (Crow Butte Letter).

[4] LBP-11-30, 74 NRC at 631-32.

[5] Klukan, Brett Michael Patrick, Counsel for the NRC Staff, Letter to the Administrative Judges (Jan. 15, 2009).

[6] Klukan, Brett Michael Patrick, Counsel for the NRC Staff, Letter to the Administrative Judges (Feb. 8, 2012). Since the issuance of the Board Memorandum, the Staff's schedule for the safety review has slipped further still. At the time of the Board Memorandum, the Staff estimated issuance of the final SER by December 2011. Klukan, Brett Michael Patrick, Counsel for the NRC Staff, Letter to the Administrative Judges (Oct. 14, 2011).

[7] The Board previously expressed its concern over scheduling delays. The Board sought from the Staff a report "providing an explanation of the significant and continuing delays in completing the technical review documents." Memorandum (Requesting Report from the NRC Staff) (Mar. 29, 2011) at 4 (unpublished). On this point, the Board observes, "We have previously requested the Staff to explain these considerable delays, but our request has stanched nothing — the delays continue." LBP-11-30, 74 NRC at 632.

[8] *See* LBP-11-30, 74 NRC at 631-32; 42 U.S.C. § 2239(a).

continue on the site pending a decision on the license renewal application.[9] In particular, the Board cites an admitted contention of the Tribe's (Environmental Contention D, one of several admitted contentions in the proceeding), which claims that the ongoing uranium recovery operation "is contaminating the water on the reservation upon which its members reside."[10] In the Board's view, the "extreme delay" in the completion of the Staff's review, and therefore the resulting delay in hearing the Tribe's claim "of serious physical injury stemming from Crow Butte's operations," raises statutory compliance issues.[11] Recognizing its lack of authority to supervise the Staff's review, the Board referred its concerns to us.[12]

Although the merits of the Tribe's Environmental Contention D have not yet been litigated, the Board appears concerned that the delay in the proceeding is resulting in harm now to Tribal members, from possible contamination of water going to the Pine Ridge Reservation.[13] If the Tribe is of the view that its members face imminent harm from ongoing site operations, then it may, at any time, file a petition for enforcement action (which could include a request to suspend or otherwise modify the license) pursuant to 10 C.F.R. § 2.206. Moreover, if the NRC Staff grants the renewed license before the hearing takes place, the Tribe may seek a stay of the Staff's action.[14]

That said, the Board rightly is concerned about the lengthy delays associated with the Staff's review of Crow Butte's license renewal application. The Staff has, at various points in the proceeding, provided reasons for schedule slippage. With

---

[9] *See* 10 C.F.R. § 40.42(a) (providing that a specific license expires on the expiration date stated in the license, unless the licensee has filed a request for renewal not less than 30 days prior to the expiration date, and providing that a license in timely renewal expires on the day on which the NRC makes a final determination to deny the request, or, if the determination states an expiration date, then the stated expiration date). *See generally* Request for License Renewal (Nov. 27, 2007) (ADAMS Accession No. ML073470645).

[10] LBP-11-30, 74 NRC at 628. *See also id.* at 631. Environmental Contention D asserts:

> In [section] 7.4.3 [Crow Butte's] [a]pplication incorrectly states there is no communication among the aquifers, when in fact, the Basal Chadron aquifer, where mining occurs, and the aquifer[ ] which provides drinking water to the Pine Ridge Indian Reservation, communicate with each other, resulting in the possibility of contamination of the potable water.

Request for Hearing and/or Petition to Intervene (July 28, 2009, docketed July 29, 2008) at 18 (Tribal Petition). *See also id.* at 19-21; LBP-08-24, 68 NRC at 725-27; CLI-09-9, 69 NRC at 352-54.

[11] LBP-11-30, 74 NRC at 631.

[12] *Id.* at 632-33 (citing *Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 67 (2004)).

[13] *See id.* at 631 ("At this stage of the proceedings, it matters not that the Tribe might be able to establish, once a hearing is eventually held, that its claim is meritorious and, therefore, its members might well have been sustaining additional grievous injury while the Staff conducted its environmental review . . . which has, to date, been extended twelve separate times.").

[14] *See* 10 C.F.R. § 2.1213.

respect to the environmental review, it appears that the principal cause for delay is the Staff's completion of required consultation activities pursuant to section 106 of the National Historic Preservation Act (NHPA).[15] The Board is particularly frustrated with this delay, observing that it finds "no reason why the identification of historic properties should not have been completed years ago."[16] Regarding the safety review, the Staff has cited as bases for delay the time needed to resolve requests for additional information, as well as ongoing discussions with Crow Butte as to "the possible preclusion of certain anticipated license conditions."[17] In addition, the Staff recently stated that it "cannot finalize the SER before receiving from [Crow Butte] certain revisions to the Technical Report" associated with the application.[18]

We appreciate the Board's bringing its concern to our attention, but we do not agree with its suggestion that the Tribe may have been deprived of its hearing rights. First, the record before us shows that, while this proceeding undoubtedly has been slow to get off the ground, the Staff has been conducting the necessary safety and environmental reviews on an ongoing basis. The Staff's status reports reflect that, to complete both the safety and environmental reviews, the Staff has requested considerable information from Crow Butte and other stakeholders bearing on health and safety issues. Its efforts appear reasonable.[19] The Staff also has been conducting legally required, and hopefully productive, NHPA consultations with the Tribe itself (among others).[20] Further, the Staff, at the

---

[15] NRC Staff's Submittal in Response to March 29, 2011 Memorandum Requesting Report from the NRC Staff (Apr. 15, 2011) at 4 (April 15 Staff Status Report); Klukan, Brett Michael Patrick, Counsel for the NRC Staff, Letter to the Administrative Judges (Oct. 14, 2011), at 1 (noting that the NHPA review "is taking significantly longer than previously anticipated by the Staff to complete").

[16] LBP-11-30, 74 NRC at 632 & n.25.

[17] April 15 Staff Status Report at 2.

[18] Klukan, Brett Michael Patrick, Counsel for the NRC Staff, Letter to the Administrative Judges (Nov. 16, 2011).

[19] The Board observes that Crow Butte "had every incentive to endeavor to put off the hearing for as long as possible." LBP-11-30, 74 NRC at 632. In its letter to the Board, counsel for Crow Butte expresses its interest in timely and efficient issuance of NRC Staff review documents and resolution of pending contentions, and states that it has acted promptly to obtain information requested by the NRC. Crow Butte Letter at 2. We expect Crow Butte to respond expeditiously and accurately to Staff inquiries.

[20] Indeed, the Tribe appears to be actively involved in the Staff's NHPA efforts. *See, e.g.,* Hsueh, Kevin, Office of Federal and State Materials and Environmental Management Programs, NRC, Letter to James Laysbad, Tribal Historic Preservation Officer, Oglala Sioux Tribe (Oct. 28, 2011) (ADAMS Accession No. ML112980555) (explaining the NHPA outreach process); Hsueh, Kevin, Office of Federal and State Materials and Environmental Management Programs, NRC, Letter to Tribal Historic Preservation Officers (Jan. 19, 2012) (ADAMS Accession No. ML120320430) (package) (extending an invitation to attend a February 14-15, 2012, government-to-government meeting as part of ongoing NHPA § 106 consultations).

Board's direction, consistently has provided monthly status reports keeping the Board and parties apprised of its review schedule and offering explanations for delays. Significantly, the Tribe has not asserted at any point that it has been prejudiced, or otherwise harmed, by delay.[21]

Looking ahead, and given the delays that already have taken place in this proceeding, we expect that, "absent compelling circumstances, the Staff will accord sufficient priority and devote sufficient resources to meeting its current estimated safety and environmental review schedule."[22]

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 22d day of February 2012.

---

[21] At least some of the activities undertaken by the Staff contributing to the delay ultimately may respond to concerns articulated by the Tribe. As indicated in the text, the Staff has undertaken efforts to perform NHPA consultation activities with a number of interested entities, including the Tribe. As the Board noted, the Tribe proffered Environmental Contention B, which asserted the Staff's failure to consult with the Tribe regarding cultural resources that may be in the license renewal area, and thereby its failure to fulfill its statutory obligations under the NHPA. Board Memorandum, LBP-11-30, 74 NRC at 632 n.25. *See generally* Tribal Petition at 13-15; LBP-08-24, 68 NRC at 719-23 (admitting the contention); CLI-09-9, 69 NRC at 348-51 (reversing the Board's decision and finding the contention premature).

[22] *Shieldalloy Metallurgical Corp.* (Decommissioning of the Newfield, New Jersey Facility), CLI-09-1, 69 NRC 1, 5 (2009) (responding to the Board's Memorandum of concern regarding, among other things, significant delays in the adjudicatory proceeding).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Michael C. Farrar, Chairman
Nicholas G. Trikouros
Lawrence G. McDade

In the Matter of **Docket No. 70-3098-MLA**
(ASLBP No. 07-856-02-MLA-BD01)

SHAW AREVA MOX SERVICES
(Mixed Oxide Fuel Fabrication Facility)

February 9, 2012
(January 7, 2013, abridged adaptation for publication)

SUMMARY DISPOSITION: TREATING MOTION TO DISMISS AS MOTION FOR SUMMARY DISPOSITION

The Board proceeded with this motion to dismiss an admitted contention by analogy to Rule 12(d) of the Federal Rules of Civil Procedure. That Rule permits courts to treat motions to dismiss for failure to state a claim upon which relief can be granted (under Rule 12(b)(6)) and motions for judgment on the pleadings (under Rule 12(c)) as motions for summary judgment under Rule 56 if "matters outside the pleadings are presented to and not excluded by the court." Fed. R. Civ. P. 12(d).

MEMORANDUM AND ORDER
(Dismissing Contention 4)

I. INTRODUCTION

This matter arises from the application of Shaw AREVA MOX Services (Applicant) for a license to operate a Mixed Oxide Fuel Fabrication Facility (MFFF) that is currently being constructed for the U.S. Department of Energy (DOE) on the Savannah River Site.[1] Blue Ridge Environmental Defense League, Nuclear Watch South, and the Nuclear Information and Resource Service (collectively, Intervenors) intervened and proffered four admissible contentions.[2] Those contentions were denominated number 4 (dealing with Applicant's ability to safely store liquid high-alpha waste (HAW) if Applicant is unable to transfer this waste out of its facility) and numbers 9, 10, and 11 (dealing with the adequacy of the Applicant's revised Fundamental Nuclear Material Control Plan).[3]

After the NRC Staff completed its review of the application and its amendments, the Board's September 9, 2011 Order restated the timetable for submitting evidentiary statements and prehearing motions on all four contentions.[4] In accordance with this timetable, on September 29, 2011, Applicant filed its initial evidentiary statement, including direct testimony and exhibits on all contentions.[5] In response, Intervenors and the Staff timely filed their respective evidentiary statements, including direct testimony and exhibits, on October 19, 2011.[6]

Although the Staff's submission addressed all four contentions, Intervenors' submission addressed only Contentions 9, 10, and 11.[7] Thereafter, on October 31, 2011, Applicant moved to dismiss Contention 4 and to dismiss and to strike

---

[1] Mixed Oxide Fuel Fabrication Facility License Application (Sept. 27, 2006) (ADAMS Accession No. ML062750195).

[2] *See* LBP-07-14, 66 NRC 169, 214 (2007) (admitting Contention 4 in its original form); LBP-08-11, 67 NRC 460, 464, 487-88 (2008) (admitting revised Contention 4); LBP-11-9, 73 NRC 391, 414 (2011) (admitting Contentions 9, 10, and 11).

[3] *See* LBP-08-11, 67 NRC at 487-88 (text of revised Contention 4); LBP-11-9, 73 NRC at 394-95 (describing subject of challenges in Contentions 9, 10, and 11).

[4] *See* Licensing Board Order (Summarizing Determinations Related to August 31, 2011 Teleconference) (Sept. 9, 2011), App. 1 (unpublished) [hereinafter Timetable Order].

[5] *Id.,* App. 1, step 3; Shaw AREVA MOX Services, LLC's Initial Statement of Position on Contentions 4, 9, 10 and 11 (Sept. 29, 2011).

[6] Timetable Order, App. 1, step 4; Intervenors' Initial Statement of Position on Contentions 9, 10, and 11 (dated Oct. 19, 2010 [sic], submitted Oct. 19, 2011); NRC Staff's Initial Statement of Position on Contentions 4, 9, 10, and 11 (Oct. 19, 2011).

[7] *See* Intervenors' Initial Statement of Position on Contentions 9, 10, and 11; NRC Staff's Initial Statement of Position on Contentions 4, 9, 10, and 11.

portions of Intervenors' evidentiary statement and direct testimony.[8] Specifically, Applicant's motion sought: (1) to dismiss Contention 4 in its entirety;[9] and (2) to limit Intervenors' presentation of Contention 9 in the several respects detailed in the margin.[10]

As to the latter, the Board issued an Order on November 30, 2011, denying the portions of the motion that addressed Contention 9.[11] Thus, Contentions 9, 10, and 11 remain on a timetable that will have them addressed at an evidentiary hearing beginning on March 7, 2012.[12]

As to the former, the issue of whether to dismiss Contention 4 was not ripe for Board determination at the same time — for on November 3, 2011, and again on November 16, 2011, we had asked both Intervenors and Applicant for further briefing on this issue.[13] That briefing is now complete,[14] and the issue now before the Board is whether to dismiss Contention 4 in whole or in part.

For the reasons set forth herein, we dismiss Contention 4 in its entirety. In short, our examination of the pleadings, briefing, and testimony regarding Contention 4 has led us to the conclusions (1) that the motion to dismiss is well taken in several particulars, and (2) that treating one aspect of the motion as a motion for summary disposition, on the record now before us, it is appropriate to conclude that no genuine dispute of material fact is presented. Having reached this conclusion,

---

[8] Shaw AREVA MOX Services, LLC's Partially Unopposed Motion to Dismiss and Motion to Strike (Oct. 31, 2011) [hereinafter Applicant's Motion].

[9] *Id.* at 1.

[10] Specifically, Applicant sought to (1) dismiss the aspects of Contention 9 "that relate to verifying the integrity, as opposed to the mere presence, of strategic special nuclear material (SSNM) items"; (2) "strike Intervenors' Exhibits INT000003 and INT000004, and the portions of Intervenors' pre-filed direct testimony that are based" on these two exhibits, because this evidence is based on European Atomic Energy Community safeguards systems rather than U.S. requirements; and (3) "strike Intervenors' Exhibit INT000009 and the portions of Intervenors'" prefiled direct testimony that are based on this exhibit, because this evidence is based on speculative future events. *See id.* at 1-2.

[11] *See* Licensing Board Order (Ruling on Applicant's Motions to Dismiss and to Strike) (Nov. 30, 2011) at 2-7 (unpublished).

[12] *See* Licensing Board Order (Establishing Dates for Site Visit and Evidentiary Hearing) (Dec. 21, 2011) at 2 (unpublished).

[13] *See* E-mail from Shelbie Lewman, Judicial Law Clerk, Atomic Safety and Licensing Board Panel, to Parties (Nov. 3, 2011, 11:52 a.m. EST) [hereinafter Lewman E-mail]; see Tr. at 1030-34. During the November 16, 2011 teleconference, we informed the parties that there should be no more evidentiary filings for Contention 4. Tr. at 1034.

[14] *See* Intervenors' Statement Regarding Contention 4 (Nov. 10, 2011) [hereinafter Intervenors' Statement]; Shaw AREVA MOX Services, LLC's Position on the Board's Authority with Respect to Contention 4 and Reply to Intervenors' Statement Regarding Contention 4 (Nov. 30, 2011) [hereinafter Applicant's Reply].

we need not address a question we had posed to the parties,[15] namely whether *sua sponte* review of the issues addressed in this contention would otherwise be warranted.

II. BACKGROUND, DISCUSSION, AND CONCLUSION

These sections, constituting some fifteen pages in our original Memorandum and Order, have been removed from this published version because they contain Security Related Sensitive Unclassified Non-Safeguards Information. In their place, the Board provides the following summary of the removed sections.

The Board proceeded with the motion to dismiss Contention 4 by analogy to Rule 12(d) of the Federal Rules of Civil Procedure. That Rule permits courts to treat motions to dismiss for failure to state a claim upon which relief can be granted (under Rule 12(b)(6)) and motions for judgment on the pleadings (under Rule 12(c)) as motions for summary judgment under Rule 56 if "matters outside the pleadings are presented to and not excluded by the court."[16] The Board deemed it appropriate to proceed by analogy to this federal rule, in effect converting Applicant's motion to dismiss into a motion for summary disposition,[17] because it had before it and considered materials — primarily Applicant's direct testimony and corresponding exhibits regarding Contention 4 — other than the original pleadings on admissibility of the Contention.

After reviewing the Applicant's evidentiary materials in conjunction with the original pleadings on the admissibility of Contention 4, the Board determined that there was no genuine issue as to any material fact with respect to Contention

[15] *See* Tr. at 1030-33.

[16] Fed. R. Civ. P. 12(d).

[17] The NRC applies the same standards to motions for summary disposition that federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure. *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297 (2010).

4,[18] and therefore granted summary disposition to the Applicant and dismissed Contention 4 in its entirety.

THE ATOMIC SAFETY AND
LICENSING BOARD

Michael C. Farrar, Chairman
ADMINISTRATIVE JUDGE

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE

Lawrence G. McDade
ADMINISTRATIVE JUDGE

Rockville, Maryland
January 7, 2013

LBP-12-2 was issued in its original form on February 9, 2012. This abridged version was produced on January 7, 2013, for publication.

[18] Subpart L provides for motions for summary disposition, and such motions are governed by the same standards as those in Subpart G proceedings. *See Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), LBP-10-8, 71 NRC 433, 439 (2010) (citing 10 C.F.R. § 2.1205(c)). Under Subpart G, "summary disposition may be entered with respect to 'all or any part of the matters involved in the proceeding' if the motion, along with any appropriate supporting materials . . . , shows that there is 'no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.'" *Id.* (citing 10 C.F.R. § 2.710(a), (d)(2)).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chair
Dr. Richard F. Cole
Dr. Kenneth L. Mossman

In the Matter of **Docket No. 40-9091-MLA**
(ASLBP No. 12-915-01-MLA-BD01)

STRATA ENERGY, INC.
(Ross In Situ Recovery Uranium Project) **February 10, 2012**

In this proceeding regarding the application of Strata Energy, Inc. (SEI) for a combined source and Atomic Energy Act (AEA) § 11e(2) byproduct materials license pursuant to 10 C.F.R. Part 40 that would authorize SEI to construct and operate an in situ recovery (ISR) uranium project at the Ross site in Crook County, Wyoming, the Licensing Board concludes that Joint Petitioners Natural Resources Defense Council and the Powder River Basin Resource Council have provided sufficient support to establish their standing "as of right" to intervene in the proceeding and have proffered four admissible National Environmental Policy Act (NEPA)/environmental-related contentions so as to warrant the grant of their hearing petition and their admission into the proceeding as parties.

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 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 to determine whether the petitioner has established its standing, the Commission generally applies contemporaneous judicial standing concepts in section 189a adjudicatory proceedings, 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); (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 (ORGANIZATIONAL; REPRESENTATIONAL)

An organization that asserts it has standing to intervene in its own right, i.e., organizational standing, must establish a discrete institutional injury to the organization's interests, which must be based on something more than a general environmental or policy interest in the subject matter of the proceeding. *See International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252 (2001). Alternatively, 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 organization 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: INTERVENTION PETITION(S) (CONSTRUCTION); STANDING TO INTERVENE (CONSTRUCTION OF PETITION)

In assessing a petition to determine whether the elements of standing are met, which a presiding officer must do even if there are no objections to a petitioner's standing, there are a number of important benchmarks that the presiding officer is to apply. Initially, "the petitioner bears the burden to provide facts sufficient to establish standing." *PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 139 (2010). Generally speaking, to meet this burden it is sufficient "if the petitioner provides plausible factual allegations that satisfy

each element of standing." *U.S. Army Installation Command* (Schofield Barracks, Oahu, Hawaii, and Pohakuloa Training Area, Island of Hawaii, Hawaii), LBP-10-4, 71 NRC 216, 229 (2010) (citing *Lujan v. Defenders of Wildlife,* 504 U.S. 555, 561 (1992)), *aff'd,* CLI-10-20, 72 NRC 185 (2010). Moreover, in assessing whether a petitioner has demonstrated its standing, a licensing board is to "construe the petition in favor of the petitioner." *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995). At the same time, however, if a petitioner's factual claims in support of its standing are contested, untenable, conjectural, or conclusory, a board need not uncritically accept such assertions, but may weigh those informational claims and exercise its judgment about whether the standing element at issue has been satisfied. *See Schofield Barracks,* LBP-10-4, 71 NRC at 230 & n.14 (citing *Bell Bend,* CLI-10-7, 71 NRC at 139; *Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 410 (2007); *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-00-5, 51 NRC 90, 98 (2000)).

RULES OF PRACTICE: INTERVENTION PETITION(S) (CONSTRUCTION WHEN PETITIONER REPRESENTED BY COUNSEL)

The precept that a licensing board must afford latitude to a pro se petitioner in considering that petitioner's pleadings, *see PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), LBP-09-18, 70 NRC 385, 396-97 (2009), *aff'd on other grounds,* CLI-10-7, 71 NRC at 41, is not a consideration when a petitioner is represented by counsel.

RULES OF PRACTICE: STANDING TO INTERVENE (ORGANIZATIONAL)

General environmental and policy interests that an organization champions, whether on a national or more regional/local basis, and that the organization asserts could be degraded or impaired by licensing action are "of the sort [that] repeatedly have [been] found insufficient for organizational standing." *White Mesa,* CLI-01-21, 54 NRC at 252; *see Cogema Mining, Inc.* (Irigaray and Christensen Ranch Facilities), LBP-09-13, 70 NRC 168, 191 (2009).

RULES OF PRACTICE: STANDING TO INTERVENE (TRADITIONAL STANDING; PROXIMITY PLUS)

In a materials licensing action, for the purpose of ascertaining if a hearing requestor has standing based on radiological impacts, "whether a petitioner

could be affected by the licensing action must be determined on a case-by-case basis, taking into account the petitioner's distance from the source, the nature of the licensed activity, and the significance of the radioactive source." *Schofield Barracks,* CLI-10-20, 72 NRC at 188 (footnote omitted). And the standing regime to which a presiding officer must look in the first instance is whether, in lieu of the usual injury and causation showings, the petitioner has been able to establish "proximity plus" by showing "(1) that the proposed licensing action involves a 'significant source' of radiation, which has (2) an 'obvious potential for offsite consequences.'" *Id.* at 189 (footnote omitted) (quoting *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994)). If these elements of proximity-based standing are not demonstrated, then standing must be established according to traditional standing principles that, along with the usual showing of redressability, require a specific showing of injury and causation. *See id.; see also Exelon Generation Co., LLC* (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 581 (2005).

RULES OF PRACTICE: STANDING TO INTERVENE (TRADITIONAL STANDING; PROXIMITY PLUS)

If a petitioner makes no attempt to establish that any "promixity plus" presumption should be applicable to the licensing action being challenged, *see Crow Butte Resources, Inc.* (North Trend Expansion Project), LBP-08-6, 67 NRC 241, 272-73 (2008), *aff'd as to ruling on standing,* CLI-09-12, 69 NRC 535, 544-48 (2009) [hereinafter *Crowe Butte I*], the presiding officer must look to the traditional standing precepts of injury and causation, as well as redressability, to determine whether the petitioner has made a sufficient factual and legal demonstration regarding its standing to intervene.

RULES OF PRACTICE: STANDING TO INTERVENE (SHOWING REGARDING ALLEGED CONTAMINATION TO UPGRADIENT WATER SOURCE)

When petitioners "considerably upgradient of the mining area . . . fail to explain how contaminated material from the [ISR] site might plausibly enter their drinking water, they fail to demonstrate they fulfill the causation element necessary to establish their standing." *Powertech (USA), Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC 361, 388 (2010). And this is particularly so when the challenged allegation lacks any relevant scientific or technical support. *See Schofield Barracks,* LBP-10-4, 71 NRC at 230 n.14.

RULES OF PRACTICE: STANDING TO INTERVENE (SHOWING REGARDING ALLEGED CONTAMINATION TO UPGRADIENT WATER SOURCE)

As the distance increases from an ISR facility, the petitioner with an upgradient water source must expect that it will be called upon to deal with the factual circumstances that exist and provide the licensing board with some analysis as to how any contamination will come to affect any wells alleged to be impacted by the facility, given the distance involved. *See Dewey-Burdock,* LBP-10-16, 72 NRC at 385.

RULES OF PRACTICE: STANDING TO INTERVENE (SHOWING BASED ON ECONOMIC LOSS)

Standing claims based on economic impacts are only cognizable in agency proceedings with regard to NEPA-based concerns. *See Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station), ALAB-582, 11 NRC 239, 242 (1980) (citing *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Units 1 and 2), ALAB-413, 5 NRC 1418, 1420-21 (1977)).

RULES OF PRACTICE: STANDING TO INTERVENE (SHOWING BASED ON ECONOMIC LOSS)

What is necessary to establish standing based on economic loss is a showing from the petitioner (or the individual it seeks to represent) that the purported economic loss has some objective fundament, rather than being based solely on the petitioner's (or affiant's) perception of the economic loss in light of the proposed licensing action. *See Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 432 (2002) (generic, unsubstantiated claims regarding health, safety, and property devaluation impacts are insufficient to establish standing), *aff'd,* CLI-03-1, 57 NRC 1 (2003). This nonsubjective showing could, for example, be provided by demonstrating that the value of property at a comparable distance from another ISR facility had dropped from what it was prior to the submission of a license application. Alternatively, such a showing might be based on actual sales/offers before and after the licensing proposal at issue in the proceeding, or by providing the declaration of a local realtor or property appraiser who furnishes an independent assessment of the property's value before and after the licensing action was proposed before the agency.

RULES OF PRACTICE: STANDING TO INTERVENE (SHOWING BASED ON ECONOMIC LOSS)

A more subjective appraisal of declining property values might be permissible in the context of a licensing action associated with an applicant or facility shown to have engaged in a "continuous and pervasive" course of illegal conduct. *Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc.,* 528 U.S. 167, 184 (2000).

RULES OF PRACTICE: INTERVENTION PETITION(S) (SUPPLEMENTING OR CURING STANDING SHOWING WITH REPLY PLEADING); STANDING TO INTERVENE (SUPPLEMENTING OR CURING STANDING SHOWING WITH REPLY PLEADING)

While a petitioner has some latitude to supplement or cure a standing showing in its reply pleading, any additional arguments should be supported by either the declaration that accompanied the original hearing request or a supplemental affidavit. *See South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 7 (2010) (reply pleading and supplemental declarations appropriately clarified original affidavits).

RULES OF PRACTICE: STANDING TO INTERVENE (INJURY IN FACT)

There is no "contention-based" requirement mandating that to have standing, besides showing that a cognizable injury is associated with a proposed licensing action and that granting the relief sought will address that injury, a petitioner also must establish a link between that injury and the issues it wishes to litigate in challenging an application. *See Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 339-40 (2009); *Yankee Nuclear,* CLI-96-1, 43 NRC at 6.

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 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. *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 Nuclear Regulatory Commission (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 Summer,* CLI-10-1, 71 NRC at 7 & n.33.

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 order 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 (SUPPORTING INFORMATION OR EXPERT OPINION)

It is the petitioner's obligation to present 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 licensing 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 143, 155 (1991). 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. *See 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 I,* CLI-09-12, 69 NRC at 553; *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)

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 environmental report (ER)) so as to establish 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)(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 Crow Butte I,* CLI-09-12, 69 NRC at 557; *American Centrifuge Plant,* CLI-06-10, 63 NRC at 462-63.

NEPA AND AEA: CONTENTIONS (ALLEGED NEPA DEFICIENCY DOES NOT PRESERVE FUTURE AEA CHALLENGE)

For a contention that a petitioner characterizes as firmly footed in NEPA, the additional assertion, intended to preserve a future AEA-based challenge, that issuing a license with the alleged NEPA deficiency unresolved would violate the AEA's mandate to issue only licenses that are not inimical to the common defense and security and the public health and safety is a "bootstrap" approach that is neither necessary nor appropriate relative to the contention. If a petitioner is unable to prevail under NEPA with respect to the issues raised in the contention, then the AEA will not afford additional solace.

NEPA: CONSIDERATION OF IMPACTS (REASONABLY FORESEEABLE IMPACTS; REMOTE AND SPECULATIVE IMPACTS)

While NEPA requires that the NRC consider the reasonably foreseeable environmental impacts of the proposed licensing action, the agency need not consider remote and speculative impacts, particularly if the impact cannot easily be estimated at the current time, and an appropriate future opportunity will exist

for the agency to analyze the impact. *See Sierra Club v. Marsh,* 769 F.2d 868, 878 (1st Cir. 1985).

NEPA: CONSIDERATION OF IMPACTS (CUMULATIVE IMPACTS)

NRC regulations implementing NEPA require the agency to consider the cumulative impacts of a proposed licensing action, i.e., those that result from the incremental effects of the proposed action in conjunction with past, present, and reasonably foreseeable future actions. In particular, the definitions in 10 C.F.R. § 51.14(b) incorporate the CEQ regulations that define the scope of an environmental impact statement (EIS) to include cumulative impacts, *see* 40 C.F.R. §§ 1508.7, 1508.25(c). To assist the Staff with preparing its cumulative impacts analysis, the Staff guidance document for environmental reports requests that license applicants include their own cumulative impacts analysis. *See* Office of Nuclear Material Safety and Safeguards, [NRC], NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs" at 6-4 (2003).

NEPA: ENVIRONMENTAL REPORT (CUMULATIVE IMPACTS)

Because the Staff uses the ER as the basis for its EIS, and because hearing petitioners are required to style their NEPA contentions against the ER, *see* 10 C.F.R. § 2.309(f)(2), a contention would be admissible if it raises a genuine dispute with the sufficiency of the cumulative impacts analysis, or the lack thereof, in the ER. *See, e.g., Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 102 (2009) (admitting cumulative impacts contention relative to applicant's ER), *aff'd in part and rev'd in part on other grounds,* CLI-10-2, 71 NRC 27 (2010); *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 258-59 (2007) (same).

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

It is not the licensing board's responsibility to provide support for an intervenor's contention so as to make it admissible. *See Crow Butte I,* CLI-09-12, 69 NRC at 553 & n.81; *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), ALAB-226, 8 AEC 381, 406 (1974).

NEPA: GENERIC ENVIRONMENTAL IMPACT STATEMENT (CHALLENGABILITY IN LICENSING PROCEEDING)

RULES OF PRACTICE: CONTENTIONS (CHALLENGE TO GENERIC ENVIRONMENTAL IMPACT STATEMENT; SUPPORTING INFORMATION OR EXPERT OPINION)

The generic EIS (GEIS) for ISR mining, not having been incorporated into the agency's regulations, can be challenged in an adjudicatory proceeding concerning an ISR licensing request. But a petitioner's failure to provide any citation to what it is among a GEIS's programmatic discussions that the ER neglects to address leaves it to the licensing board to identify the grounds that support the petitioner's contention, which is something the board need not do. *See Fansteel,* CLI-03-13, 58 NRC at 204-05; *see also Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-09-11, 69 NRC 529, 534 (2009) ("The Commission should not be expected to sift unaided through . . . documents filed before the Board to piece together and discern a party's argument and the grounds for its claims") (internal quotations omitted).

MEMORANDUM AND ORDER

(Ruling on Standing and Contention Admissibility)

Strata Energy, Inc. (SEI) has applied to the Nuclear Regulatory Commission (NRC) for a combined source and Atomic Energy Act (AEA) § 11e(2) byproduct materials license pursuant to 10 C.F.R. Part 40 that would authorize SEI to construct and operate an in situ recovery (ISR) uranium project at the Ross site in Crook County, Wyoming. On October 27, 2011, two public interest organizations, the Natural Resources Defense Council (NRDC) and the Powder River Basin Resource Council (PRBRC), hereinafter referred to as Joint Petitioners, together filed a hearing request seeking to intervene in that licensing proceeding to challenge SEI's application, in particular certain aspects of its environmental report (ER). SEI and the NRC Staff oppose the petition on the grounds that Joint Petitioners have failed to establish their standing to intervene and have not submitted an admissible contention.

For the reasons set forth below, we find that Joint Petitioners have provided sufficient support to establish their standing "as of right" to intervene in this adjudicatory proceeding and have proffered four admissible contentions. As a consequence, we grant their intervention petition and outline certain procedural and administrative directives regarding further litigation of the admitted contentions.

I. BACKGROUND

A. SEI's Application and Joint Petitioners' Intervention Request

On January 4, 2011, SEI submitted an application pursuant to 10 C.F.R. Part 40 for a combined source and section 11e(2) byproduct materials license.[1] *See* Letter from Anthony Simpson, Chief Operating Officer, SEI, to Keith McConnell, Deputy Director, Decommissioning and Uranium Recovery Licensing Directorate, Division of Waste Management and Environmental Protection, NRC Office of Federal and State Materials and Environmental Management Programs (Jan. 4, 2011) at 1 (ADAMS Accession No. ML110120055). SEI proposes to construct and operate an in situ leach recovery facility adjacent to the ranching community of Oshoto in eastern Wyoming. *See* 1 [SEI], [ER], Ross ISR Project [NRC] License Application, Crook County, Wyoming at 1-8 (Dec. 2010) (ADAMS Accession No. ML110130342) [hereinafter SEI ER].

On July 13, 2011, the Commission published a notice of opportunity to request a hearing and to petition for leave to intervene regarding the licensing proceeding for the Ross ISR project. *See* [SEI], Ross [ISR] Uranium Project, Crook County, WY; Notice of Materials License Application, Opportunity to Request a Hearing and to Petition for Leave to Intervene, and Commission Order Imposing Procedures for Document Access to Sensitive Unclassified Non-Safeguards Information for Contention Preparation, 76 Fed. Reg. 41,308 (July 13, 2011). The notice allowed any person whose interest might be affected by the proposed SEI ISR project to file such a request and petition, in accordance with 10 C.F.R. § 2.309, within 60 days of the notice. Subsequently, in response to a request by Joint Petitioners, the Commission extended the time to file a hearing petition by 45 days. *See* Commission Order (Aug. 17, 2011) (unpublished). Joint Petitioners then submitted a hearing request regarding the SEI license application on October 27, 2011. *See* Petition to Intervene and Request for Hearing by [Joint Petitioners] (Oct. 27, 2011) [hereinafter Intervention Petition]. Acting on an October 31, 2011 referral memorandum from the Secretary of the Commission, on November 2 the Chief Administrative Judge established this Licensing Board to rule on the Joint Petitioners' hearing request and to conduct any hearing as warranted. *See* Memorandum from Annette Vietti-Cook, NRC Secretary, to E. Roy Hawkens, Chief Administrative Judge, Atomic Safety and Licensing Board

[1] As outlined by the Commission in its decision in *Sequoyah Fuels Corp.* (Gore, Oklahoma Site), CLI-03-15, 58 NRC 349 (2003), section 11e(2) byproduct material is that material, as defined by AEA § 11e(2), 42 U.S.C. § 2014e(2), that is "the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content." This byproduct material category was created in 1978 by the Uranium Mill Tailings and Reclamation Act to afford the NRC regulatory jurisdiction over mill tailings at active and inactive uranium milling sites. *See Sequoyah Fuels,* CLI-03-15, 58 NRC at 353-54.

Panel, Request for Hearing with Respect to Notice of Opportunity for Hearing Regarding Materials License Application for [SEI] Ross [ISR] Uranium Project, Docket No. 40-9091 (Oct. 31, 2011); [SEI]; Establishment of Atomic Safety and Licensing Board, 76 Fed. Reg. 69,295 (Nov. 8, 2011).

Thereafter, this Board granted a joint request by the participants for additional time to file their respective answers and reply brief. *See* Licensing Board Memorandum and Order (Initial Prehearing Order) (Nov. 3, 2011) at 2 (unpublished) [hereinafter Initial Prehearing Order]. Adhering to that revised filing schedule, on December 5, 2011, SEI and the Staff submitted their answers to the Joint Petitioners' hearing request. *See* Applicant [SEI's] Response to [Joint Petitioners] Request for a Hearing and Petition to Intervene (Dec. 5, 2011) [hereinafter SEI Answer]; NRC Staff Response to Petition to Intervene and Request for Hearing by [Joint Petitioners] (Dec. 5, 2011) [hereinafter Staff Answer]. Joint Petitioners followed with their reply to both answers on December 15, 2011. *See* [Joint Petitioners] Reply to Responses by [SEI] and the NRC Staff to Petition to Intervene and Request for Hearing (Dec. 15, 2011) [hereinafter Joint Petitioners Reply]. In accord with several Board scheduling orders,[2] on December 20, 2011, the Board convened an initial prehearing conference in the Licensing Board Panel's Rockville, Maryland hearing room. During this session, the Board heard oral presentations from the participants regarding the disputed matters of whether Joint Petitioners have established their standing to intervene in this proceeding and the admissibility of their five proffered contentions. *See* Tr. at 1-175.

B. ISR Process

The technical report (TR) portion of SEI's application describes the ISR process as consisting of two steps: extracting uranium from the underground ore body and processing the recovered solution into yellowcake. *See* 1 [SEI], [TR], Ross ISR Project [NRC] License Application, Crook County, Wyoming (Dec. 2010) at 1-6 to -7 (ADAMS Accession No. ML110130333). In the first step, an aqueous recovery solution, called lixiviant, is injected into the ore-bearing sandstone via injection wells. The lixiviant solution consists of an oxidant such as hydrogen peroxide or oxygen, a complexing agent such as sodium bicarbonate or carbon dioxide, and native groundwater. As it is pumped through the ore body, the lixiviant oxidizes and dissolves uranium contained in the ore. Recovery wells pump the pregnant (uranium-containing) lixiviant back to the surface.

---

[2] Licensing Board Memorandum and Order (Initial Prehearing Conference Directives and Guidance) (Dec. 13, 2011) at 1-2 (unpublished); Licensing Board Memorandum and Order (Scheduling Initial Prehearing Conference; Opportunity for Limited Appearance Statements) (Dec. 8, 2011) at 2 (unpublished); Licensing Board Memorandum (Date for Initial Prehearing Conference) (Nov. 15, 2011) at 1 (unpublished).

At the surface, the pregnant lixiviant undergoes ion exchange at the facility's central processing plant (CPP) to extract the uranium from the lixiviant using a uranium-specific resin. Finally, the uranium is removed from the resin and precipitated into a slurry that is filtered and dried into yellowcake. The lixiviant and resin are then recycled for continued use.[3]

As the SEI ER indicates, the process of constructing and later operating the facility will involve round-the-clock onsite activities, particularly during the construction phase. The construction and operation of the facility also will generate additional traffic (and any associated dust) on the Ross site and on local roads as materials and supplies are brought into the facility and dried uranium yellowcake and waste materials, including section 11e(2) byproduct material, are transported out of the facility for, respectively, further conversion into more enriched products or disposal. *See* 2 SEI ER at 4-14 to -29, 4-99, 4-105 to -106, 5-58 (ADAMS Accession No. ML110130344).

II. ANALYSIS

A. Joint Petitioners' Standing

1. Standards Governing Standing

For an individual or organization to be deemed a "person whose interest may be affected by the proceeding" under 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 to determine whether the petitioner has established its standing, the Commission generally applies contemporaneous judicial standing concepts in section 189a adjudicatory proceedings, 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

[3] The ISR process, which sometimes is also referred to as the in situ leach (ISL) process, has been similarly described by other licensing boards. *See Powertech (USA), Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC 361, 378-80 (2010); *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), LBP-08-24, 68 NRC 691, 704 (2008), *aff'd in part, rev'd in part, and remanded,* CLI-09-9, 69 NRC 331 (2009) [hereinafter *Crow Butte II*]. The ISL and ISR processes are the same, with ISR being a newer term. *See Dewey-Burdock,* LBP-10-16, 72 NRC at 379 n.28.

interest arguably protected by the governing statutes (e.g., the AEA, the National Environmental Policy Act of 1969 (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 organization that asserts it has standing to intervene in its own right, i.e., organizational standing, must establish a discrete institutional injury to the organization's interests, which must be based on something more than a general environmental or policy interest in the subject matter of the proceeding. *See International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252 (2001). Alternatively, 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 organization 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 to determine whether these elements are met, which a presiding officer must do even if there are no objections to a petitioner's standing, there are a number of important benchmarks that we are to apply. Initially, "the petitioner bears the burden to provide facts sufficient to establish standing." *PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 139 (2010). Generally speaking, to meet this burden it is sufficient "if the petitioner provides plausible factual allegations that satisfy each element of standing." *U.S. Army Installation Command* (Schofield Barracks, Oahu, Hawaii, and Pohakuloa Training Area, Island of Hawaii, Hawaii), LBP-10-4, 71 NRC 216, 229 (2010) (citing *Lujan v. Defenders of Wildlife,* 504 U.S. 555, 561 (1992)), *aff'd,* CLI-10-20, 72 NRC 185 (2010). Moreover, in assessing whether a petitioner has demonstrated its standing, a licensing board is to "construe the petition in favor of the petitioner."[4] *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995). At the same time, however, if a petitioner's factual claims in support of its standing are contested, untenable, conjectural, or conclusory, a board need not uncritically accept such assertions, but may weigh those informational claims and exercise its judgment about whether the standing element at issue has been satisfied. *See Schofield Barracks,* LBP-10-4, 71 NRC at 230 & n.14 (citing *Bell Bend,* CLI-10-7, 71 NRC at 139; *Consumers Energy Co.* (Palisades Nuclear

[4] There is also a precept that a board must afford latitude to a pro se petitioner in considering that petitioner's pleadings, *see PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), LBP-09-18, 70 NRC 385, 396-97 (2009), *aff'd on other grounds,* CLI-10-7, 71 NRC at 141, which is not a consideration here in that Joint Petitioners are represented by counsel.

Plant), CLI-07-18, 65 NRC 399, 410 (2007); *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-00-5, 51 NRC 90, 98 (2000)).

We apply these general rules and guidelines in evaluating the Joint Petitioners' standing presentation. Because each of the Joint Petitioners claims standing on the same basis, we consider the Joint Petitioners' standing to intervene together.

2. Ruling on Standing

DISCUSSION: Intervention Petition at 3-8; SEI Answer at 29-44; Staff Answer at 8-13; Joint Petitioners Reply at 2-12; Tr. at 10-51.

RULING: In their initial hearing request, Joint Petitioners provided some information about the activities and interests of NRDC and PRBRC and their members that suggest they might be seeking organizational intervention status. *See* Intervention Petition at 3-4, 8; *see also id.* Declarations at 1-2 (Declaration of Linda Lopez (Oct. 20, 2011) (on behalf of NRDC)); *id.* at 3-5 (Declaration of Wilma Tope (Oct. 24, 2011) (on behalf of PRBRC)).[5] Their counsel represented at the December 20 oral argument that this was indeed the case. *See* Tr. at 11. It is apparent, however, that for both of these organizations, the general environmental and policy interests that they champion — the former on a national level and the latter on a more regional/local basis — and that they assert could be degraded or impaired by the licensing action at issue here are "of the sort [that] repeatedly have [been] found insufficient for organizational standing." *White Mesa,* CLI-01-21, 54 NRC at 252; *see Cogema Mining, Inc.* (Irigaray and Christensen Ranch Facilities), LBP-09-13, 70 NRC 168, 191 (2009) (concluding PRBRC lacks organizational standing).

As a consequence, any demonstration of standing by Joint Petitioners will have to be on the basis of their claims regarding representational standing.[6] To this end, they rely on the declaration of a single individual, Pamela Viviano, who claims, among other things, membership in both NRDC and PRBRC and states that those

---

[5] In citing these declarations, as well as the other declarations provided in support of Joint Petitioners' hearing request, we will reference the comprehensive "Bates" numbering that is provided for all the declarations attached to their intervention petition rather than the numbering for the particular declaration.

[6] In their hearing petition, Joint Petitioners represent that their organizations have members who have visited and plan to visit the Devils Tower National Monument, which is some 10 miles from the proposed Ross facility, and are interested in preserving the site's viewshed and aesthetic integrity. *See* Intervention Petition at 8. To the extent this assertion is intended as an additional basis for Joint Petitioners' organizational standing claim, it provides no information that would bolster any effort to establish such standing. Alternatively, if this claim is intended as a basis for representational standing, it lacks the necessary supporting declarations from the unnamed members identifying themselves, outlining their interests, and authorizing Joint Petitioners to represent them in this proceeding. *See Palisades,* CLI-07-18, 65 NRC at 409.

organizations are authorized to represent her interests in this proceeding. *See* Intervention Petition, Declarations at 6 (Declaration of Pamela Viviano (Oct. 21, 2011)) [hereinafter Viviano Declaration].

In a materials licensing action, for the purpose of ascertaining if a hearing requestor has standing based on radiological impacts, "whether a petitioner could be affected by the licensing action must be determined on a case-by-case basis, taking into account the petitioner's distance from the source, the nature of the licensed activity, and the significance of the radioactive source." *Schofield Barracks,* CLI-10-20, 72 NRC at 188 (footnote omitted). And the standing regime to which we must look in the first instance is whether, in lieu of the usual injury and causation showings, the petitioner has been able to establish "promixity plus" by showing "(1) that the proposed licensing action involves a 'significant source' of radiation, which has (2) an 'obvious potential for offsite consequences.'" *Id.* at 189 (footnote omitted) (quoting *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994)). If these elements of proximity-based standing are not demonstrated, then standing must be established according to traditional standing principles that, along with the usual showing of redressability, require a specific showing of injury and causation. *See id.* at 189; *see also Exelon Generation Co., LLC* (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 581 (2005).

Before us, Joint Petitioners have made no attempt to establish that any "promixity plus" presumption should be applicable to the licensing action they are challenging. *See Crow Butte Resources, Inc.* (North Trend Expansion Project), LBP-08-6, 67 NRC 241, 272-73 (2008), *aff'd as to ruling on standing,* CLI-09-12, 69 NRC 535, 544-48 (2009) [hereinafter *Crow Butte I*]. As a consequence, we must look to the traditional standing precepts of injury and causation, as well as redressability, to determine whether Joint Petitioners have made a sufficient factual and legal demonstration regarding their standing to intervene.

Toward that end, relying upon the terms of Ms. Viviano's affidavit as well as allegations provided in the three technical affidavits submitted as support for Joint Petitioners' five contentions and the technical and environmental reports accompanying SEI's application, Joint Petitioners seek to establish that the injury, causation, and redressability elements of standing have been met. More specifically, Joint Petitioners contend that several different injuries to Ms. Viviano that can be caused by the activities associated with the proposed Ross ISR facility will be redressable if Joint Petitioners are allowed to challenge the requested authorization in this proceeding. In particular, Joint Petitioners claim that impacts arising from aquifer/surface water contamination, traffic and dust, light pollution, and property value decline associated with Ms. Viviano's residential and investment properties, as well as the cumulative effects of this ISR project and other past and future ISR and non-ISR projects that are in the vicinity of the Ross facility and Ms. Viviano's residential and investment properties, are more than

sufficient to establish their representational standing. On each count, however, SEI and the Staff disagree and assert that Joint Petitioners have failed to establish Ms. Viviano's standing and, concomitantly, their representational standing.

a. Allegations Regarding Aquifer/Surface Water Contamination, Property Value Decline, and Cumulative Impacts Fail to Provide a Basis for Standing

In reviewing the five items upon which Joint Petitioners assert Ms. Viviano's (and their) standing rests, we are skeptical as to whether three — aquifer/surface contamination, property value decline, and cumulative impacts — afford Joint Petitioners any support for their representational standing claim. With respect to aquifer contamination, Ms. Viviano in her sworn affidavit indicates that she resides on a ranch approximately 10 miles to the northeast of the Ross facility and owns a piece of investment property some 7 miles to the southeast of the facility and that these properties have wells with depths of between 300 and 700 feet that provide a potable water supply from the Inyan Kara aquifer.[7] *See* Viviano Declaration at 6-8. Although the Ross facility will, according to the SEI application, seek to extract uranium from an ore body in the Lance/Fox Hills aquifer that, at the facility site, is approximately 4000 feet above the Inyan Kara aquifer, SEI claims there is at least a 1000-foot layer of impermeable shale (the Pierre Shale) between the Lance/Fox Hills aquifer and the Inyan Kara aquifer.[8] *See* 1 SEI ER at 3-77 (fig. 3.3-5); *see also* SEI Oral Argument Exh. 1.[9] Ms.

---

[7] Although Ms. Viviano's affidavit does not specify the name of the aquifer that serves her residential and investment properties, in Joint Petitioners' reply brief and at the oral argument it was acknowledged that the aquifer is the Inyan Kara aquifer. *See* Joint Petitioners Reply at 6; Tr. at 121.

[8] At the site of Ms. Viviano's properties, the Inyan Kara aquifer lies near the surface. SEI has provided information indicating that by the time the Inyan Kara aquifer has reached the Ross site to the west of her properties, that aquifer has plunged to a depth of some 4000 feet and is overlaid by the Pierre Shale and other strata, including the near-surface Lance/Fox Hills layer. *See* SEI Answer at 33; *see also* SEI Oral Argument Exh. 1.

[9] With respect to the SEI oral argument exhibit referenced above, this item, along with two other so-called "exhibits," were filed by SEI on December 16, four days before the scheduled oral argument. In a submission that accompanied these items, SEI indicated that they "are intended to provide the Licensing Board and all parties appropriate points of reference based on information included in [SEI's] license application when discussing standing and admissible contentions during the course of the scheduled oral argument." Submission of Oral Argument Exhibits (Dec. 16, 2011) at 1. That filing also indicated that "[SEI] has consulted with both [Joint Petitioners] and NRC Staff counsel on this filing and received no objections, although [Joint Petitioners] reserve[ ] [their] right to object to the substance of the exhibits at a later time." *Id.* at 2. Just before beginning the participants' oral argument presentations, the Board raised with Joint Petitioners' counsel the question whether they

(Continued)

Viviano declares, however, that she is concerned about contamination of the Inyan Kara aquifer by reason of a connection between these aquifers based on the 5000-plus oil and gas boreholes she maintains exist both within and beyond the Ross project area and extend to depths of 6000 to 7000 feet, many of which she asserts have been improperly plugged and abandoned.[10] *See* Viviano Declaration at 6, 8; Joint Petitioners Reply at 6 & n.1.

In this instance, however, we do not consider dispositive either the SEI claim regarding the impermeability of the intervening shale formation or Ms. Viviano's allegation that the borehole information upon which she relies would be sufficient to establish the requisite "plausible path" between the Lance/Fox Hills and Inyan Kara aquifers in the vicinity of the Ross site.[11] Rather, we consider

---

had any objection to the items, which in addition to being submitted electronically were brought into the hearing room on poster boards, and was advised that "[w]e didn't see it until Friday afternoon and we will want to talk about how that exhibit could be interpreted today, which we can do in the course of argument." Tr. at 10. As a consequence, although these items were not admitted as evidentiary exhibits, they were referenced and discussed by the participants and the Board during the argument.

We would add as well that, as was represented by SEI in its December 16 submission, two of the "exhibits" were based upon one or more figures from the SEI ER, albeit with shadings, callouts, and additional background mapping added for enhancement. *See* SEI Oral Argument Exh. 1 (based on 1 SEI ER at 3-75 (fig. 3.3-3), 3-76 (fig. 3.3-4), 3-77 (fig. 3.3-5)); SEI Oral Argument Exh. 2 (based on 1 SEI ER at 3-199 (fig. 3.4-1)). This, however, does not appear to be the case relative to a major portion of the third item, which seems to have been created for the argument. *See* SEI Oral Argument Exh. 3 (windrose figure based on SEI ER addendum 3.6-B, Site-Specific Meteorology and Climatology Data (rev. Feb. 2011) at 21 (fig. 6)) (ADAMS Accession No. ML11321A153), with no ER attribution for map with accompanying callouts).

[10] In her affidavit, Ms. Viviano also indicates she is concerned that the large amounts of water used in the ISR processing and restoration phases will draw down the Fox Hills aquifer and, concomitantly, the aquifers above it. *See* Viviano Declaration at 7. Whatever relevance this assertion might have relative to Joint Petitioners' contentions, in particular their contention 4, it fails to provide any basis for representational standing since at the Ross site the Inyan Kara aquifer that is the source of water for her properties is located well below the Fox Hills aquifer. *See supra* note 8; *see also* 1 SEI ER at 3-77 (fig. 3.3-5); SEI Oral Argument Exh. 1.

[11] Certainly, the question of the extent of possible groundwater contamination as the basis for standing has been the focus of several recent board determinations in ISR licensing cases. For petitioners claiming to be using water from the same aquifer that was to be employed as the uranium ore source, whether living at a distance of 1 mile or 50 miles from the facility in question, licensing boards have found that a "plausible pathway" connecting the proposed mining operation to their water source has been shown with plausible factual allegations so as to establish the petitioner's standing. *See Dewey-Burdock,* LBP-10-16, 72 NRC at 386; *Crow Butte II,* LBP-08-24, 68 NRC at 709 & n.77; *Crow Butte I,* LBP-08-6, 67 NRC at 281-82. On the other hand, when the ore zone and petitioner's water source exist in separate aquifers, the injury/causation question is whether there is an interconnection between these aquifers. In such circumstances, board approaches have been more varied. Although standing has been found in several instances, *see Crow Butte II,* LBP-08-24, 68 NRC at 708-10; *Crow Butte I,* LBP-08-6, 67 NRC at 278-80, 282-84, 288-89, one board concluded

(Continued)

important in this context the circumstance that both Ms. Viviano's home and investment properties, located 10 and 7 miles from the Ross facility, are locations "upgradient of the proposed mining area." *Dewey-Burdock,* LBP-10-16, 72 NRC at 387. Acknowledging that the gradient-induced groundwater flow in the area is from east to west, i.e., away from Ms. Viviano's properties and toward the proposed Ross facility, *see* Tr. at 17, Joint Petitioners assert that this is not a relevant factor because the issue is not whether her particular wells have the potential to be contaminated, but whether the aquifer from which her wells draw their water will be contaminated, *see* Tr. at 18.[12] We disagree. As the *Dewey-Burdock* board observed, when petitioners "considerably upgradient of the mining area . . . fail to explain how contaminated material from the [ISR] site might plausibly enter their drinking water, they fail to demonstrate they fulfill the causation element necessary to establish their standing." *Dewey-Burdock,* LBP-10-16, 72 NRC at 388.[13] And this is particularly so when, as is the case in

---

that the circumstances involved did not support a determination that the petitioners had established their right to intervene, *see Dewey-Burdock,* LBP-10-16, 72 NRC at 386-88.

[12] In this regard, although Joint Petitioners had access to three individuals with academic and professional qualifications in the areas of hydrology, geology, and biochemistry, *see* Intervention Petition, Declarations at 11 (Declaration of Robert E. Moran on Behalf of [Joint Petitioners] (Oct. 24, 2011)) [hereinafter Moran Declaration]; *id.* at 69-72 (Declaration of Dr. Ronald L. Sass on Behalf of [Joint Petitioners] (Oct. 25, 2011)) [hereinafter Sass Declaration]; *id.* at 105-06 (Declaration of Dr. Richard Abitz on Behalf of [Joint Petitioners] (Oct. 23, 2011)) [hereinafter Abitz Declaration], the focus of their supporting experts' affidavits is contamination at the Ross facility site, with no specific mention of the possibility of, or mechanics that might be involved in, water contamination at the site of Ms. Viviano's wells that are upgradient and some miles away from the proposed Ross facility.

[13] Admittedly, our determination here may raise concerns about a "slippery upslope" to the degree our decision, in conjunction with the *Dewey-Burdock* ruling, could be construed to suggest that a petitioner with a well located on property upgradient of an ISR facility cannot be found to have standing relative to that facility based on potential groundwater contamination. This is not the case. Of course, as would be the situation with a petitioner located downstream from such a facility, *see Crow Butte I,* LBP-08-6, 67 NRC at 288-89 (standing found for petitioner fishing river 60 miles downstream from proposed ISR facility expansion alleged to allow drainage into river from operations), a petitioner situated downgradient might be able to provide a less exacting explanation to establish the plausibility of the possible harmful waterborne impacts asserted to establish its standing. So too, a petitioner whose property is upgradient but nonetheless located in close proximity to a proposed ISR facility may be able to establish its plausible pathway with a less particularized showing. *See id.* at 281 (petitioner with well within 1.5 miles of proposed facility expansion boundary found to have standing). But as the distance increases from the ISR facility, the petitioner with an upgradient water source must expect that it will be called upon to deal with the factual circumstances that exist and provide the board with some analysis, which is missing in this instance, as to how any contamination will come to affect any wells alleged to be impacted by the facility, given the distance involved. *See Dewey-Burdock,* LBP-10-16, 72 NRC at 384-85.

this instance, the challenged allegation lacks any relevant scientific or technical support.[14] *See Schofield Barracks,* LBP-10-4, 71 NRC at 230 n.14.

Moreover, in our estimation the same result appends to the question of surface water contamination, which has played a significant role in standing determinations in recent ISR cases as well. *See, e.g., Crow Butte I,* LBP-08-6, 67 NRC at 284-87. In her declaration, Ms. Viviano does state that contaminated leach solution spills, leaks, and excursions "could cause contamination of our well water, as well as the surface waters that run northeast from the mining area." Viviano Declaration at 7. Unrefuted, however, is information from SEI indicating that Ms. Viviano's residential and investment properties either are (1) not downstream from the Little Missouri River that receives any surface water flow from the vicinity of the Ross facility; or (2) located in a totally different river basin from the Ross project. *See* SEI Answer at 36; *see also* 1 SEI ER at 3-199 (fig. 3.4-1); SEI Oral Argument Exh. 2. Thus, to the degree her otherwise unexplained statement was intended to imply that surface water contamination from the facility will reach her properties, it fails to establish the requisite plausible pathway.

Regarding the matter of a possible decline in property values for Ms. Viviano's residential and investment properties, in her affidavit Ms. Viviano states that

> another potential impact is that the value of [our residential] property will drop, due to the close proximity of a uranium operation . . . , [or] the pool of potential buyers could shrink, as many people are not willing to buy close to a uranium operation. Therefore, we could suffer a negative financial impact from reduced property values due to the proposed site.

Viviano Declaration at 8. She expresses similar concerns about her investment property, particularly given the importance of an uncontaminated "working well" in maintaining the property's value, also asserting that "[a] loss of value in this property will result in the loss of much of our invested retirement money, and thus cause us a great deal of economic hardship for our future retirement." *Id.* Joint Petitioners maintain that these assertions about loss of property values are

[14] Although Joint Petitioners' technical experts certainly do suggest that the various oil and gas boreholes may have provided a mechanism for interconnection of the Lance/Fox Hills and Inyan Kara aquifers, they provide nothing that addresses the question of how, given their upgradient location, *see supra* pp. 181-82, Ms. Viviano's particular wells might be affected via such an interconnection. The same is true for the map depicting oil and gas wells greater than 4600 feet provided as an attachment in support of Joint Petitioners' reply pleading, *see* Joint Petitioners Reply Attach. 1, which denotes the closest oil and gas wells as being approximately 4 miles and 6 miles to the west of Ms. Viviano's residential and investment properties, respectively.

sufficient to establish Ms. Viviano's standing in this proceeding so as to allow them, as her representative, to litigate all their proffered contentions.[15]

In our view, however, what is necessary is a showing from the petitioner (or the individual it seeks to represent) that the purported economic loss has some objective fundament, rather than being based solely on the petitioner's (or affiant's) perception of the economic loss in light of the proposed licensing action. *See Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 432 (2002) (generic, unsubstantiated claims regarding health, safety, and property devaluation impacts are insufficient to establish standing), *aff'd,* CLI-03-1, 57 NRC 1 (2003). This nonsubjective showing could, for example, be provided by demonstrating the value of property at a comparable distance from another ISR facility had dropped from what it was prior to the submission of a license application. Alternatively, such a showing might be based on actual sales/offers before and after the licensing proposal at issue in the proceeding, or by providing the declaration of a local realtor or property appraiser who furnishes an independent assessment of the property's value before and after the licensing action was proposed before the agency.[16] Nothing like this is included in Ms. Viviano's affidavit or with Joint Petitioners' other filings. As such, in this instance we cannot accord Ms. Viviano, or Joint Petitioners as her representatives, standing based on economic loss.

Also unavailing is Joint Petitioners' assertion of standing based on cumulative impacts. Joint Petitioners made no claims about the cumulative impacts of the Ross facility relative to other past, present, and future local ISR and non-ISR facilities as a grounds for standing in their initial hearing petition. But in the wake of the Staff's acknowledgment in its answer that, in Staff's estimation, at least portions of Joint Petitioners' contentions 4 and 5 regarding cumulative impacts are admissible as they relate to what SEI has indicated is a proposed future Lance District expansion of the Ross Project facility, Joint Petitioners in their reply brief also proffer these impacts as a potential standing basis. *Compare* Intervention Petition at 3-8 *with* Joint Petitioners Reply at 6-10. Although both SEI and the Staff contend that a concern about NEPA-related cumulative impacts cannot be

---

[15] In so doing, Joint Petitioners acknowledge the existing case law that standing claims based on economic impacts, such as Ms. Viviano's, are only cognizable in agency proceedings with regard to NEPA-based concerns. *See* Tr. at 19-20; *see also Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station), ALAB-582, 11 NRC 239, 242 (1980) (citing *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Units 1 and 2), ALAB-413, 5 NRC 1418, 1420-21 (1977)).

[16] A more subjective appraisal of declining property values might be permissible in, for instance, the context of a licensing action associated with an applicant or facility shown to have engaged in a "continuous and pervasive" course of illegal conduct. *Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc.,* 528 U.S. 167, 184 (2000). Nothing presented to us in this instance, however, provides a plausible ground for permitting an otherwise unsubstantiated assessment of property values to establish the basis for Ms Viviano's (and Joint Petitioners') standing.

a basis for standing, *see* Tr. at 33-34, 41-44, even if we assume cumulative impacts can be the basis for standing, there is still a significant problem with Joint Petitioners' attempt to interpose such impacts as grounds for standing here. Nothing in Ms. Viviano's affidavit indicates she has a concern that she will suffer any harm relative to purported cumulative impacts associated with any past, existing, or proposed ISR or non-ISR facilities.[17]

b. Allegations Regarding Traffic and Dust and Light Pollution Do Provide a Basis for Standing

While Joint Petitioners' showings regarding aquifer/surface water contamination, property value decline, and cumulative impacts fail to establish Ms. Viviano's, and thus Joint Petitioners', standing, Joint Petitioners' assertion regarding standing based upon the discussion in Ms. Viviano's affidavit about traffic and dust proves to be more fruitful. In this regard, Ms. Viviano's affidavit states:

> Another potential negative impact from this site would be the increase in traffic on our road during the construction of the site and the operational phase. These roads are dirt and gravel, and any traffic results in a dust problem. The increased traffic would cause a health hazard to us and to all those with homes along these roads.

Viviano Declaration at 8. As this statement makes apparent, the concern expressed relates to the possibility of dust from increased traffic associated with construction or operation of the site as it relates to those, including Ms. Viviano, with homes along the roads that might experience such traffic.[18] In their reply brief, Joint Petitioners further assert that while SEI and the Staff claimed that Ms. Viviano's residence is too far from the Ross project to suffer any real impact, this

---

[17] In her affidavit, Ms. Viviano does make reference to a "long history of spills, leaks, and excursions of the contaminated leach solutions" at ISR sites in Wyoming, Nebraska, and Texas, and a concern about groundwater restoration at undesignated ISR sites in Wyoming, as well as about aquifer depletion at otherwise undesignated ISR sites. Viviano Declaration at 6-8. These claims regarding the ISR process are much too imprecise to provide an appropriate basis for standing relative to any purported cumulative impacts on Ms. Viviano or her properties. So too, her claims regarding the impact of oil and gas drilling boreholes, *see id.* at 6-7, are associated with her particular concerns about contamination of the Inyan Kara aquifer rather than any cumulative impacts.

[18] Joint Petitioners hearing request describes this concern as outlined in Ms. Viviano's affidavit as "increased traffic and dust (along with health problems that may result from dust)." Intervention Petition at 6. And notwithstanding Ms. Viviano's expressed concern about "all those with homes along these roads," Viviano Declaration at 8, our concern in making a standing determination is with the impact on Ms. Viviano, who is the only person that has provided information indicating she has given authorization to Joint Petitioners to represent her interests. *See supra* note 6.

> ignore[s] the fact that a number of unpaved roads in the project vicinity may see substantially increased traffic, including D Road and New Haven Road (or Oshoto County Road). These roads connect Ms. Viviano's property to the nearby towns of Gillette and Moorcroft, and she uses them regularly to come to and from her property. The proposed Ross Project will likely increase traffic and dust on the these roads, and Ms. Viviano will suffer injury as a result.

Joint Petitioners Reply at 5.

A descriptive shortcoming exists with respect to Joint Petitioners' reply brief suggestion that Ms. Viviano, by reason of driving in the vicinity of the Ross facility, will incur negative health impacts from fugitive dust. Ms. Viviano's affidavit says nothing about any concern she might have regarding harmful impacts that relate to her driving near the facility. And while a petitioner has some latitude to supplement or cure a standing showing in its reply pleading, any additional arguments should be supported by either the declaration that accompanied the original hearing request or a supplemental affidavit. *See South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 7 (2010) (reply pleading and supplemental declarations appropriately clarified original affidavits). In this instance, however, Ms. Viviano's only affidavit makes no mention of her driving in the vicinity of the facility,[19] or of any harm from such an activity,[20] so as to provide support for Joint Petitioners' representational standing on the basis of contacts by Ms. Viviano with the Ross project area.[21]

---

[19] Although it was suggested at the oral argument in support of this reply brief assertion that the county roadways to the west of Ms. Viviano's residence that run past the Ross facility are Ms. Viviano's "only way to access I-90, which is to the south," Tr. at 12, given where Ms. Viviano lives, this does not account for the availability of a route from her residence to the east that eventually goes south out of Hulett to I-90, *see* Tr. at 14. In any event, we have no allegations from Ms. Viviano indicating whether, and to what extent, she utilizes either of these routes.

[20] Although a nonspeculative showing regarding increased traffic accidents could be another impact of increased road usage that might establish standing, *see White Mesa,* CLI-01-21, 54 NRC at 253, this concern was not raised in Ms. Viviano's affidavit or Joint Petitioners' filings. Moreover, while fugitive dust generated onsite at a facility, particularly during construction, can be a concern in the vicinity of a facility, *see AREVA Enrichment Services, LLC* (Eagle Rock Enrichment Facility), LBP-11-26, 74 NRC 499, 553-61 (2011), Ms. Viviano's declaration makes no mention of fugitive dust impacts from the facility (as opposed to dust from facility-related traffic using the road that she asserts goes by her property). Further, although disputing whether wind direction data provided by SEI, which shows that at Oshoto for a 1-year period between January 2010 and January 2011 the prevailing winds were not in the direction of either of Ms. Viviano's properties, accurately reflects the actual situation on a daily, monthly, and seasonal basis, *see* Tr. at 47 (discussing SEI Oral Argument Exh. 3), Joint Petitioners have provided us with no grounds, other than the generally windswept nature of eastern Wyoming, that suggest fugitive dust from the Ross facility will have a health and safety impact on Ms. Viviano's investment or residential properties that are at least 7 miles away from the Ross facility.

[21] During the December 20 oral argument, Joint Petitioners referred several times to the possibility

(Continued)

The same is not true for Ms. Viviano's assertion that a standing-cognizable dust impact will occur relative to increased traffic on the dirt road that abuts her residential property. While acknowledging that traffic along certain local roads will increase in both the construction and operational phases of the Ross facility, *see* 2 SEI ER at 4-18 to -19, the SEI ER also indicates that this traffic during construction and operations, particularly truck traffic, is likely to generate fugitive dust and that various dust mitigation measures will need to be implemented, including (1) speed limits for SEI employees and contractors traveling to and from the facility on local access roads; (2) strategically placed dust control water loadout facilities within the Ross project area's access roads; (3) use of dust suppression chemicals; and (4) selection of road surface materials that will minimize fugitive dust. *See id.* at 4-89 to -90, 4-91, 4-93, 5-58 to -59, 5-60 to -61. Thus, notwithstanding the claims of SEI and the Staff to the contrary, *see* Tr. at 30-32, 37-40, the health-impact potential of facility traffic-associated dust, if properly pled, could provide a basis for standing. *Cf. White Mesa,* CLI-01-21, 54 NRC at 253 (given facility produces wet sludge, allegations regarding dust impacts associated with driving past milling facility on a daily basis are unfounded conjecture).

And in that regard, we recognize that despite the fact the ER makes no mention of any traffic increase to the northeast via the dirt New Haven Road,[22] the road that eventually goes past Ms. Viviano's residence before heading to the southeast (as County Road 105) toward the town of Hulett (estimated 2009 population 516, *see id.* at 3-378 (tbl. 3.10-1)),[23] we cannot say that it is implausible that the proposed Ross facility will generate some increase in traffic via this northeast route in the form of trucks or workers' passenger vehicles. This, in combination with Ms. Viviano's unrebutted averment that "any traffic results in a dust problem" on the

---

of submitting supplements to support various claims. *See* Tr. at 14, 22, 48. The time for such supplementation, however, was when Joint Petitioners submitted their reply brief. While the 7 days generally afforded a petitioner to file its reply under the agency's rules of practice, *see* 10 C.F.R. § 2.309(h)(2), is relatively short, the impact of this abbreviated time frame was mitigated somewhat in this instance by the participants' agreement regarding the schedule for their post-hearing petition filings that afforded additional time both to SEI and the Staff to file their answers to Joint Petitioners' hearing request (14 additional days) and to Joint Petitioners to file their reply (3 additional days). *See* Initial Prehearing Order at 2.

[22] That the New Haven Road is, in fact "dirt and gravel" as Ms. Viviano asserts, is apparent from the 2011-12 American Automobile Association Wyoming/Colorado roadmap. *See* 10 C.F.R. § 2.337(f)(1).

[23] The SEI ER only indicates that the traffic increase associated with the Ross project, which the ER acknowledges could be threefold during construction, is anticipated to be on the portions of the New Haven Road (County Road 164) and the D Road (County Road 68) going south from the facility, toward the east/west-running Interstate 90 and the cities of Moorcroft and Gillette (estimated 2009 populations 926 and 28,726, respectively, *see* 2 SEI ER at 3-378 (tbl. 3.10-1)). *See id.* at 4-18 to -20, 4-31 to -32 (tbls. 4.2-1 & 4.2-2).

road abutting her property and the Commission's admonition to "construe the petition in favor of the petitioner," *Georgia Tech Research Reactor,* CLI-95-12, 42 NRC at 115, is, in our view, sufficient to establish the injury and causation elements necessary to afford Ms. Viviano standing relative to this dust impact claim.[24]

The other purported harm outlined in Ms. Viviano's affidavit that we conclude is sufficient to establish her standing is the possibility of light pollution. In her declaration she states that "lights from operating [the Ross facility] on a 24[-]hour schedule could interfere with the clear views of the night skies that we now enjoy."[25] Viviano Declaration at 8. And as is the case with fugitive dust, light pollution is a matter of concern as a proposed nuclear materials facility undergoes agency licensing review. *See Eagle Rock,* LBP-11-26, 74 NRC at 584-85. Indeed, the SEI ER analysis of potential visual and scenic resources notes the possibility of lights associated with the facility creating a visual impact at night and discusses mitigation measures to address such impacts on eleven residences that lie within a 2-mile visual resource study area surrounding the proposed facility. *See, e.g.,* 2 SEI ER at 3-348, 4-106, 5-58 (during well-field construction, nighttime operation of lighted drill rigs is possible, increasing the potential for visual impact, which can be mitigated by minimizing nighttime drilling, turning any lights away from nearby residences, and restricting proximity of rigs to residences). Relative to Ms. Viviano's concern, however, in its answer SEI declares that Ms. Viviano's showing in this regard is deficient because she fails to provide anything to support the supposition in her affidavit that the facility would generate enough light to cause an impact at her property or to account for the regional topography, which precludes her from seeing the facility from her residence. *See* SEI Answer at 43-44; *see also* Staff Answer at 12; SEI Oral Argument Exh. 3.

In this instance, we do not find Joint Petitioners' failure to challenge the applicant's showing that the Ross facility is not visible from Ms. Viviano's property is a fatal deficiency relative to her standing, given the fact that, as

---

[24] We would add that Ms. Viviano's averment that the environmental contentions proffered by Joint Petitioners will better position the agency to "fully review the possible impacts of [SEI's] proposed ISL mining and milling project and based on [Joint Petitioners] and their experts' information, may address concerns and mitigate impacts to our water, land, and other resources," Viviano Declaration at 8-9, is an assertion that is sufficient to fulfill the redressability element of the standing requirement in a case such as this in which environmental/NEPA-related matters are raised by the petitioners. *See Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 242-43, *aff'd,* CLI-09-22, 70 NRC 932 (2009).

[25] Ms. Viviano's affidavit makes no mention of light pollution relative to her investment property. *See* Viviano Declaration at 8. Also, although the visual impact of the Ross facility upon the Devils Tower National Monument, located some 11 miles to the east of the facility, *see* 1 SEI ER at 3-18 (tbl. 3.1-6), is the subject of one of Joint Petitioners' contentions, *see* section II.B.2.e, *infra,* the visual impact of the facility at Devils Tower is not an asserted basis for Ms. Viviano's standing.

anyone knows who has ever seen a search light sweeping the night sky, light pollution can still be observed from a source that is out of the line of sight. Nor do we find dispositive the assertion that the lack of a particularized showing that Ross facility-generated light can be viewed from her property establishes the lack of plausibility for her claim about visual impacts on her property given (1) the SEI ER's acknowledgment that this facility located in the relatively flat and unpopulated confines of eastern Wyoming will have a visual impact that includes night illumination; and (2) the Commission's admonition to "construe the petition in favor of the petitioner," *Georgia Tech Research Reactor,* CLI-95-12, 42 NRC at 115. Under these circumstances, we consider her showing adequate to establish her standing.[26]

Thus, although the issue of standing is a close one, we conclude Ms. Viviano's allegations regarding dust and traffic and light pollution are sufficient to provide a basis for deeming her a "person whose interest may be affected" by this proceeding in accord with AEA section 189a.[27] This, in turn, provides the grounds

---

[26] In fact, what is most disconcerting with regard to Joint Petitioners' attempt to establish this visual impact as an adequate grounds for standing is Ms. Viviano's statement in her affidavit that "the skies in our area are free of any lights, as the closest town of approximately 400 people is over 10 miles away." Viviano Declaration at 8. SEI suggested during oral argument that the town of Hulett referred to by Ms. Viviano in her affidavit actually is at a distance of less than 8 miles from her residence, *see* Tr. at 29, a claim that appears to be borne out by Google Maps and Mapquest searches of the distance from her address (as provided in her affidavit) to Hulett. *See* 10 C.F.R. § 2.337(f)(1). Based on the information now before us, it is not clear to the Board how Hulett, with its lighted residences and retail businesses that seemingly are 2 miles closer to the east, apparently produces no discernable light pollution at her residence. Nonetheless, given we have no particulars about the light emissions from either Hulett to the east or the Ross industrial facility to the west (with whatever light mitigation measures it might employ), we do not consider this sufficient to vitiate fatally the sufficiency of her light pollution-based standing showing.

[27] Given the latitude afforded the agency to define who is an "affected person" within the meaning of AEA § 189a, 42 U.S.C. § 2239(a), *see Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 917 n.27 (2009), and the challenge a petitioner generally would have in establishing "proximity plus" or traditional standing relative to aerial and groundwater releases, it does not seem untoward for the Commission to consider adopting, at least for the initial construction/operation authorization of major nuclear material facilities, including uranium recovery (e.g., ISR mining) and fuel cycle (e.g., uranium conversion/enrichment and fuel fabrication) sites, a standing regime that mirrors the one applicable to the construction/operation of power reactor facilities by which persons living or having substantial contacts within a 50-mile radius of the facility are afforded standing, *see id.* at 916-17. There does not appear to be a "standing zone" for major materials facilities that is readily analogous to the reactor 50-mile zone, which (perhaps not surprisingly) encompasses roughly the emergency planning zone intended to address pathways associated with the ingestion of contaminated water or food, *see* NRC & Federal Emergency Management Agency, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, NUREG-

(Continued)

by which Joint Petitioners, as her acknowledged representatives, can establish their standing in this particular ISR facility licensing proceeding.

B. Admissibility of Joint Petitioners' Contentions

With Joint Petitioners having established their standing, we turn to the question of the admissibility of their five proffered contentions.[28]

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 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. *See* 10 C.F.R. § 2.309(f)(1)(i),

---

0654/FEMA-REP-1, at 10-17, 5-3 (rev. 1 Nov. 1980), *available at* http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0654/r1/. Nonetheless, some past actions by the Staff in the context of materials licensing environmental justice (EJ) assessments suggests this task is not necessarily impractical. *See* Policy Statement on the Treatment of [EJ] Matters in NRC Regulatory and Licensing Actions, 69 Fed. Reg. 52,040, 52,047-48 (Aug. 24, 2004); Office of Nuclear Material Safety and Safeguards, [NRC], NUREG-1748, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs at C-4 (2003) [hereinafter NUREG-1748]. A reasonable distance from these major materials facilities could be established, perhaps a radius of as much as 20 miles, within which anyone living or having substantial contacts would be afforded standing, assuming the individual provided an affidavit or other supporting information establishing his or her residential location or significant contacts within that area, in addition to any other required standing prerequisites under section 2.309(d)(1) and applicable agency case law. As is the case with reactors, having such a standing zone for major nuclear materials facilities would avoid the need to engage in a detailed review of allegations about possible plausible pathways for radiological or other impacts. For materials facilities, this is likely to stave off the parsing of items, such as belowground hydrologic routes or aboveground dust or light pollution, that are, in the best of circumstances, difficult to plot with precision.

[28] In doing so, we recognize the well-established precept that there is no "contention-based" requirement mandating that to have standing, besides showing that a cognizable injury is associated with a proposed licensing action and that granting the relief sought will address that injury, a petitioner also must establish a link between that injury and the issues it wishes to litigate in challenging an application. *See Crow Butte II,* CLI-09-9, 69 NRC at 339-40; *Yankee Nuclear,* CLI-96-1, 43 NRC at 6.

(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 Summer,* CLI-10-1, 71 NRC at 7 & n.33. 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 order 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. Need for Adequate Factual Information or Expert Opinion

It is the petitioner's obligation to present 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 143, 155 (1991). 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. *See 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 I,* CLI-09-12, 69 NRC at 553; *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.

c. 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/TR and the ER) so as to establish 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)(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 Crow Butte I,* CLI-09-12, 69 NRC at 557; *American Centrifuge Plant,* CLI-06-10, 63 NRC at 462-63.

2. Joint Petitioners' Contentions

Turning to the admissibility of Joint Petitioners' contentions under these standards, initially we observe that while Joint Petitioners have acknowledged that "this is a NEPA case" and that all of their contentions are challenges to the SEI application based on asserted NEPA-related deficiencies, Tr. at 20, for each contention they have attempted to add an AEA caveat. In an effort to "preserve any future challenges" they may wish to bring under the AEA, Joint Petitioners contend that, given the NEPA-related shortcoming identified in each contention, if the Commission were to issue a license to SEI with that deficiency unresolved, the agency would be violating the AEA's mandate to issue only licenses that are not inimical to the common defense and security and the public health and safety. Intervention Petition at 15-16 (contention 1), 19 (contention 2), 24 (contention 3), 26 (contention 4), and 32 (contention 5). Such a "bootstrap" approach is neither necessary nor appropriate relative to contentions that Joint Petitioners themselves characterize as firmly footed in NEPA. If Joint Petitioners are unable to prevail under NEPA with respect to the issues they raise in their contentions, then the AEA will not afford them additional solace. Consequently, we consider all these contentions as raising environmental/NEPA issues, and thus we label them and rule upon their admissibility as such, a task to which we turn below. In each instance, we begin by reciting the contention as it is specified in Joint Petitioners' hearing request.

a. Environmental Contention 1: The Application Fails to Adequately Characterize Baseline (i.e., Original or Premining) Groundwater Quality

CONTENTION: The application fails to comply with 10 C.F.R. § 51.45, 10 C.F.R. Part 40, Appendix A, and NEPA because it lacks an adequate description of the present baseline (i.e., original or premining) groundwater quality and fails to demonstrate that groundwater samples were collected in a scientifically defensible manner,

using proper sampling methodologies. The ER's departure from NRC guidance serves as additional evidence of these regulatory violations. NRC, NUREG-1569, *Standard Review Plan for In Situ Leach Uranium Extraction License Applications,* §§ 2.7.1, 2.7.3, 2.7.4 (2003).

DISCUSSION: Intervention Petition at 10-15; SEI Answer at 44-47; Staff Answer at 16-21; Joint Petitioners Reply at 15-18; Tr. at 51-78.

RULING: *Admissible,* as denominated in Appendix A to this decision, in that this contention and its foundational support are sufficient to establish a genuine material dispute adequate to warrant further inquiry.

The question framed by this contention — whether NRC regulations and NEPA require a groundwater baseline characterization for an ISR site — is not new to NRC adjudications. In the *Dewey-Burdock* ISR proceeding, in admitting a contention raising this issue, the board concluded that the applicant and Staff were incorrect in their assertions that such information was not required, particularly the applicant's assertion that 10 C.F.R. § 40.32(e) prohibited the applicant from gathering complete information on baseline water quality. *See Dewey-Burdock,* LBP-10-16, 72 NRC at 424. SEI and the Staff essentially renew these objections here, with SEI contending (and the Staff agreeing) that, regardless of whether the *Dewey-Burdock* ruling was correct, a subsequent agency rulemaking regarding what are impermissible activities at an ISR site prior to agency authorization to begin "construction" establishes that well-field development, including the type of water quality assessment being sought by Joint Petitioners, is prohibited. *See* SEI Answer at 20-21 (citing Licenses, Certifications, and Approvals for Materials Licensees, 76 Fed. Reg. 56,951 (Sept. 15, 2011)); Tr. at 71.

As revised in September 2011, the regulatory provisions involved, section 40.32(e) and the Part 40 definition section, section 40.4, provide, respectively, that grounds for license denial exist if, prior to issuance of a license to possess and use source and byproduct materials for uranium milling, there is "commencement of construction" by an applicant, 76 Fed. Reg. at 56,964 (to be codified at 10 C.F.R. § 40.32(e)). Further, "construction" is defined as

> the installation of wells associated with radiological operations (e.g., production, injection, or monitoring well networks associated with in-situ recovery or other facilities), the installation of foundations, or inplace assembly, erection, fabrication, or testing for any structure, system, or component of a facility or activity subject to the regulations in this part that are related to radiological safety or security. The term "construction" does not include:
>
> . . . .
>
> (2) Site exploration, including necessary borings to determine foundation conditions or other preconstruction monitoring to establish background information

> related to the suitability of the site, the environmental impacts of construction or operation, or the protection of environmental values;
>
> . . . .
>
> (9) Taking any other action that has no reasonable nexus to:
>
> (i) Radiological health and safety, or
>
> (ii) Common defense and security . . . ,

and "commencement of construction" is defined as

> taking any action defined as "construction" or any other activity at the site of a facility subject to the regulations in this part that has a reasonable nexus to:
>
> (1) Radiological health and safety; or
>
> (2) Common defense and security . . . .

Id. at 56,963-64 (to be codified at 10 C.F.R. § 40.4 (definitions of "Commencement of construction" and "Construction")).

Both SEI and the Staff assert that the only way to gain the type of information needed to establish a groundwater baseline such as Joint Intervenors desire would require drilling wells that would violate these provisions, as well as the dictates of Part 40, App. A, Criterion 7, and the guidance in the Staff's standard review plan for ISR applications, NUREG-1569. *See* SEI Answer at 18-20; Staff Answer at 16-18. On the other hand, Joint Petitioners argue that the combination of (1) the requirement in 10 C.F.R. § 51.45(b) that an ER contain "a description of the environment affected"; (2) Appendix A, Criterion 7's direction to an applicant to furnish "baseline data"; (3) Appendix A, Criterion 5B(5)(a)'s proviso that with regard to subsequent groundwater restoration, a hazardous constituent must not exceed the "background concentration" of that constituent; and (4) the *Dewey-Burdock* board's rejection of the SEI/Staff section 40.32(e) interpretation of "construction" all point to the need now for a baseline water quality assessment of the type SEI has declared it need not prepare, at least until after it receives its license. *See* Joint Petitioners Reply at 15-18.

In this circumstance, we conclude that the *Dewey-Burdock* board's resolution of the legal question of the interpretation of "construction" under section 40.32(e) was correct and that the subsequent rulemaking revision did not change this result. In this regard, contrary to the assertions of SEI and the Staff, we are unable to conclude that the September 2011 rulemaking has the definitive effect they claim. Indeed, relative to the final rule's language regarding the "commencement of construction," the statement of considerations accompanying the final rule provides the following colloquy:

> Comment: One commenter states that the proposed regulations fail to state whether the installation of monitoring wells, a significant component of uranium recovery facilities, including in situ leach facilities, is a "construction" activity or is exempted from the definition of "construction."
>
> Response: Installation of monitoring wells that are only intended to be used to collect background data or perform background aquifer testing would be permissible. However, monitoring wells that are part of an ISR wellfield monitoring network would not be permissible because such facilities are necessary to ensure the radiological health and safety of the public and that the licensed facility is operating within standards determined by the NRC; therefore, these wells have a reasonable nexus to radiological health and safety.

76 Fed. Reg. at 56,956-57. While this agency response indicates that drilling monitoring wells that are part of the "wellfield monitoring network" would be considered construction activity, it also states that a monitoring well intended to collect "background data or perform background aquifer testing" would not fall into that category. As a consequence, we agree with the *Dewey-Burdock* board that, like the petitioners in that proceeding, Joint Petitioners here have framed an admissible contention that has a factual dispute, i.e., the adequacy of the baseline water quality description in the SEI ER and whether SEI must take any additional steps to fulfill its legal responsibility under 10 C.F.R. § 51.45 to provide information in its ER outlining a description of the existing water quality baseline sufficient to enable the Staff to prepare its own environmental impact statement. Accordingly, we conclude that this contention should be admitted for further litigation in this proceeding.

b. Environmental Contention 2: The Application Fails to Analyze the Environmental Impacts That Will Occur if [SEI] Cannot Restore Groundwater to Primary or Secondary Limits

> CONTENTION: The application fails to meet the requirements of 10 C.F.R. § 51.45 and NEPA because it fails to evaluate the virtual certainty that [SEI] will be unable to restore groundwater to primary or secondary limits.

DISCUSSION: Intervention Petition at 16-19; SEI Answer at 47-49; Staff Answer at 21-23; Joint Petitioners Reply at 18-21; Tr. at 81-110.

RULING: *Admissible,* as denominated in Appendix A to this decision, in that this contention and its foundational support are sufficient to establish a genuine material dispute adequate to warrant further inquiry.

With this contention, Joint Petitioners allege that when the time comes for the Ross site to cease operations, SEI (or its successor in interest) will be unable to restore the groundwater either to baseline quality (primary) or to drinking water

quality (secondary) standards. This is so, according to Joint Petitioners, because no previous ISL/ISR mining operation has been able to restore groundwater to baseline standards and, therefore, Joint Petitioners declare in their contention, it is a "virtual certainty" that SEI will be unable to do so, necessitating an alternate concentration limit (ACL). *See* Intervention Petition at 16, 17. As a consequence, Joint Petitioners contend that SEI would be required to request that the Commission set an ACL for aqueous contaminants, *see* 10 C.F.R. Part 40, App. A, Criterion 5B(5)(c). And because restoring groundwater to a quality that is no lower than the ACL would necessarily result in a degradation of groundwater quality from premining baseline conditions, Joint Petitioners assert that the SEI ER must outline the environmental impacts of such an ACL.

SEI disputes this claim that an ACL is inevitable, *see* SEI Answer at 49; Tr. at 95, 96, with both SEI and the Staff also attempting to characterize Joint Petitioners' argument as resting in some fashion on the presumption that SEI will violate NRC regulations, *see* SEI Answer at 48; Staff Answer at 22-23, an assumption that the Commission has instructed licensing boards not to make, *see, e.g., GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000). While the latter characterization is flawed, in that SEI would still be in compliance with NRC regulations if it restores the site to an agency-approved ACL, this argument misses the point of Joint Petitioners' allegation. Under the agency's regulations implementing NEPA, the ER is to discuss any "irreversible and irretrievable commitments of resources which would be involved in the proposed action." 10 C.F.R. § 51.45(b)(5). Although, as SEI points out, the water in the aquifer that is the subject of an ISR project is, under the federal exemption and state permitting processes that govern underground injection control projects, unsuitable now or in the future as a source of drinking water, *see* SEI Answer at 13-18, at the same time the ISR process will further degrade the preoperational or baseline quality of the water, unless it can be restored. And unless the baseline can be restored, there will be an "irreversible and irretrievable" commitment of a resource the parameters of which must, under NEPA and agency regulations, be outlined in the applicant's ER.

Also questioned by SEI is Joint Petitioners' assertion that an ISL/ISR restoration back to baseline has never occurred, pointing to the example of the Nubeth research and development project, the predecessor to the Ross project at this same site, the restoration of which was, SEI asserts, the subject of final agency action. *See* 3 SEI Answer at 46. But when contrasted with the supporting statements of Drs. Moran and Abitz regarding the issues and problems with aquifer restoration at the Nubeth project and other ISR projects, *see* Moran Declaration at 35, 26-28; Abitz Declaration at 11-12, this merely highlights a material factual dispute relative to the participants' positions on this point.

Thus, Joint Petitioners' contention appears to be a candidate for admission. Another challenge remains, however. While NEPA requires that the NRC consider

the reasonably foreseeable environmental impacts of the proposed licensing action, the agency need not consider remote and speculative impacts, particularly if the impact cannot easily be estimated at the current time, and an appropriate future opportunity will exist for the agency to analyze the impact. *See Sierra Club v. Marsh,* 769 F.2d 868, 878 (1st Cir. 1985). And in this regard, there are two elements that potentially are fatal to the admissibility of Joint Petitioners' contention, i.e., determining the parameters of an ACL, given that such a limitation is generally set as part of the decommissioning process for an ISR facility, and the fact that the sufficiency of any ACL, when requested, can be contested in a future hearing.

To fashion an adequate evaluation of the environmental effects of being able to restore the groundwater quality to an ACL, there would need to be some determination about what that ACL would be.[29] But, as SEI and the Staff assert, *see* Tr. at 92-94, 105, given the differences that exist among well fields, it likely cannot be known at this juncture exactly what alternative concentration will be deemed necessary to protect human health and the environment under the nineteen factors of Appendix A, Criterion 5B(6). Joint Petitioners, on the other hand, suggest that the magnitude of the endeavor could be narrowed to a range of possible ACLs based on the historical experience of other ISL/ISR sites. *See* Tr. at 83-85. What this essentially calls for is a bounding analysis, something that is not unheard of in the context of NEPA analyses and does not seem untoward in this instance, given the importance of NEPA as a mechanism for providing information regarding the parameters of "irreversible and irretrievable" resource commitments. As such, we do not consider this concern a reason for precluding this contention's admission.

Nor is this contention's admission impeded by the fact that, as both SEI and the Staff acknowledge, *see* Staff Answer at 22 n.43; Tr. at 103, 109-10, SEI will be required to submit a license amendment request to the Commission if it wishes to utilize an ACL. Joint Petitioners then would have an opportunity to petition for a new hearing regarding the sufficiency of the SEI request.[30] But as Joint Petitioners point out, *see* Tr. at 107-09, the ability of any interested person to obtain an AEA hearing at that point would not provide the relief Joint Petitioners should be able to obtain now, consistent with NEPA, i.e., a public explanation of the impacts of being unable to restore the mined aquifer to primary or secondary baseline and, instead, having to use an ACL, as that alternate limitation might be implemented per a reasonable bounding analysis.

---

[29] The other factor of importance in such an analysis, the parameters of baseline/current water quality, presumably will be generated in the context of admitted environmental contention 1.

[30] By all appearances, this also would be the point at which the topic of the possible use of new water quality restoration technology, which Dr. Abitz discusses in his declaration, *see* Abitz Declaration at 12-13, would be appropriately raised in connection with the Ross facility.

We thus find this contention should be admitted for further litigation in this proceeding.[31]

c. Environmental Contention 3: The Application Fails to Include Adequate Hydrogeological Information to Demonstrate [SEI's] Ability to Contain Fluid Migration

CONTENTION: The application fails to provide sufficient information regarding the hydrogeological setting of the area to meet the requirements of 10 C.F.R. § 51.45, 10 C.F.R. Part 40, Appendix A, Criteria 4(e) and 5G(2), and NEPA. The application also runs afoul of NUREG-1569 § 2.6, which provides guidance for complying with the mandatory rules. The application similarly fails to assess the likelihood and impacts of fluid migration to the adjacent surface water and groundwater, as required by 10 C.F.R. § 51.45 and NEPA, and as discussed in NUREG-1569 § 2.7.

DISCUSSION: Intervention Petition at 19-24; SEI Answer at 49-52; Staff Answer at 23-27; Joint Petitioners Reply at 21-24; Tr. at 110-24.

RULING: *Admitted in part,* as outlined in the discussion below and denominated in Appendix A to this decision, in that a portion of this contention and its foundational support are sufficient to establish a genuine material dispute adequate to warrant further inquiry.

Although we have determined that Joint Petitioners have failed to provide information about a number of asserted impacts associated with the Ross facility, including groundwater and surface water migration, that are sufficient to demonstrate standing relative to Ms. Viviano, *see* section II.A.2.a, *supra,* our standing findings are not necessarily dispositive of our determination on a contention that raises similar concerns. Thus, we look anew at Joint Petitioners' environmental contention 3, which likewise raises hydrological concerns.

And in doing so, we find, as SEI and the Staff assert, that the declarations of Drs. Moran, Sass, and Abitz do not provide support for that portion of this issue statement, i.e., the first two sentences, that challenges the adequacy of the SEI application's analysis of geology/seismology relative to 10 C.F.R. Part 40, Appendix A, Criteria 4(e), 5G(2), and section 2.6 of NUREG-1569. As such, this aspect of the contention lacks sufficient support to show that a genuine dispute exists on a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(vi).

On the other hand, we disagree with the SEI and Staff claims regarding the

[31] In doing so, we emphasize again that, assuming it is properly derived, utilizing an ACL is not a violation of any agency regulation, *see supra* p. 196 and, as such, this contention is not a vehicle for Joint Petitioners to seek to establish that a satisfactory ACL cannot be adopted or that SEI will be unable to comply with any ACL that might be instituted, matters that would be the subject for any future license amendment proceeding if the use of an ACL is, in fact, proposed by SEI.

inadequacy of Joint Petitioners' hydrology-based challenges to the application, as embodied in the last sentence of the contention. The declarations of Drs. Moran, Sass, and Abitz contain detailed discussions regarding boreholes and aquifer isolation in the immediate vicinity of the Ross facility that raise questions about the groundwater hydrology associated with the site as detailed in the SEI application sufficient to establish a material issue of fact in accord with the pleading requirements of section 2.309(f)(1)(vi). *See* Moran Declaration at 15-21; Sass Declaration at 72-74, 78-80; Abitz Declaration at 106-10.

We thus admit this contention, albeit limited to its groundwater hydrology-related aspects outlined in the third sentence of the contention.

d. Environmental Contention 4: The Application Fails to Adequately Document Negative Impacts on Groundwater Quantity

CONTENTION: The application violates 10 C.F.R. § 51.45 and NEPA by failing to properly analyze the project's impacts on groundwater quantity. Furthermore, the application presents conflicting information on groundwater consumption, precluding accurate evaluation of the project's impacts in this area.

DISCUSSION: Intervention Petition at 24-26; SEI Answer at 52-53; Staff Answer at 27-28; Joint Petitioners Reply at 24-26; Tr. at 124-36.

RULING: *Admitted in part,* as denominated in Appendix A to this decision, in that the contention presents a genuine material dispute adequate to warrant further inquiry regarding the ER's analysis of the cumulative impacts of SEI's proposed mining activities at the Ross site and other nearby sites in the Lance District expansion on groundwater quantity.

With this contention and the accompanying supporting explanation, Joint Petitioners question various aspects of the SEI ER discussion regarding groundwater quantity impacts. Specifically, they assert that the ER is deficient because it "fails to analyze how much water will be used by the Ross operations in the long term and instead only offers several partial and conflicting estimates of possible groundwater consumption." Intervention Petition at 25. Additionally, Joint Petitioners state that SEI's proposed additional ISL/ISR facilities in the so-called Lance District expansion area to the north and south of the Ross project will compound the project's effects on groundwater depletion. *See id.*

Also in this regard, Joint Petitioners' expert Dr. Moran offers specific criticisms of SEI's water use and restoration analysis. He points to two different and unreconciled measures of water consumption in different parts of SEI's ER. *See* Moran Declaration at 31-32. Further, Dr. Moran argues that the low annual precipitation in the Ross facility area means that "recharging the aquifers and recovery of local water levels may require much longer periods of time than

are predicted in the Application, especially if numerous other ISL projects are approved." *Id.* at 32.

SEI opposes admission of environmental contention 4, insisting that 10 C.F.R. § 51.45, which governs the contents of the environmental report, does not require the level of detail about groundwater consumption that Joint Petitioners demand. SEI also argues that the hearing petition does not present a sufficient dispute with the sections of the ER discussing groundwater consumption.

In contrast, the Staff supports the admission of environmental contention 4 in part, agreeing with Joint Petitioners that the cumulative impact on groundwater quantity of the Ross project, in conjunction with that of SEI's other proposed ISL/ISR operations in the Lance District expansion, must be considered before granting the license.

We find that portion of Joint Petitioners' environmental contention 4 regarding the cumulative impact on groundwater quantity of the Ross project and the planned Lance District expansion satisfies the admissibility requirements of 10 C.F.R. § 2.309. This portion of the contention presents a material dispute with SEI's application that is within the scope of this licensing proceeding. *See Dewey-Burdock,* LBP-10-16, 74 NRC at 427-28 (admitting similar contention). Joint Petitioners also corroborate this portion of their contention challenging the SEI ER with expert support. To the extent that SEI disagrees with Joint Petitioners' criticisms of its groundwater analysis, those disagreements are matters to be decided on the merits, not at the contention admissibility stage. On the other hand, we consider all other claims raised by Joint Petitioners in the context of this contention, including concerns about the computer modeling methodology utilized by SEI to calculate groundwater quantity impacts, inadmissible as lacking sufficient factual or expert support and as failing to establish a material factual or legal dispute. *See* 10 C.F.R. § 2.309(f)(1)(v), (vi); section II.B.1.b-c, *supra.*

e. Environmental Contention 5: The Application Fails to Adequately Assess Cumulative Impacts of the Proposed Action in Conjunction with Other Industrial Activities in the Area, and Fails to Evaluate Adverse Environmental Effects Resulting from an Insufficient Decommissioning Bond and the Disposal of 11e(2) Byproduct Material. It Also Does Not Properly Consider Impacts to Visual Resources at the Nearby Devils Tower National Monument and Improperly Tiers to NRC's Flawed [Generic Environmental Impact Statement (GEIS)] for ISL Uranium Mining.

CONTENTION: The application violates 10 C.F.R. § 51.45, NEPA, and the Council on Environmental Quality's (CEQ) implementing regulations for NEPA because it fails to consider cumulative impacts that may result from [SEI's] proposed ISL uranium mining operations in conjunction with oil and gas drilling and other ISL

> uranium mining operations, all of which exist in the project vicinity and are likely to continue and expand in the foreseeable future. The application also violates these authorities because it does not provide an adequate analysis of the foreseeable impacts and negative environmental effects that will result in the likely event that [SEI's] decommissioning bond is insufficient to achieve its purpose, as well as those impacts related to disposal of 11e(2) byproduct material. Finally, the application violates NEPA because the ER tiers to NRC's flawed and unsupportable GEIS for ISL uranium mining.

DISCUSSION: Intervention Petition at 27-32; SEI Answer at 53-59; Staff Answer at 29-37; Joint Petitioners Reply at 26-32; Tr. at 137-67.

For ease of discussion, we will separate Joint Petitioners' environmental contention 5 into its five component allegations: inadequate cumulative impacts analysis (5A); inadequate decommissioning bond (5B); disposal of section 11e(2) byproduct material (5C); visual impacts at Devils Tower National Monument (5D);[32] and improper tiering to the NRC GEIS for ISL mining (5E).

(i) RULING on Environmental Contention 5A, Inadequate Cumulative Impacts Analysis: *Admitted in part,* as dominated in Appendix A to this decision, in that the contention and its foundational support, as it relates to cumulative impacts associated with the Lance District expansion, are sufficient to establish a material dispute adequate to warrant further inquiry.

NRC regulations implementing NEPA require the agency to consider the cumulative impacts of a proposed licensing action, i.e., those that result from the incremental effects of the proposed action in conjunction with past, present, and reasonably foreseeable future actions. In particular, the definitions in 10 C.F.R. § 51.14(b) incorporate the CEQ regulations that define the scope of an environmental impact statement (EIS) to include cumulative impacts, *see* 40 C.F.R. §§ 1508.7, 1508.25(c). To assist the Staff with preparing its cumulative impacts analysis, the Staff guidance document for environmental reports requests that license applicants include their own cumulative impacts analysis. *See* NUREG-1748, at 6-4.

SEI and the Staff state that license applicants do not have a specific duty under section 51.45 to analyze cumulative impacts in their environmental reports. *See* SEI Answer at 54; Staff Answer at 29. This claim does not, however, conform with the provisions of Part 51 governing the consideration of "impacts" on the

[32] Although the title of this contention makes reference to the failure properly to consider the impacts of the Ross facility upon Devils Tower visual resources, the contention itself makes no mention of this matter.

environment, which is to include cumulative impacts.[33] Accordingly, because the Staff uses the ER as the basis for its EIS, and because hearing petitioners are required to style their NEPA contentions against the ER, *see* 10 C.F.R. § 2.309(f)(2), a contention would be admissible if it raises a genuine dispute with the sufficiency of the cumulative impacts analysis, or the lack thereof, in the ER. *See, e.g., Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 102 (2009) (admitting cumulative impacts contention relative to applicant's ER), *aff'd in part and rev'd in part on other grounds,* CLI-10-2, 71 NRC 27 (2010); *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 258-59 (2007) (same).

In support of their contention, Joint Petitioners lodge three major criticisms regarding the ER with respect to cumulative impacts.[34] First, Joint Petitioners claim that "the ER does not consider the impacts of past activities, including uranium exploration and ISL testing." Intervention Petition at 28. Second, they assert that "the ER does not consider the full cumulative scope of the Ross-Lance project contemplated by [SEI]," because the reasonably foreseeable impacts of the additional satellite facilities that SEI proposes to construct in the Lance District expansion are not adequately analyzed in conjunction with the Ross project. *Id.* at 28-29. Finally, Joint Petitioners echo their argument from environmental contention 4 that the combined SEI operations will have cumulative impacts on water quantity that are not discussed in the ER and additionally allege that water quality impacts will result from cumulative disposal of liquid waste via deep-well injection. *See id.* at 29.

Regarding their first claim, Joint Petitioners are incorrect in their assertion that the ER does not consider past ISL/ISR activities. The ER provides a history of prior uranium exploration and testing, *see* 1 SEI ER at 1-5 to -7, and, as Joint Petitioners' hearing request acknowledges, the ER contains multiple references to the boreholes that remain from prior drilling at the site, *see* Intervention Petition at 21-23; *see also* 1 SEI ER at 3-10, 3-47; 2 *id.* at 4-61 to -63. For its part, SEI states that because the groundwater was restored when the earlier Nubeth research and development (R&D) ISR project was decommissioned, there are no

---

[33] Under 10 C.F.R. § 51.45(b)(1), "impacts" on the environment are to be discussed, and under 40 C.F.R. § 1508.25(c), which is one of the CEQ provisions section 51.45(b) indicates is to be used to implement the NRC's responsibilities under NEPA § 102(2) to prepare an EIS, "cumulative impacts" are included within the scope of the impacts to be assessed. Not surprisingly, therefore, SEI includes in its ER a subchapter on "Cumulative Effects." *See* 1 SEI ER at 2-17 to -44. The subchapter considers such impacts as transportation, noise, air and water quality, socioeconomic conditions, and past, current, and planned mineral development. The analysis also considers, in varying levels of detail, whether and how the proposed Ross project will interact with other activities in the vicinity of the project.

[34] We note that Joint Petitioners' claim regarding the impacts of other industrial sites in the vicinity of the proposed Ross facility is not footed in EJ concerns.

cumulative impacts with the Ross project, and Joint Petitioners provide nothing to contradict SEI on this score. And while Joint Petitioners' supporting affiant Dr. Moran opines in his declaration that "the application fails to adequately present the true extent of historical exploration drilling, borehole abandonment details, R&D testing, changes to groundwater water quality, and interconnections of geologic strata," Moran Declaration at 12, his declaration contains no alleged facts to support this opinion. Consequently, this claim does not raise a genuine dispute with SEI's application. *See Fansteel,* CLI-03-13, 58 NRC at 203.

With respect to the scope of SEI's Lance District expansion, SEI states in its ER that it intends to construct and operate additional ISR facilities in the Lance District expansion surrounding the Ross site. *See* 1 SEI ER at 1-19 to -20, 2-23. SEI indicates that these additional facilities would likely operate as satellites of the Ross facility and would utilize the same CPP that SEI proposes to construct for the Ross project. *See id.* at 2-23. And with respect to cumulative impacts, SEI states:

> Absent any site-specific features that could preclude development of these other sites (e.g., historical and cultural resources), ISR operations at additional sites likely will result in essentially the same potential impacts analyzed in this ER for the Proposed Action. Development of these sites may act to produce cumulative effects by increasing or prolonging the impacts analyzed for the Proposed Action, but the impacts will be distributed proportionately throughout the region of influence and therefore are not expected to significantly increase the severity of any impact.

Id. Joint Petitioners allege that this discussion is inadequate, particularly with regard to the lack of specificity about SEI's planned satellite facilities, and the potential impacts resulting from the Ross facility's CPP being used for SEI's additional facilities and possibly those of third parties. *See* Intervention Petition at 28-29. The Staff agrees that this portion of the contention is admissible. *See* Staff Answer at 29-30, 31.

We conclude relative to the matter of cumulative impacts associated with the Lance District expansion that Joint Petitioners have raised a genuine dispute as to the sufficiency of SEI's cumulative impacts analysis, supported by fact and expert opinion, that is material to the findings the NRC must make before granting a license to SEI. Certainly, given the size of the Lance District expansion relative to the Ross permit area, *see* 1 SEI ER at 1-249 (fig. 1.2-3), and the possible use of the Ross CPP in connection with that expansion, the potential for cumulative impacts seems apparent.

As to the cumulative impacts of SEI's proposed ISR facilities on groundwater quantity, for the reasons outlined in our discussion regarding environmental contention 4, above, *see* section II.B.2.d, *supra,* this portion of environmental contention 5A likewise is admissible. Regarding the impacts on groundwater

quality from liquid waste disposal, Dr. Moran observes that SEI plans to dispose of liquid waste via deep disposal wells into the Deadwood and Flathead formations. *See* Moran Declaration at 35; 2 SEI ER at 4-66. He does not, however, analyze the cumulative impacts of long-term disposal of that waste along with that of SEI's planned additional facilities and nearby industrial projects that also dispose of liquid waste into these formations. Although SEI did not directly address this deep disposal claim, the Staff asserts in response that the groundwater in these formations is already unusable and, therefore, Joint Petitioners do not raise a genuine dispute with the application. *See* Staff Answer at 31. We disagree, at least insofar as this concern relates to potential impacts associated with the Lance District expansion. Joint Petitioners have put forward a specific criticism of the ER that is material to the question of whether SEI has met its requirement to consider all significant environmental impacts of the proposed action. The Staff's objection that there will in fact be no environmental impact is a question for the merits, not one that is relevant to admissibility.

Based on the foregoing, we conclude that environmental contention 5A concerning the cumulative impacts of the full scope of SEI's proposed Lance District expansion project is admissible. Moreover, as we discussed above, *see* section II.B.2.d. *supra,* we also find admissible a portion of environmental contention 4 that concerns cumulative impacts associated with SEI's present and future Lance District expansion operations on groundwater quantity. As a consequence, we will consolidate with environmental contention 5A that portion of environmental contention 4 that alleges SEI has failed to consider cumulative impacts, with the language of this consolidated environmental contention set forth in Appendix A to this decision.

(ii) RULING on Environmental Contention 5B, Inadequate Decommissioning Bond: *Inadmissible,* in that this contention and its foundational support lack adequate factual or expert support and fail to establish a genuine dispute on a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(v), (vi); section II.B.1.b-c, *supra.*

Joint Petitioners base this contention, which asserts that SEI's ER must consider the reasonably foreseeable environmental impacts of its potential failure to finance adequately its decommissioning activities, on the declaration of their expert Dr. Moran. Dr. Moran provides a general critique of the financial assurance calculations of prior ISL facility operators and argues that SEI's "financial assurance calculations should be made by some independent party" and "should also consider the actual reclamation and restoration costs incurred, long-term, from a statistical sampling of the previously-licensed ISL sites." Moran Declaration at 44-45. We note initially that Dr. Moran is a hydrogeologist and geochemist, *see id.* at 11, and nothing in his declaration indicates that he has expertise with decommissioning bonds, surety arrangements, or financial analysis of any kind.

But even putting aside any questions about his qualifications to provide an opinion regarding these financial assurance matters, Dr. Moran does not allege any specific inadequacies in SEI's calculation of the amount of its decommissioning bond. Moreover, his references to prior problems involving the estimation of decommissioning costs are inadequate to establish a likelihood that the amount of SEI's decommissioning bond will be insufficient. *See Crow Butte II,* LBP-08-24, 68 NRC at 756 (contention seeking decommissioning bond increase based on Wyoming Department of Environmental Quality directive to applicant's subsidiary to increase surety bond at another ISL facility lacks sufficient support).

This portion of environmental contention 5 thus lacks alleged facts or expert opinion sufficient to support the contention, *see* 10 C.F.R. § 2.309(f)(1)(v), and fails to show that a genuine dispute exists with the application, *see id.* § 2.309(f)(1)(vi).

(iii) RULING on Environmental Contention 5C, Disposal of Section 11e(2) Byproduct Material: *Inadmissible,* in that this contention and its foundational support lack adequate factual or expert support and fail to establish a genuine dispute on a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(v), (vi); section II.B.1.b-c, *supra.*

Joint Petitioners claim it is foreseeable that no facility for the disposal of section 11e(2) byproduct material will be available when SEI seeks to dispose of such material. Yet, they provide no alleged facts or expert opinion to support their assertion that the lack of a disposal site is reasonably foreseeable. By contrast, SEI's ER contains a review of the disposal capacity of four existing section 11e(2) byproduct material disposal facilities. *See* 2 SEI ER at 4-168 to -169. Because Joint Petitioners provide no information to suggest that these facilities will be unavailable, their contention fails as lacking adequate factual and expert support, and as failing to raise a genuine dispute with the application. *See* 10 C.F.R. § 2.309(f)(1)(v), (vi).

(iv) RULING on Environmental Contention 5D, Visual Impacts at Devils Tower National Monument: *Inadmissible,* in that this contention and its foundational support lack factual or expert support and fail to establish a genuine dispute on a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(v), (vi); section II.B.1.b-c, *supra.*

Besides a sentence citing section 51.45 as authority for the ER's asserted need to fully address visual and aesthetic impact, Joint Petitioners' hearing request contains only three sentences as the asserted basis for this contention. The first states that SEI "fails to properly consider the visual and aesthetic impacts that the project would have on Devils Tower." Intervention Petition at 31. But this challenge to the adequacy of the ER's visual and aesthetics impacts discussion fails to specify what is inadequate about that ER discussion. Nor do Joint Petitioners provide any factual or expert support for the additional allegation in

the basis' second sentence that "[t]he industrial activity at the project site could tarnish the Monument's viewshed" from 10 miles away. Intervention Petition at 31. To be sure, in reply to SEI's response that it conducted a full visual and aesthetic impacts discussion,[35] *see* SEI Answer at 58 (citing SEI ER §§ 3.9, 4.9, and 5.9), Joint Petitioners do declare that this ER analysis "neglects to address the site-specific impacts at Devils Tower, as do the programmatic discussions in NRC's GEIS for ISL uranium mining." Joint Petitioners Reply at 30 (citing NRC Office of Federal and State Materials and Environmental Management Programs and Wyoming Department of Environmental Quality Land Quality Division, [GEIS] for [ISL] Uranium Milling Facilities, NUREG-1910 (May 2009)). Joint Petitioners, however, fail to provide any citation to what it is among the GEIS programmatic discussions that the ER neglects to address, leaving it to the Board to identify the grounds that support their contention, which is something we need not do. *See Fansteel,* CLI-03-13, 58 NRC at 204-05; *see also Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-09-11, 69 NRC 529, 534 (2009) ("The Commission should not be expected to sift unaided through . . . documents filed before the Board to piece together and discern a party's argument and the grounds for its claims") (internal quotations omitted).

Finally, in the third sentence of their basis statement Joint Petitioners cite a single case, *LaFlamme v. Federal Energy Regulatory Commission,* 852 F.2d 389, 399-403 (9th Cir. 1988), for the proposition that the agency must adequately

---

[35] For its part, the Staff notes that in the ER's visual impacts assessment, the ER specifically mentions the Devils Tower monument, declaring that "'[t]he proposed project area is not visible from the visitor's center or hiking trails around the monument.'" Staff Answer at 35 (quoting 2 SEI ER at 4-105). While this ER statement, which is not specifically contested by Joint Petitioners, would appear to address the question of Ross facility visual impacts for those on the ground at Devils Tower, it does not speak to the question of the visual impacts for those who might be above ground level. And in that regard, the SEI ER recognizes that "[a]lthough the Devils Tower National Monument and surrounding area is classified as a Class II [visual resource management (VRM)] area [(i.e., one in which the existing character of the landscape should be retained and the level of characteristic landscape change should be low so as not to attract the attention of the casual observer)], the Ross ISR project will only be visible to climbers scaling the volcanic neck." 2 SEI ER at 3-349; *see also id.* at 3-348 (defining objectives for Class II VRM area); U.S. Nat'l Park Serv., Devils Tower National Monument — Climbing Information, http://www.nps.gov/deto/planyourvisit/climbing.htm (last visited Jan. 24, 2012). But Joint Intervenors likewise did not raise any specific concerns about the visual impacts of the facility upon those who might climb the western-looking face of Devils Tower, and it is not the Board's responsibility to provide support for their contention so as to make it admissible. *See Crow Butte I,* CLI-09-12, 69 NRC at 553 & n.81; *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), ALAB-226, 8 AEC 381, 406 (1974). That being said, and recognizing that the number of individuals visually impacted above ground level may be a small proportion of those who visit the Devils Tower site, we nonetheless are aware of nothing that relieves the Staff of the obligation to afford environmental impact statement consideration of the visual impacts of the Ross facility upon a climber's view of the surrounding landscape. This seems particularly so, given the obvious effort expended to obtain that elevated visual perspective.

consider impacts to visual and aesthetic resources in its NEPA review. In that case, however, there was clear evidence that the construction of a hydroelectric dam would impair the aesthetic qualities of the appurtenant river. Here, as we have already noted, Joint Petitioners lack a statement of supporting facts or expert opinion to establish how the Ross project would impair the visual resources at Devils Tower. Such support, rather than mere speculation, is required for an admissible contention under 10 C.F.R. § 2.309(f)(1). *See Fansteel,* CLI-03-13, 58 NRC at 203.

The contention thus falls short of the requirements in 10 C.F.R. § 2.309(f)(1)(v), (vi) that a petitioner provide factual or expert support for a contention and show the existence of a genuine dispute with the application by reference to specific portions of the application.

(v) RULING on Environmental Contention 5E, Improper Tiering to the GEIS for ISL Mining: *Inadmissible,* in that this contention and its foundational support lack factual or expert support and fail to establish a genuine dispute on a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(v), (vi); section II.B.1.b-c, *supra.*

As the Staff acknowledges, in contrast to the GEIS associated with power reactor license renewals that has been incorporated into the agency's regulations, *see* 10 C.F.R. Part 51, Subpart A, App. B, the GEIS for ISL mining can be the subject of an appropriate challenge in an adjudicatory proceeding. *See* Tr. at 152. In support of this contention claiming that the SEI ER is deficient because it seeks to tier to a GEIS that is wholly inadequate, Joint Petitioners provide a string of citations to SEI's ER in which SEI references the ISL mining GEIS. *See* Intervention Petition at 31. Nowhere, however, do Joint Petitioners explain specifically which alleged GEIS flaws are reproduced and/or relied upon by SEI. Instead, Joint Petitioners direct us to the many comments they submitted on the draft and final GEIS, which they have included as six exhibits to their petition totaling 126 pages, *see* Intervention Petition, exhs. 1-6, and advise us that Joint Petitioners "incorporated them by reference" to avoid any "burden" that "such a litany" would impose on the Board, Tr. at 141.

Joint Petitioners have not put forward adequate grounds for their claim that the SEI application is flawed because it tiers to the agency's GEIS for ISL mining. In their petition, Joint Petitioners fail to link any of their past criticisms to specific provisions of the ER, and we decline to pore through the attachments to their intervention submission to assemble the basis for such a contention. *See Fansteel,* CLI-03-13, 58 NRC at 204-05; *see also Pilgrim,* CLI-09-11, 69 NRC at 534.

In lieu of providing an explicit connection between the alleged flaws in the GEIS and the references to the GEIS in SEI's ER, Joint Petitioners essentially invite us to declare the ER guilty by association with the GEIS. Without more, this is an inadequate basis for the contention and fails to provide the necessary factual or expert support for the contention. Moreover, because Joint Petitioners

fail to point to specific flaws in SEI's application, the contention fails to raise a genuine dispute on a material issue of fact.

III. PROCEDURAL/ADMINISTRATIVE MATTERS

Having determined in section II, above, that Joint Petitioners NRDC and PRBRC have established standing and have set forth at least one admissible contention, they are admitted as parties to this proceeding. Consequently, below we set forth procedural guidance for further litigation regarding their admitted contentions.

A. General Guidance

Given there was no request in Joint Petitioners' hearing petition that the Board ask the Commission for permission to conduct this proceeding under the procedures specified in 10 C.F.R. Part 2, Subpart G, *see Crow Butte I,* CLI-09-12, 69 NRC at 571-73, unless all parties agree that this proceeding should be conducted pursuant to 10 C.F.R. Part 2, Subpart N, this proceeding will be conducted in accordance with the procedures of 10 C.F.R. Part 2, Subparts C and L. Assuming all the parties currently do not consent to conducting this proceeding under Subpart N, the parties should conduct a conference within 10 days of the date of this issuance to discuss their particular claims and defenses and the possibility of settlement or resolution of any part of this proceeding and to make arrangements for the required disclosures under 10 C.F.R. § 2.336(a).[36]

The Board will oversee the discovery process through status reports and/or conferences, and expects that each of the parties will comply with the process to the maximum extent possible, with the understanding that failing to do so will result in appropriate Board sanctions.[37]

Pursuant to 10 C.F.R. § 2.332(d), the Board is to consider the Staff's projected schedule for completion of its safety and environmental evaluations in developing the hearing schedule. Accordingly, on or before *Tuesday, February 21, 2012,* the Staff shall submit to the Board through the E-Filing system a written estimate of its projected schedule for completion of its safety and environmental evaluations,

[36] Among the items to be discussed is whether the Staff's section 2.336(b) hearing file can be provided electronically via the NRC web site sooner than 30 days from the date of this issuance.

[37] In this regard, when a party claims a privilege and withholds information otherwise discoverable under the rules, the party shall expressly make the claim and describe the nature of what is not being disclosed to the extent that, without revealing what is sought to be protected, other parties will be able to determine the applicability of the privilege or protection. The claim and identification of privileged materials must occur within the time provided for disclosing withheld materials. *See* 10 C.F.R. § 2.336(a)(3), (b)(5).

including but not limited to its best estimate of the dates for issuance of any open item and final safety evaluation reports and the draft and final environmental impact statements relative to the Ross facility.

The Board will then conduct a prehearing conference to discuss initial discovery disclosures, scheduling, and other matters on a date to be established by the Board in a subsequent order. The parties should be prepared to address the following matters at the prehearing conference:

1. Estimates (discussed during the parties' conference) regarding when this case will be ready for an evidentiary hearing.

2. Establishing time limits for updating mandatory disclosures under 10 C.F.R. § 2.336(d) and for updating the hearing file under 10 C.F.R. § 2.1203(c).

3. Whether any party intends to assert a privilege or protected status for any information or documents otherwise required to be disclosed herein and, if so, proposals for the submission of privilege logs under 10 C.F.R. § 2.336(a)(3), (b)(5), procedures and time limits for challenges to such assertions, and the development of a protective order and nondisclosure agreement.

4. Whether any of the parties anticipates submitting a motion for summary disposition regarding any of the admitted contentions and the timing and page length of such a motion and responses thereto.

5. Establishing time limits for various evidentiary hearing-related filings, including:

    a. The final list of potential witnesses for each contention pursuant to 10 C.F.R. § 2.336(a)(1).

    b. Any unanimous request, pursuant to 10 C.F.R. § 2.310(h), to handle any specific contention under 10 C.F.R. Part 2, Subpart N.

    c. Any motion for cross-examination under 10 C.F.R. § 2.1204(b).

    d. The parties' initial written statements of position and written direct testimony with supporting affidavits pursuant to 10 C.F.R. § 2.1207(a)(1), along with consideration of (i) whether the parties should file simultaneously or sequentially, and, if sequentially, which party should file first; and (ii) the timing of filing of written responses, rebuttal testimony, and in limine motions relative to direct or rebuttal testimony.

6. The items outlined in 10 C.F.R. § 2.329(c)(1)-(3).

7. The possibility of settling any of the contentions, in whole or in part, including the status of any current settlement negotiations and the utility of appointing a settlement judge pursuant to 10 C.F.R. § 2.338(b).

8. Whether a site visit would be appropriate and helpful to the Board in the resolution of the contentions.

9. Any other procedural or scheduling matters the Board may deem appropriate.

IV. CONCLUSION

For the reasons set forth above, we conclude that in challenging SEI's application for authorization to construct and operate the Ross ISR facility, Joint Petitioners have established their representational standing and have provided four admissible contentions. As a consequence, their hearing request is granted and they are admitted as parties to this proceeding. The text of their admitted contentions is set forth in Appendix A to this decision.

For the foregoing reasons, it is, this 10th day of February 2012, ORDERED that:

1. Having established their standing to participate in this proceeding, relative to the contentions specified in paragraph 2, below, the hearing request of Joint Petitioners NRDC and PRBRC is *granted* and those petitioners are admitted as parties to this proceeding.

2. The following of Joint Petitioners' contentions are *admitted* for litigation in this proceeding: Environmental Contention 1, Environmental Contention 2, Environmental Contention 3, and Environmental Contention 4/5A.

3. The following of Joint Petitioners' contentions are *rejected* as inadmissible for litigation in this proceeding: Environmental Contention 5B, Environmental Contention 5C, Environmental Contention 5D, and Environmental Contention 5E.

4. The parties are to take the actions required by section III above in accordance with the schedule established therein.

5. In accordance with the provisions of 10 C.F.R. § 2.311, as it rules upon an intervention petition, any appeal to the Commission from this memorandum and order must be taken within ten (10) days after it is served.

THE ATOMIC SAFETY AND
LICENSING BOARD

G. Paul Bollwerk, III, Chair
ADMINISTRATIVE JUDGE

Richard F. Cole
ADMINISTRATIVE JUDGE

Kenneth L. Mossman
ADMINISTRATIVE JUDGE

Rockville, Maryland
February 10, 2012

APPENDIX A

ADMITTED CONTENTIONS

1. Environmental Contention 1: The application fails to adequately characterize baseline (i.e., original or pre-mining) groundwater quality.

   CONTENTION: The application fails to comply with 10 C.F.R. § 51.45, 10 C.F.R. Part 40, Appendix A, and NEPA because it lacks an adequate description of the present baseline (i.e., original or premining) groundwater quality and fails to demonstrate that groundwater samples were collected in a scientifically defensible manner, using proper sampling methodologies. The ER's departure from NRC guidance serves as additional evidence of these regulatory violations. NRC, NUREG-1569, *Standard Review Plan for In Situ Leach Uranium Extraction License Applications,* §§ 2.7.1, 2.7.3, 2.7.4 (2003).

2. Environmental Contention 2: The application fails to analyze the environmental impacts that will occur if SEI cannot restore groundwater to primary or secondary limits.

   CONTENTION: The application fails to meet the requirements of 10 C.F.R. § 51.45 and NEPA because it fails to evaluate the virtual certainty that SEI will be unable to restore groundwater to primary or secondary limits.

3. Environmental Contention 3: The application fails to include adequate hydrological information to demonstrate SEI's ability to contain groundwater fluid migration.

   CONTENTION: The application fails to assess the likelihood and impacts of fluid migration to the adjacent groundwater, as required by 10 C.F.R. § 51.45 and NEPA, and as discussed in NUREG-1569 § 2.7.

4. Environmental Contention 4/5A: The application fails to adequately assess cumulative impacts of the proposed action and the planned Lance District expansion project.

   CONTENTION: The application violates 10 C.F.R. § 51.45, NEPA, and the Council on Environmental Quality's (CEQ) implementing regulations for NEPA because it fails to consider adequately cumulative impacts, including impacts on water quantity, that may result from SEI's proposed ISL uranium mining operations planned in the Lance District expansion project.

Cite as 75 NRC 213 (2012) **LBP-12-4**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

E. Roy Hawkens, Chairman
Dr. Michael F. Kennedy
Dr. William C. Burnett

In the Matter of **Docket Nos. 52-040-COL**
52-041-COL
(ASLBP No. 10-903-02-COL-BD01)

FLORIDA POWER & LIGHT COMPANY
(Turkey Point Nuclear Generating Plant, Units 6 and 7) **February 28, 2012**

RULES OF PRACTICE: SUMMARY DISPOSITION (APPLICATION OF STANDARDS FOR FORMAL HEARINGS TO INFORMAL PROCEEDINGS)

The hearing procedures of 10 C.F.R. Part 2, Subpart L provide that motions for summary disposition "must be in writing and must include a written explanation of the basis of the motion, and affidavits to support statements of fact." 10 C.F.R. § 2.1205(a). Such motions are to be evaluated pursuant to the same "standards for summary disposition set forth in [10 C.F.R. Part 2,] subpart G." *Id.* § 2.1205(c). Those Subpart G standards state that a motion for 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 dispute as to any material fact and that the moving party is entitled to a decision as a matter of law." *Id.* § 2.710(d)(2).

RULES OF PRACTICE: SUMMARY DISPOSITION

The standards governing summary disposition "are based upon those the federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure." *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297 (2010). Pursuant to those standards, the moving party bears the initial burden of showing the absence of a genuine issue of material fact. *See Celotex Corp. v. Catrett,* 477 U.S. 317, 323 (1986). If the nonmoving party opposes the motion, it cannot rest on the allegations or denials of a pleading; instead, it must "go beyond the pleadings and by [the nonmoving party's] own affidavits, or by the depositions, answers to interrogatories, and admissions on file, designate specific facts showing that there is a genuine issue for trial." *Id.* at 324 (internal quotation marks omitted); *see* 10 C.F.R. § 2.710(b). If, however, the nonmoving party declines to oppose the moving party's *prima facie* showing of undisputed material facts, Commission regulations provide that those facts will be considered admitted. 10 C.F.R. § 2.710(a).

RULES OF PRACTICE: SUMMARY DISPOSITION

That a nonmoving party declines to oppose a motion for summary disposition does not perforce mean the moving party is entitled to a favorable judgment. "'[T]he party moving for summary judgment has the burden to show that he is entitled to judgment under established principles; and if he does not discharge that burden then he is not entitled to judgment. No defense to an insufficient showing is required.'" *Adikes v. S.H. Kress & Co.,* 398 U.S. 144, 161 (1970) (quoting 6 James Wm. Moore et al., *Moore's Federal Practice* ¶ 56.22[2], at 2824-25 (2d ed. 1966)). In other words, where a nonmoving party declines to oppose a motion for summary disposition, the Board shall accept as admitted the moving party's *prima facie* showing of material facts. The Board cannot grant summary disposition on those facts, however, unless the moving party discharges its burden of demonstrating that it "is entitled to a decision as a matter of law." 10 C.F.R. § 2.710(d)(2); *see United States v. 5800 SW 74th Ave.,* 363 F.3d 1099, 1101-02 (11th Cir. 2004); *Anchorage Associates v. Virgin Islands Board of Tax Review,* 922 F.2d 168, 174-76 (3d Cir. 1990); *Jaroma v. Massey,* 873 F.2d 17, 20 (1st Cir. 1989).

COMBINED LICENSES

REGULATIONS: INTERPRETATION (10 C.F.R. § 52.79(a)(3))

A combined license (COL) application must include a Final Safety Analysis Report (FSAR) containing certain "information, at a level of information sufficient

to enable the Commission to reach a final conclusion on all safety matters that must be resolved by the Commission before issuance of" the COL, including "[t]he kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in [10 C.F.R. Part 20]." 10 C.F.R. § 52.79(a)(3). Part 20 "outlines a number of radiation protection requirements with which licensees must comply," such as "procedures and controls to reduce occupational doses and doses to members of the public to levels that are as low as reasonably achievable." *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-16, 70 NRC 33, 37 (2009) (referencing 10 C.F.R. § 20.1101(b)).

COMBINED LICENSES

REGULATIONS: INTERPRETATION (10 C.F.R. § 52.79(a)(3))

The level of low-level radioactive waste (LLRW) "storage information required by 10 C.F.R. § 52.79(a)(3) is tied to the COL applicant's particular plans for compliance through design, operational organization, and procedures" (*Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 46 (2010) (citing *Vogtle,* CLI-09-16, 70 NRC at 37)), including how that applicant "intends to handle an accumulation of LLRW." *Id.* at 47.

COMBINED LICENSES

REGULATIONS: INTERPRETATION (10 C.F.R. § 52.79(a)(3))

The scope and specificity of information required under section 52.79(a)(3) is a fact-bound determination that "is tied to the applicant's 'particular plans for compliance through,' but not necessarily the details of, 'design, operational organization, and procedures' associated with any contingent long-term LLRW facility." *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), LBP-10-8, 71 NRC 444 (2010) (quoting *Vogtle,* CLI-09-16, 70 NRC at 37). To comply with section 53.79(a)(3)'s requirement to provide "sufficient [information] to enable the Commission to reach a final conclusion on all safety matters" regarding "the means" a COL applicant will use to comply with 10 C.F.R. Part 20 (10 C.F.R. § 52.79(a)(3)), a COL applicant's FSAR must identify particular plans pertaining to "design, operational organization, and procedures" that demonstrate how it intends "to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20 [including, but] not limited to [LLRW] handling and storage." *Vogtle,* CLI-09-16, 70 NRC at 37.

MEMORANDUM AND ORDER
(Granting FPL Motion for Summary Disposition of CASE Contention 7)

I. INTRODUCTION

This proceeding concerns Florida Power & Light Company's (FPL's) combined license (COL) application for two new nuclear power reactors, Turkey Point Units 6 and 7, at its facility near Homestead, Florida.[1] On February 28, 2011, this Board granted hearing requests and petitions to intervene from two groups of intervenors[2] opposing FPL's COL application. *See* LBP-11-6, 73 NRC 149, 251 (2011).[3]

In LBP-11-6, we, *inter alia,* admitted CASE's Contention 7 for litigation.[4] As admitted, that contention asserts that, in the event FPL needs to manage Class B and Class C low-level radioactive waste (LLRW)[5] for an extended period of time, FPL's COL application "fails to provide information sufficient to enable the NRC to reach a final conclusion on safety matters regarding the means for controlling

---

[1] *See* [FPL, COL] Application for the Turkey Point Units 6 & 7, Notice of Hearing, Opportunity to Petition for Leave to Intervene and Associated Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation, 75 Fed. Reg. 34,777 (June 18, 2010).

[2] These groups are (1) Mark Oncavage, Dan Kipnis, Southern Alliance for Clean Energy, and National Parks Conservation Association [hereinafter referred to collectively as Joint Intervenors]; and (2) Citizens Allied for Safe Energy, Inc. [hereinafter CASE].

[3] We also granted a request by the Village of Pinecrest to participate as an interested local governmental body. *See* LBP-11-6, 73 NRC at 252.

[4] In LBP-11-6, we also admitted two other contentions: Joint Intervenors' Contention 2.1 and CASE's Contention 6, both which were contentions of omission. We recently granted FPL's motion to dismiss these two contentions, concluding that FPL's Revision 3 to its COL application had rendered them moot. *See* Licensing Board Memorandum and Order (Granting FPL's Motions to Dismiss Joint Intervenors' Contention 2.1 and CASE's Contention 6 as Moot) (Jan. 26, 2012) at 6 (unpublished). Joint Intervenors and CASE have requests pending before this Board that seek to admit new contentions challenging the adequacy of the measures that FPL took to moot the contentions dismissed in our January 26 Memorandum and Order.

[5] The Low-Level Radioactive Waste Policy Act defines LLRW as "radioactive material that — (i) is not high-level radioactive waste, spent nuclear fuel, or byproduct material (as defined in [42 U.S.C. §] 2014(e)(2) . . .); and (ii) the [NRC] . . . classifies as [LLRW]." 42 U.S.C. § 2021b(9)(A)(i)-(ii). The NRC divides LLRW into three classes, A, B, and C (10 C.F.R. § 61.55(a)(2)), based on the concentration and types of long-lived and short-lived radionuclides. *Id.* § 61.55(a)(1). LLRW from a nuclear power plant consists principally of reactor water resin beds (*see infra* Part III.A), but it also includes, e.g., contaminated filters, protective clothing and shoe covers, cleaning rags, and tools. *See* U.S. Nuclear Regulatory Commission, Radioactive Waste: Production, Storage, Disposal, NUREG/BR-0216, Rev. 2 at 19 (May 2002).

and limiting radioactive materials and effluents and radiation exposures within the limits set forth in [10 C.F.R.] Part 20 and ALARA [as low as reasonably achievable]." LBP-11-6, 73 NRC at 246.

On December 16, 2011, FPL submitted to the NRC Revision 3 to its COL application for Turkey Point Units 6 and 7. *See* Letter from Mano K. Nazar, Executive Vice President and Chief Nuclear Officer, FPL, to U.S. Nuclear Regulatory Commission (Dec. 16, 2011) (ADAMS Accession No. ML11361A102).

On January 3, 2012, FPL filed a motion for summary disposition of CASE's Contention 7.[6] CASE does not oppose the motion,[7] and the NRC Staff supports it.[8]

For the reasons discussed below, we conclude that Contention 7 presents no genuine dispute of material fact and that FPL is entitled to judgment as a matter of law. Accordingly, we grant FPL's motion for summary disposition of Contention 7.

II. APPLICABLE LEGAL STANDARDS

A. Regulatory Standards Governing LLRW Handling and Storage in a COL Application

As relevant here, a COL application must include a Final Safety Analysis Report (FSAR) containing certain "information, at a level of information sufficient to enable the Commission to reach a final conclusion on all safety matters that must be resolved by the Commission before issuance of" the COL, including "[t]he kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in [10 C.F.R. Part 20]." 10 C.F.R. § 52.79(a)(3). Part 20 "outlines a number of radiation protection requirements with which licensees must comply," such as "procedures and controls to reduce occupational doses and doses to members of the public to levels that are as low as reasonably achievable." *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-16, 70 NRC 33, 37 (2009) (referencing 10 C.F.R. § 20.1101(b)).

In the *Vogtle* proceeding, which involved a COL application incorporating the same certified design as the design referenced for Turkey Point Units 6 and 7

[6] [FPL's] Motion for Summary Disposition of CASE Contention 7 (Jan. 3, 2012) [hereinafter Motion for Summary Disposition of Contention 7].

[7] [CASE] Response to FPL Motions to Dismiss Contention 6 as Moot and for Summary Disposition of CASE Contention 7 (Jan. 23, 2012) [hereinafter CASE Response].

[8] NRC Staff Answer to "[FPL's] Motion for Summary Disposition of CASE Contention 7" (Jan. 23, 2012) [hereinafter NRC Staff Answer].

(i.e., the Westinghouse AP1000), the Commission construed section 52.79(a)(3) as imposing "no quantity or time restrictions relative to onsite storage of such waste [LLRW]." *Vogtle,* CLI-09-16, 70 NRC at 36. In a subsequent COL application proceeding also involving the Westinghouse AP1000 design, the Commission observed that "[a]bsent a licensed LLRW disposal facility that will accept waste from [a COL applicant's facility], it is reasonably foreseeable that LLRW generated by normal operations will be stored at the site for a longer term than is currently envisioned in" that COL application. *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 46 (2010). The Commission therefore instructed that the level of "LLRW storage information required by 10 C.F.R. § 52.79(a)(3) is tied to the COL applicant's particular plans for compliance through design, operational organization, and procedures" (*id.*) (citing *Vogtle,* CLI-09-16, 70 NRC at 37), including how that applicant "intends to handle an accumulation of LLRW." *Id.* at 47.

B. Summary Disposition Standards

This proceeding is governed by the informal hearing procedures of 10 C.F.R. Part 2, Subpart L (*see* LBP-11-6, 73 NRC at 252), which provide that motions for summary disposition "must be in writing and must include a written explanation of the basis of the motion, and affidavits to support statements of fact." 10 C.F.R. § 2.1205(a). Such motions are to be evaluated pursuant to the same "standards for summary disposition set forth in [10 C.F.R. Part 2,] subpart G." *Id.* § 2.1205(c). Those Subpart G standards state that a motion for 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 dispute as to any material fact and that the moving party is entitled to a decision as a matter of law." *Id.* § 2.710(d)(2).

The Commission has instructed that the standards governing summary disposition "are based upon those the federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure." *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297 (2010). Pursuant to those standards, the moving party bears the initial burden of showing the absence of a genuine issue of material fact. *See Celotex Corp. v. Catrett,* 477 U.S. 317, 323 (1986). If the nonmoving party opposes the motion, it cannot rest on the allegations or denials of a pleading; instead, it must "go beyond the pleadings and by [the nonmoving party's] own affidavits, or by the depositions, answers to interrogatories, and admissions on file, designate specific facts showing that there is a genuine issue for trial." *Id.* at 324 (internal quotation marks omitted); *see* 10 C.F.R. § 2.710(b). If, however, the nonmoving party declines to oppose the moving party's *prima facie* showing of undisputed

material facts, Commission regulations provide that those facts will be considered admitted. 10 C.F.R. § 2.710(a).

That a nonmoving party declines to oppose a motion for summary disposition, however, does not perforce mean the moving party is entitled to a favorable judgment. "'[T]he party moving for summary judgment has the burden to show that he is entitled to judgment under established principles; and if he does not discharge that burden then he is not entitled to judgment. No defense to an insufficient showing is required.'" *Adikes v. S.H. Kress & Co.,* 398 U.S. 144, 161 (1970) (quoting 6 James Wm. Moore et al., *Moore's Federal Practice* ¶ 56.22[2], at 2824-25 (2d ed. 1966)).

In other words, where — as here — a nonmoving party declines to oppose a motion for summary disposition, the Board shall accept as admitted the moving party's *prima facie* showing of material facts. The Board cannot grant summary disposition on those facts, however, unless the moving party discharges its burden of demonstrating that it "is entitled to a decision as a matter of law." 10 C.F.R. § 2.710(d)(2); *see United States v. 5800 SW 74th Ave.,* 363 F.3d 1099, 1101-02 (11th Cir. 2004); *Anchorage Associates v. Virgin Islands Board of Tax Review,* 922 F.2d 168, 174-76 (3d Cir. 1990); *Jaroma v. Massey,* 873 F.2d 17, 20 (1st Cir. 1989); *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-08-7, 67 NRC 361, 372 (2008).

Guided by the above analytic framework, we proceed to analyze FPL's motion for summary disposition.

III. ANALYSIS

A. No Genuine Dispute of Material Fact Exists

As designed and discussed in FPL's COL application, the Turkey Point facility has onsite LLRW storage capability "for greater than two years at the expected rate of [LLRW] generation and greater than one year at the maximum rate of [LLRW] generation." *See* Turkey Point Units 6 & 7, COL Application, Part 2 — FSAR, Rev. 3, Chap. 11 — Radioactive Waste Management at 11.4-1 (Dec. 2011) [hereinafter FSAR Rev. 3]. FPL's original COL application contemplated that it would not exceed the facility's LLRW storage capacity because it planned to ship such waste periodically to the Studsvik facility in Erwin, Tennessee, which would accept and temporarily store the LLRW pending shipment to a permanent LLRW disposal facility. *See* Turkey Point Units 6 & 7, COL Application, Part 2 — FSAR, Rev. 0, Chap.11 — Radioactive Waste Management at 11.4-1 to 11.4-2 (June 2009).

In LBP-11-6, we agreed with CASE that, on the record before us, FPL's reliance on the ability of Studsvik to accept and to store LLRW from proposed Units 6 and 7 was questionable due to the closure of the Barnwell LLRW disposal

facility in South Carolina to LLRW producers from Florida, such as FPL. Absent an LLRW disposal facility to which Studsvik could send LLRW, it followed that, contrary to FPL's COL application, FPL might be required to store LLRW at the proposed Turkey Point facility for longer than 2 years. *See* LBP-11-6, 73 NRC at 244-46. CASE's Contention 7 thus asserts that the FSAR in FPL's COL application is inadequate because it does not provide sufficient information to demonstrate how FPL plans to store LLRW onsite for more than 2 years in a manner that will comply with the radiation exposure limits in Part 20 and radiation exposure guidance in Part 50, Appendix I (guides for meeting the "as low as reasonably achievable" (ALARA) criterion in light water reactors).[9]

In its motion for summary disposition, FPL states that, as a result of Revision 3 to its FSAR, there is no genuine dispute of material fact as to the sufficiency of the information FPL has provided in the FSAR to enable the NRC to reach a conclusion regarding FPL's ability to provide long-term onsite storage of LLRW while complying with 10 C.F.R. Part 20. *See* Motion for Summary Disposition of Contention 7 at 1-2. Specifically, FPL states that "[o]n December 16, 2011, FPL submitted Revision 3 to its [COL application], which included revisions to Section 11.4 of its FSAR. The revised Section 11.4 provides FPL's plan, if needed, for controlling exposures from storage of an extended accumulation of LLRW." *Id.,* Attach. 2, Statement of Material Facts on Which No Genuine Dispute Exists.

FPL's plan for controlling radiation exposure from onsite storage of LLRW consists of the following: (1) in the first instance, FPL does *not* plan to store LLRW onsite for extended periods of time, because it intends routinely to ship LLRW to an offsite storage facility (FSAR Rev. 3, at 11.4-1, 11.4-3);[10] (2) if additional LLRW onsite storage capacity is required because adequate offsite storage or disposal capacity is unavailable, FPL could implement a contingency plan to implement waste minimization strategies to extend the duration of its existing capacity (*id.* at 11.4-1); and (3) as a backup contingency plan, FPL would expand its LLRW storage capacity by designing, constructing, and operating additional onsite storage in accordance with NUREG-0800, Standard Review Plan Chapter 11 Radioactive Waste Management Appendix 11.4-A, Design

---

[9] Contention 7 states in full:

> FPL's COL [application] fails to provide information sufficient to enable the NRC to reach a final conclusion on safety matters regarding the means for controlling and limiting radioactive material and effluents and radiation exposures within the limits set forth in [10 C.F.R.] Part 20 and ALARA in the event FPL needs to manage Class B and Class C LLRW for an extended period.

LBP-11-6, 73 NRC at 246.

[10] FPL states that it currently ships Class B and Class C LLRW from its two operating Turkey Point nuclear reactors to Studsvik for storage and ultimate disposal. *See* Motion for Summary Disposition of Contention 7 at 2 n.3.

Guidance for Temporary Storage of Low-Level Radioactive Waste. *Id.* at 11.4-1, 11.4-3. Any change to the facility to create additional onsite LLRW storage would be evaluated by performing written safety analyses pursuant to 10 C.F.R. § 50.59, and if the acceptability of the proposed additional storage could not be demonstrated by a section 50.59 analysis, FPL would seek a license amendment to approve the proposed storage. *Id.* at 11.4-3.

In a declaration provided by Paul R. Jacobs,[11] FPL provides the following factual details regarding its contingency plan for long-term onsite LLRW storage. FPL's LLRW will be generated primarily from purification media (i.e., spent resin) discharges that will occur during planned outages, which are expected to occur at 18-month intervals. *See* Jacobs Decl. at 2, 3. The spent resin discharges will first be held in resin catch tanks in the rail car bay of the Auxiliary Building, the capacity of which may be supplemented by additional temporary mobile systems, if needed. *See id.* at 3.[12] When FPL has accumulated sufficient spent resin in the catch tanks, it will process the resin (primarily by dewatering it) and place the processed resin in storage (i.e., shipping) containers. *See id.* at 2, 3. Pursuant to the Westinghouse AP1000 Design Control Document (DCD) § 11.4.2.1, the Auxiliary Building has sufficient space to store at least two media discharges in tanks and shipping containers. *See id.* at 4. "[I]t will [thus] be the third [planned] outage involving media discharge before even additional temporary storage could potentially be needed (about four and a half years)." *Id.* Mr. Jacobs further declares that FPL

> will have sufficient time after Turkey Point Units 6 & 7 start operating to complete all activities to construct additional storage, if needed, as called for in its contingency plan — at least two refueling outages (about three years). . . . The LLRW storage facility can be constructed within six months. Therefore, an additional storage facility could be constructed prior to the third outage requiring media discharge, even if work is not started until after completing the second outage (about 36 months from the start of operations).

Id. at 4-5.

---

[11] Mr. Jacobs is the New Nuclear Project Engineering Supervisor for FPL's Turkey Point Units 6 and 7 nuclear power plant project. Mr. Jacobs' extensive educational background and professional experience are set forth in his declaration and appended curriculum vitae. *See* Motion for Summary Disposition of Contention 7, Attach. 3, Declaration of Paul R. Jacobs in Support of [FPL's] Motion for Summary Disposition of CASE Contention 7 (Dec. 27, 2011) [hereinafter Jacobs Decl.].

[12] Mr. Jacobs states (Jacobs Decl. at 2) that data provided from plant chemistry monitoring will provide "adequate information . . . to anticipate the amount of [LLRW] that will be generated during an outage and will need to be stored." The "estimated maximum annual activity is described in [AP1000 Design Control Document] Table 11.4-3. The AP1000 plant design has sufficient storage capacity to accommodate the maximum generation rate of Class B and C LLRW." *Id.* at 3.

Finally, Mr. Jacobs explains that

> FPL's plan for controlling and limiting radioactive material and effluents and radiation exposures from Class B and C LLRW is found in Section 11.4 of its FSAR, "Solid Waste Management," which incorporates by reference the corresponding section of Revision 19 to the DCD. This includes specific commitments regarding the kinds and quantities of waste (DCD § 11.4.2.1 at 11.4-3 to 11.4-6), the design of storage containers (DCD § 11.4.2.1 at 11.4-4), and how the waste will be processed and packaged (DCD § 11.4.2.3.3 at 11.4-10 to 11.4-11). It also includes FPL's stated plan to transfer Class B and C LLRW to Studsvik for treatment, storage, and ultimate disposal, as FPL is doing currently for its existing operating nuclear plants. FSAR § 11.4.6 at 11.4-2. It also includes FPL's contingency plan in the event additional onsite storage capacity for [LLRW] is required. In that case, FPL's FSAR states that additional temporary storage "would be designed, constructed, and operated in accordance with the design guidance provided in NUREG-0800, Standard Review Plan 11.4, Appendix 11.4-A." FSAR § 11.4.2.4.3 at 11.4-1.

Jacobs Decl. at 4.

We conclude that the above material facts stated by FPL have *prima facie* support in the record. The NRC Staff "agrees" with FPL's characterization of the material facts. *See* NRC Staff Answer at 4. Because CASE does not dispute these facts (CASE Response at 1), we deem them admitted pursuant to 10 C.F.R. § 2.710(a).[13]

B. Based on the Undisputed Material Facts, FPL Is Entitled to Judgment as a Matter of Law

The legal question presented is whether FPL's FSAR, as supplemented by Revision 3, provides "sufficient [information] to enable the Commission to reach a final conclusion on all safety matters" regarding "the means [FPL will use] for controlling and limiting radioactive effluents and radiation exposures within the

[13] FPL acknowledges that, as admitted, Contention 7 raises one potential question of fact, namely, "whether FPL's letter of intent with Studsvik adequately establishes where [LLRW] will be disposed of while maintaining compliance with Part 20." Motion for Summary Disposition of Contention 7 at 4. FPL suggests that there is a factual basis to conclude that FPL will not need to plan for long-term onsite storage of LLRW in light of the licensing in Texas of a disposal facility called Waste Control Specialists that is authorized to accept and dispose of out-of-compact LLRW. *See id.* at 3 n.4. As we see it, however, and as FPL and the NRC Staff both seem to acknowledge (*id.* at 4-5; NRC Staff Answer at 6), the factual issue of whether offsite LLRW storage and disposal facilities will ultimately be available is not material to summary disposition of Contention 7, because Revision 3 of FPL's FSAR, in compliance with 10 C.F.R. § 52.79(a)(3), provides an adequate contingency plan for the long-term onsite storage of LLRW in the event that offsite storage and disposal facilities are not available. *See infra* Part III.B.

limits set forth in [10 C.F.R. Part 20] . . . ." 10 C.F.R. § 52.79(a)(3). Although CASE does not oppose FPL's motion for summary disposition (CASE Response at 1), we may grant that motion only if FPL has demonstrated it is entitled to judgment as a matter of law. *See supra* Part II.B. We conclude that FPL has satisfied that burden.[14]

Preliminarily, we consider whether section 52.79(a)(3) prescribes with specificity the information that an applicant must provide in its COL application. The Commission explicitly left that issue open in CLI-09-16 (*see Vogtle,* CLI-09-16, 70 NRC at 37-38), but it provided an instructive discussion that, in our view, bears on the issue. As relevant here, the Commission indicated that section 52.79(a)(3) "requires that a COL application contain information . . . . pertain[ing] to how the COL applicant intends, through its design, operational organization, and procedures, to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20 [including, but] not limited to [LLRW] handling and storage." *Id.* at 36-37. "As such, the required information is tied to the COL applicant's particular plans for compliance through design, operational organization, and procedures." *Id.* at 37.

Based on the Commission's discussion in CLI-09-16, we conclude — in agreement with the analysis and conclusion in *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), LBP-10-8, 71 NRC 433 (2010) — that the scope and specificity of information required under section 52.79(a)(3) is a fact-bound determination that "is tied to the applicant's 'particular plans for compliance through,' but not necessarily the details of, 'design, operational organization, and procedures' associated with any contingent long-term LLRW facility." *Id.* at 444 (quoting *Vogtle,* CLI-09-16, 70 NRC at 37).

In other words, to comply with section 53.79(a)(3)'s requirement to provide "sufficient [information] to enable the Commission to reach a final conclusion on all safety matters" regarding "the means" FPL will use to comply with 10 C.F.R. Part 20 (10 C.F.R. § 52.79(a)(3)), FPL's FSAR must identify particular plans pertaining to "design, operational organization, and procedures" that demonstrate how it intends "to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20 [including, but] not limited to [LLRW] handling and storage." *Vogtle,* CLI-09-16, 70 NRC at 37. We conclude that FPL's FSAR, as amended by Revision 3, satisfies this requirement.[15]

---

[14] The NRC Staff "agrees" with FPL's legal analysis and argues that FPL "is entitled to a decision in its favor as a matter of law." *See* NRC Staff Answer at 4.

[15] The NRC Staff urges us to follow the Licensing Board's rationale in the *Vogtle* decision (NRC Staff Answer at 14), which we do. The Staff cautions, however, that by following the *Vogtle* rationale, we will go into conflict with the decision in *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-10-20, 72 NRC 571 (2010), which — in the Staff's view —

(Continued)

FPL's FSAR indicates that its principal means for handling LLRW will be to package it in shipping containers and routinely ship it to a storage facility, thereby avoiding the need for long-term onsite storage. *See* FSAR Rev. 3, at 11.4-3. If offsite shipping of LLRW is not available when Units 6 and 7 become operational, "temporary storage capability is available on site for greater than two years at the expected rate of [LLRW] generation and greater than one year at the maximum rate of [LLRW] generation, as described in DCD Subsection 11.4.2.4.2 paragraph ten." *Id.* at 11.4-1.[16]

The FSAR provides two contingency plans for handling the onsite accumulation of LLRW for a longer period of time. First, "[i]mplementation of waste minimization strategies could extend the duration of temporary [LLRW] storage capability." FSAR Rev. 3, at 11.4-1. For example, FPL could decrease the generation of LLRW by "reducing the service run length of resin beds or mixing spent resins to limit radioactivity concentrations." Turkey Point Units 6 & 7 COL Application, Part 3 — Environmental Report, Rev. 3, at 5.7-7 (Dec. 2011).

Second, FPL's FSAR provides that "[i]f additional storage capacity for [LLRW] were required, further temporary storage would be designed, constructed, and operated in accordance with the design guidance provided in NUREG-0800, Standard Review Plan 11.4, Appendix 11.4-A." FSAR Rev. 3, at 11.4-3; *accord id.* at 11.4-1. Appendix 11.4-A to NUREG-0800, which is entitled "Design Guidance for Temporary Storage of Low-Level Radioactive Waste," contains detailed information pertaining to the safe design, construction, and operation of onsite LLRW storage facilities. In our judgment, FPL's commitment (FSAR Rev. 3, at 11.4-3) that it will — if necessary — design, construct, and operate a temporary onsite LLRW storage facility in accordance with the guidance in Appendix 11.4-A to NUREG-0800, coupled with FPL's plan in section 11.4 of the FSAR for controlling and limiting radioactive material and effluents and radiation exposures from LLRW, which incorporates by reference the corresponding

---

construed section 52.79(a)(3) to require an FSAR to provide "more information than is contemplated by the *Vogtle* holding and by 10 C.F.R. § 52.79(a)(3)." *Id.* at 12. Although we appreciate the NRC Staff's candor in pointing out what it perceives to be a conflict between decisions of the *Vogtle* and *Levy* Boards, its assessment, in our view, is not ineluctable, especially given the *Levy* Board's explicit avowal (LBP-10-20, 72 NRC at 603) that its "decision is consistent with *Vogtle*." As we indicated above in text, whether an FSAR contains sufficient information to satisfy section 52.79(a)(3) is a fact-bound determination that must be made on a case-by-case basis. *Cf. Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 76-77) (2009) ("[t]he questions of the safety . . . impacts of onsite low-level waste *storage* are . . . largely site- and design-specific, and appropriately decided in an individual licensing proceeding").

[16] The FSAR states: "All packaged and stored [LLRW] is shipped to offsite disposal/storage facilities and temporary storage of [LLRW] is only provided until routine offsite shipping can be performed. Accordingly, there is no expected need for permanent onsite storage facilities at Units 6 & 7." FSAR Rev. 3, at 11.4-3.

section of Revision 19 of the DCD, provides "sufficient [information] to enable the Commission to reach a final conclusion on all safety matters" regarding "the means" FPL will use to comply with radiation protection requirements in 10 C.F.R. Part 20 (10 C.F.R. § 52.79(a)(3)), including LLRW handling and storage. *See Vogtle,* CLI-09-16, 70 NRC at 37.

Further, FPL states that it would conduct an analysis under 10 C.F.R. § 50.59 to determine whether the construction of an additional onsite LLRW storage facility could be made without a license amendment, but if a license amendment were necessary, FPL represents that it would seek approval from the NRC to construct such a facility (*see* FSAR Rev. 3, at 11.4-3), which, FPL declares, "can be constructed within six months." Jacobs Decl. at 5.[17]

We conclude that FPL's FSAR contains sufficient information to satisfy 10 C.F.R. § 52.79(a)(3). FPL is therefore entitled to a decision on Contention 7 in its favor as a matter of law.

IV. CONCLUSION

For the foregoing reasons, we *grant* FPL's motion for summary disposition of CASE Contention 7.

[17] In *Vogtle,* the Board correctly observed that, if the need arises, there is a "longstanding agency recognition of the availability of the mechanisms under 10 C.F.R. §§ 50.59 or 50.90 for obtaining authorization to construct additional onsite LLRW storage facilities." *Vogtle,* LBP-10-8, 71 NRC at 444 (citing Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, NRC Regulatory Issue Summary 2008-32, Interim [LLRW] Storage at Reactor Sites at 2-4 (Dec. 30, 2008)).

It is so ORDERED.

THE ATOMIC SAFETY
AND LICENSING BOARD

E. Roy Hawkens, Chairman
ADMINISTRATIVE JUDGE

Dr. Michael F. Kennedy
ADMINISTRATIVE JUDGE

Dr. William C. Burnett
ADMINISTRATIVE JUDGE

Rockville, Maryland
February 28, 2012

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Michael M. Gibson, Chairman
Dr. Gary S. Arnold
Dr. Randall J. Charbeneau

In the Matter of **Docket Nos. 52-12-COL**
52-13-COL
(ASLBP No. 09-885-08-COL-BD01)

NUCLEAR INNOVATION NORTH AMERICA LLC
(South Texas Project, Units 3 and 4) **February 29, 2012**

In this 10 C.F.R. Part 52 proceeding regarding the application of Nuclear Innovation North America LLC (NINA or Applicant) for combined licenses (COLs) to construct and operate two new nuclear units, using the Advanced Boiling Water Reactor (ABWR) certified design, at its site in Matagorda County, Texas, after conducting an evidentiary hearing on the merits of Contention DEIS-1-G that challenges the estimated need for power that proposed STP Units 3 and 4 would satisfy, the Licensing Board rules that the NRC Staff (Staff) has carried its burden to demonstrate the adequacy of the environmental review in accordance with the National Environmental Policy Act (NEPA) and 10 C.F.R. Part 51.

RULES OF PRACTICE: BURDEN OF PROOF

Generally, an applicant in a licensing proceeding, 10 C.F.R. § 2.325, must meet its burden of proof by a preponderance of the evidence. *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation),

CLI-08-26, 68 NRC 509, 521 (2008). But for NEPA contentions, the burden shifts to Staff, because the NRC, not the applicant, bears the ultimate burden of complying 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: NEED-FOR-POWER ASSESSMENT

In emphasizing that need-for-power forecasts are required only to be reasonable, *see Niagara Mohawk Power Corp.* (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347, 366-67 (1975), *cited with approval in U.S. Energy Research and Development Administration* (Clinch River Breeder Reactor Plant), CLI-76-13, 4 NRC 67, 77 (1976), the Commission has observed that such forecasts need not "precisely identify future market conditions and energy demand, or . . . develop detailed analyses of system generating assets, costs of production, capital replacement ratios, and the like in order to establish with certainty that the construction and operation of a nuclear power plant is the most economical alternative for generation of power." *See, e.g.,* Nuclear Energy Institute; Denial of Petition for Rulemaking, 68 Fed. Reg. 55,905, 55,910 (Sept. 29, 2003) (citing *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 88, 94 (1998)). Rather, it is sufficient if the need-for-power assessment is at a level of detail "sufficient to reasonably characterize the costs and benefits associated with proposed licensing actions." *South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 17 (2010) (citing 68 Fed. Reg. at 55,910). Otherwise "[q]uibbling over the details of an economic analysis" would effectively "stand[ ] NEPA on its head by asking that the license be rejected not due to environmental costs, but because the economic benefits are not as great as estimated." *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 145 (2004) (internal quotation marks omitted).

RULES OF PRACTICE: MOOTNESS

When a contention of omission is cured by the subsequent issuance of licensing-related documents, "the contention must be disposed of or modified." *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 382 (2002) (emphasis added) (citing *Catawba,* CLI-83-19, 17 NRC at 1050). At that time, the intervenor must timely file a new or amended contention if it intends to challenge the sufficiency of the new information. *See* 10 C.F.R. § 2.309(f)(1); *McGuire/Catawba,* CLI-02-28, 56 NRC at 383 (footnote and citations omitted). Resolution of the mooted contention requires no more than a finding by the presiding officer that the matter has become

moot. *USEC Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 444-45 (2006).

RULES OF PRACTICE: SUPPLEMENTING ENVIRONMENTAL RECORD

As the Commission has affirmed, "[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)). In other words, Staff's review (the FEIS itself) and the adjudicatory record become the pertinent environmental record of decision. *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).

TECHNICAL ISSUES DISCUSSED

The following technical issues are discussed: energy savings from renovations for existing building, energy savings from energy-efficient building codes, assessing need for power from a proposed power plant.

TABLE OF CONTENTS

I. INTRODUCTION 230

II. BACKGROUND 231
- A. Procedural History 231
- B. DEIS's Need-for-Power Assessment 234
- C. FEIS's Need-for-Power Assessment 235

III. LEGAL STANDARDS 235
- A. Burden and Standard of Proof 235
- B. NEPA and 10 C.F.R. Part 51 236
- C. Mootness 238
- D. Supplementing Environmental Record 239

IV. FACTUAL FINDINGS AND LEGAL CONCLUSIONS 239

A. Scope of DEIS-1-G 239
1. Energy Savings from Renovations 240
2. Energy Savings from Future Code Updates 242
B. Evidentiary Record 244
1. Testimony 244
2. Documentary Exhibits 244
C. Legal Analysis and Findings 245
1. Was Contention DEIS-1-G Rendered Moot? 245
2. Is There a Need for Power Given Savings from Energy-Efficient Building Codes? 249
D. Findings of Fact and Conclusions of Law 254

SECOND PARTIAL INITIAL DECISION
(Contention DEIS-1-G)

I. INTRODUCTION

This partial initial decision (PID)[1] concerns the application of Nuclear Innovation North America LLC (Applicant) for combined licenses (COLs) under 10 C.F.R. Part 52 that would permit the construction and operation of two new nuclear reactor units — proposed South Texas Project (STP) Units 3 and 4, employing the Advanced Boiling Water Reactor (ABWR) certified design — on the existing South Texas site, located near Bay City, Texas.[2] The South Texas site currently houses two nuclear reactors, STP Units 1 and 2.

We rule on the merits of Contention DEIS-1-G. This contention challenges the estimated need for power that proposed STP Units 3 and 4 would satisfy. As admitted by the Board, Contention DEIS-1-G states:

> NRC Staff's DEIS [Draft Environmental Impact Statement] analysis of the need for power is incomplete because it fails to account for reduced demand caused by the adoption of an energy efficient building code in Texas, the implementation of which could significantly reduce peak demand in the ERCOT region.[3]

---

[1] This is the second PID on environmental matters for this proceeding. The first PID, LBP-11-38, 74 NRC 817 (2011), resolved Contention CL-2 in favor of Staff and Applicant.

[2] South Texas Project Nuclear Operating Company; Notice of Receipt and Availability of Application for a Combined License, 72 Fed. Reg. 60,394 (Oct. 24, 2007).

[3] LBP-11-7, 73 NRC 254, 294 (2011); *see also* Intervenors' Motion for Leave to File New Contentions Based on the Draft Environmental Impact Statement (May 19, 2010) at 4 (Motion for

(Continued)

On June 4, 2010, subsequent to Intervenors filing their contention, Texas adopted energy-efficient building code rules.[4]

On October 31, 2011, this Board held an evidentiary hearing in Rockville, Maryland, on Contention DEIS-1-G. After considering all the evidence and legal arguments, the Board concludes that the Final Environmental Impact Statement (FEIS), as supplemented by the evidence introduced at the evidentiary hearing, adequately accounts for reduced demand caused by the adoption of energy-efficient building codes in Texas and demonstrates a need for power from proposed STP Units 3 and 4. Thus, the Board rules that the NRC Staff (Staff) has carried its burden to demonstrate the adequacy of the environmental review in accordance with the National Environmental Policy Act (NEPA) and 10 C.F.R. Part 51 regarding Contention DEIS-1-G.

II. BACKGROUND[5]

A. Procedural History

On September 20, 2007, Applicant[6] applied to the Nuclear Regulatory Commission (NRC) for COLs that would permit the construction and operation of proposed STP Units 3 and 4. Following the NRC's publication of a notice of hearing and opportunity to petition for leave to intervene in this matter,[7] Intervenors[8] jointly filed a petition that challenged several aspects of Applicant's COL

DEIS Contentions); *id.,* Attach., David Power, Comments Regarding Draft Environmental Impact Statement for Combined Licenses for South Texas Project Units 3 & 4 (May 19, 2010) at 4 (David Power Comments).

[4] 35 Tex. Reg. 4727, 4728 (June 4, 2010) (adopting Final Rule, 34 Tex. Admin. Code § 19.53).

[5] This proceeding produced a number of procedural detours that have no material bearing on the decision regarding the contention at issue here, and so we do not recite this proceeding's entire procedural history. For such an account, *see* LBP-09-21, 70 NRC 581 (2009); LBP-10-14, 72 NRC 101 (2010); and LBP-11-7, 73 NRC 254 (2011).

[6] At the outset of this proceeding, the lead applicant for the South Texas Project (STP) Units 3 and 4 was the STP Nuclear Operating Company (STPNOC). In early 2011, Nuclear Innovation North America LLC (NINA) replaced STPNOC as the lead applicant for a consortium of several applicants. Licensing Board Order (Revising Case Caption) (Feb. 7, 2011) at 1. This Partial Initial Decision (PID) refers to NINA as the lead applicant.

[7] South Texas Project Nuclear Operating Company Application for the South Texas Project Units 3 and 4; Notice of Order, Hearing, and Opportunity to Petition for Leave to Intervene, 74 Fed. Reg. 7934 (Feb. 20, 2009).

[8] Intervenors are three public interest organizations: the Sustainable Energy and Economic Development Coalition, the South Texas Association for Responsible Energy, and Public Citizen.

application (COLA).[9] This Board was established on May 1, 2009, to adjudicate the STP COL proceeding.[10]

Staff issued the DEIS for proposed STP Units 3 and 4 in March 2010.[11] Chapter 8 of the DEIS addressed the need for power from proposed STP Units 3 and 4 in the subject region, where the Electric Reliability Council of Texas (ERCOT) operates the electrical grid. Staff concluded that there would be a need for the power from proposed STP Units 3 and 4 and therefore recommended that the COLs for proposed STP Units 3 and 4 be issued.[12]

On May 19, 2010, Intervenors proffered six new contentions (Contentions DEIS-1 through DEIS-6) that alleged various inadequacies in Staff's DEIS for proposed STP Units 3 and 4.[13] As pled, Contention DEIS-1 challenged the DEIS assessment of the need for power with eight independent allegations, A through H. On February 28, 2011, the Board admitted one aspect of the contention related to Intervenors' DEIS-1-G arguments, but declined to admit the remainder.[14]

Thereafter, in light of Staff's publication of its FEIS in late February 2011,[15] as well as the absence of a final safety report by the Advisory Committee on Reactor Safeguards,[16] the Board and parties agreed to expedite the environmental portion of this proceeding and to set a schedule for an evidentiary hearing on the environmental contentions.[17] Under that schedule, the parties submitted prefiled direct testimony, initial position statements, and exhibits on May 9, 2011.[18]

---

[9] Petition for Intervention and Request for Hearing (Apr. 21, 2009) (Petition).

[10] South Texas Project Nuclear Operating Company; Establishment of Atomic Safety and Licensing Board, 74 Fed. Reg. 22,184, 22,184 (May 12, 2009).

[11] NUREG-1937, "Draft Environmental Impact Statement for Combined Licenses (COLs) for South Texas Project Electric Generating Station Units 3 and 4, Draft Report for Comment," Vols. 1 & 2 (Mar. 2010). Excerpts from the DEIS are provided as Exhs. NRC000065 and INT000040 (DEIS).

[12] *Id.* at 8-25 to 8-26, 10-27.

[13] Motion for DEIS Contentions at 4; David Power Comments at 4.

[14] LBP-11-7, 73 NRC at 285.

[15] Nuclear Innovation North America LLC; Notice of Availability of the Final Environmental Impact Statement for South Texas Project Units 3 and 4 Combined License Application Review, 76 Fed. Reg. 11,522, 11,522 (Mar. 2, 2011); NRC Staff Status Update on Safety and Environmental Documents (Mar. 1, 2011).

[16] These are the two "triggering" events for holding an evidentiary hearing under our Initial Scheduling Order (ISO). Licensing Board [ISO] (Oct. 29, 2009) at 14.

[17] Licensing Board Memorandum and Order (Establishing Schedule for Evidentiary Hearing) (Mar. 11, 2011) at 1-2 (unpublished). Although DEIS-1-G states a challenge to only the DEIS, that challenge applies equally to the FEIS under the migration tenet. *See, e.g., Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-1, 73 NRC 19, 26 n.13 (2011).

[18] Nuclear Innovation North America LLC's Initial Statement of Position on Contention DEIS-1-G (May 9, 2011) (Applicant's Initial Statement); NRC Staff Initial Statement of Position (May 9, 2011) (Staff's Initial Statement); Intervenors' Initial Statements of Position in Support of Contentions CL-2 and DEIS-1 (May 9, 2011) (Intervenors' Initial Statement).

On May 31, 2011, the parties submitted rebuttal testimony, rebuttal position statements, and exhibits.[19]

On June 17, 2011, Applicant and Staff filed motions *in limine,* seeking to strike aspects of the Intervenors' prefiled direct and rebuttal testimony and accompanying exhibits.[20] Intervenors responded to the motions, conceding that portions of testimony and certain exhibits should be excluded, but arguing that, in all other respects, the motions *in limine* should be denied.[21] Insofar as the parties agreed material was irrelevant, we granted the motions *in limine,* but, in all other respects, we denied them.[22]

On August 17, 2011, Applicant filed surrebuttal testimony and additional exhibits to address arguments regarding the energy savings due to renovations that were raised by Intervenors in their rebuttal testimony.[23] On August 17, 2011, Staff likewise filed additional exhibits and an affidavit regarding the savings from renovations.[24]

On August 18 and 19, 2011, the Board commenced an evidentiary hearing in Austin, Texas, on Contention DEIS-1-G, as well as on Contention CL-2. The Board admitted into evidence the exhibits proffered by the parties.[25] Although the Board expected to complete the hearing at that time, the questioning of the witnesses with respect to Contention DEIS-1-G was postponed due to a medical emergency for Intervenors' witness on that contention.[26] The hearing on Contention DEIS-1-G was rescheduled for October 31, 2011.[27]

On October 31, 2011, the Board held an evidentiary hearing on Contention DEIS-1-G in Rockville, Maryland.[28] The hearing was conducted in accordance

---

[19] Nuclear Innovation North America LLC's Rebuttal Statement of Position on Contention DEIS-1-G (May 31, 2011); NRC Staff Rebuttal Statement of Position (May 31, 2011); Intervenors' Consolidated Response to Applicant's and Staff's Statements of Initial Positions (May 31, 2011).

[20] Nuclear Innovation North America's Motion in Limine to Strike Portions of Intervenors' Initial and Rebuttal Submissions (June 17, 2011) (Applicant Motion in Limine); NRC Staff Motion in Limine to Exclude Portions of Testimony and Exhibits Filed by the Intervenors (June 17, 2011) (Staff Motion in Limine).

[21] Intervenors' Consolidated Response to Applicant's & Staff's Motions in Limine (June 27, 2011) at 1-2.

[22] Licensing Board Order (Ruling on Motions in Limine) (July 14, 2011) at 3-4 (unpublished).

[23] Tr. at 1408.

[24] Tr. at 1409.

[25] Tr. at 1450-59 (Staff); Tr. at 1456 (Applicant); Tr. at 1468, 1514-15 (Intervenors).

[26] Tr. at 1652-54.

[27] Atomic Safety and Licensing Board; In the Matter of Nuclear Innovation North America LLC (South Texas Project Units 3 and 4); Evidentiary Hearing to Receive Testimony and Exhibits Regarding the Application, 76 Fed. Reg. 61,401, 61,401 (Oct. 4, 2011).

[28] In accordance with 10 C.F.R. § 2.315(a), before the hearing, the Board accepted written limited

(Continued)

with the provisions of Subpart L to 10 C.F.R. Part 2. None of the parties requested an opportunity to conduct cross-examination. The parties offered into evidence prefiled testimony and exhibits,[29] and the Board received live testimony from several witnesses.[30] After questioning these witnesses regarding the merits of DEIS-1-G, the Board afforded the parties an opportunity to suggest cross-examination or rehabilitation questions.

Following the October 31 evidentiary hearing, the Board adopted certain corrections to the hearing transcript and closed the evidentiary record with respect to Contention DEIS-1-G.[31] On November 30, 2011, the parties filed proposed findings of fact and conclusions of law regarding DEIS-1-G.[32]

B. DEIS's Need-for-Power Assessment

Chapter 8 of the DEIS addresses the need for power. Principally based upon a review of ERCOT studies,[33] the DEIS projects a future shortage of up to 4400 MW in baseload generation capacity during 2014-2019[34] — i.e., the period within which proposed STP Units 3 and 4 are scheduled to come online. It further projects that, by 2024, there will be a need for an additional 10,417 MW of capacity.[35] The DEIS also concludes that, even were proposed STP Units 3 and

---

appearance statements from members of the public in connection with the hearing. 76 Fed. Reg. at 61,401.

[29] For the exhibit numbers used in this PID and reflected in the agency's electronic hearing docket, evidence was described as follows: (1) a three-character party identifier, i.e., STP, NRC, and INT; followed by (2) six-character evidence identifier — designed to reflect the sequential number of the exhibit and whether it was revised subsequent to its original submission as a prefiled exhibit, e.g., evidentiary exhibit INTR20001 admitted at the August 2011 hearing is the second revised version of prefiled exhibit INT000001; (3) followed by a two-character identifier, here "00" (where there is a mandatory/uncontested portion of a proceeding, the identifier would indicate that the exhibit was utilized in the mandatory/uncontested portion of a proceeding, i.e., MA); followed by (4) the designation BD01, which indicates that this Licensing Board, i.e., BD01, was involved in its identification and admission. Accordingly, the official designation for Intervenors' prefiled direct testimony on DEIS-1-G, referenced above, is INTR20001-00-BD01. But for simplicity, we will refer to all admitted exhibits admitted by their initial nine-character designation only, e.g., INTR20001.

[30] Tr. at 1714 (Pieniazek); Tr. at 1740 (Scott and Mussatti); Tr. at 1785 (Mosenthal).

[31] Licensing Board Memorandum and Order (Adopting Transcript Corrections and Closing Evidentiary Record) (Nov. 29, 2011) at 1 (unpublished).

[32] [NINA's] Proposed Findings of Fact and Conclusions of Law for Contention DEIS-1-G (Nov. 30, 2011); NRC Staff Proposed Findings of Fact and Conclusions of Law on Contention DEIS-1 in the Form of a Partial Initial Decision (Nov. 30, 2011); Intervenors' Proposed Findings of Fact and Conclusions of Law Concerning Contention DEIS-1 (Nov. 30, 2011).

[33] DEIS at 8-5 to -7, -23 to -24.

[34] *Id.* at 8-25.

[35] *Id.* at 8-23.

4 to go online, they could only partially satisfy this shortage.[36] Accordingly, the DEIS states "there is a justified need for new baseload generating capacity in the ERCOT region in excess of the planned 2,740 MW capacity output of proposed Units 3 and 4 at STP."[37]

C. FEIS's Need-for-Power Assessment

The FEIS updates the DEIS need-for-power assessment by, *inter alia,* incorporating more recent ERCOT studies[38] and accounting for ERCOT's newly increased reserve margin mandate (representing an increase from 12.5% to 13.75%).[39] The FEIS further assessed the impact of emerging demand-side management (DSM) programs, including "rules implementing the 2009 International Energy Conservation Code and 2009 International Residential Code as the basis for building codes for single family and other residential housing throughout the State, effective April 1, 2011 and January 1, 2012, respectively."[40] Even with these updates, however, Staff's conclusion in its FEIS remains unchanged:

> [T]here is an expected future shortage of baseload power in the ERCOT region that could be at least partially addressed by construction of proposed Units 3 and 4 at the STP site. . . . Building of the two new units could address (1) growth in demand for baseload power and (2) replacement of retiring baseload generating units elsewhere in the ERCOT region.[41]

III. LEGAL STANDARDS

A. Burden and Standard of Proof

On safety issues, an applicant in a licensing proceeding has the burden of establishing its entitlement to the applied-for license by a preponderance of the evidence.[42] But for NEPA contentions, as here, the burden falls on Staff because the NRC, not the applicant, bears the ultimate responsibility for complying with

---

[36] *Id.* at 8-25 to -26.

[37] *Id.*

[38] FEIS at 8-7.

[39] *Id.* at 8-15.

[40] *Id.* at 8-18 (citing 35 Tex. Reg. 4729 (June 4, 2010)).

[41] *Id.* at 8-32.

[42] 10 C.F.R. § 2.325; *see also Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, 68 NRC 509, 521 (2008) (applying a preponderance of the evidence standard to resolution of an environmental contention). Throughout this PID, all the Board's factual findings are based on a preponderance of the evidence standard.

NEPA's dictates.[43] Even so, as a practical matter, Staff relies heavily upon the applicant's Environmental Report (ER) in preparing its Environmental Impact Statement (EIS).[44] Therefore, while all environmental contentions ultimately challenge the NRC's compliance with NEPA,[45] an applicant may advocate for a particular challenged position set forth in the EIS.[46]

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

The contention at issue, DEIS-1-G, arises under NEPA and the NRC's implementing regulations.[47] NEPA requires that an agency prepare an EIS before approving any major federal action that will significantly affect the quality of the human environment.[48] NEPA does not mandate substantive results; rather, NEPA imposes procedural restraints on agencies, requiring them to take a "hard look" at the environmental impacts of a proposed action and reasonable alternatives to that action.[49] This standard requires the agency to undertake a rigorous exploration and an objective analysis of environmental impacts. Merely offering "general statements about 'possible' effects and 'some risk' do[es] not constitute a 'hard look' absent a justification regarding why more definitive information could not be provided."[50] Taking a hard look "foster[s] both informed decision-making and informed public participation," and thus ensures that the agency does not act upon "incomplete information, only to regret its decision after it is too late to correct."[51]

NEPA's "hard look," however, is tempered by a "rule of reason."[52] An agency

---

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

[44] *See* 10 C.F.R. §§ 51.41, 51.45(c).

[45] *Catawba,* CLI-83-19, 17 NRC at 1049.

[46] *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).

[47] 42 U.S.C. §§ 4321-4370; 10 C.F.R. Part 51.

[48] 42 U.S.C. § 4332(2)(C).

[49] *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).

[50] *Pa'ina Hawaii, LLC,* CLI-10-18, 72 NRC 56, 74 (2010) (quoting *Blue Mountains Biodiversity Project v. Blackwood,* 161 F.3d 1208, 1213 (9th Cir. 1998)).

[51] *Claiborne,* CLI-98-3, 47 NRC at 88 (quoting *Marsh v. Oregon Natural Resources Council,* 490 U.S. 360, 371 (1989)).

[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,

(Continued)

need only address reasonably foreseeable impacts, not those that are "remote and speculative" or "inconsequentially small."[53] After all, NEPA only requires "reasonable forecasting."[54] As the Commission stated in its *Pilgrim* decision:

> There is no NEPA requirement to use the best scientific methodology, and NEPA "should be construed in the light of reason if it is not to demand" virtually infinite study and resources. Nor is an environmental impact statement intended to be a "research document," reflecting the frontiers of scientific methodology, studies and data. . . . And while there "will always be more data that could be gathered," agencies "must have some discretion to draw the line and move forward with decisionmaking." In short, NEPA allows agencies "to select their own methodology as long as that methodology is reasonable."[55]

In emphasizing that need-for-power forecasts are required only to be reasonable,[56] the Commission has observed that such forecasts need not "precisely identify future market conditions and energy demand, or . . . develop detailed analyses of system generating assets, costs of production, capital replacement ratios, and the like in order to establish with certainty that the construction and operation of a nuclear power plant is the most economical alternative for generation of power."[57] Rather, it is sufficient if the need-for-power assessment is at a level of detail "sufficient to reasonably characterize the costs and benefits

---

836 (1973)); *see also Department of Transportation v. Public Citizen,* 541 U.S. 752, 767-69 (2004) (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] *Scientists' Institute for Public Information, Inc. v. AEC,* 481 F.2d 1079, 1092 (D.C. Cir. 1973); *see also Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 354-55, 359 (1989) (rejecting the notion that NEPA requires a "worst case analysis").

[55] *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 315-16 (2010) (citations omitted).

[56] *See Niagara Mohawk Power Corp.* (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347, 366-67 (1975), *cited with approval in U.S. Energy Research and Development Administration* (Clinch River Breeder Reactor Plant), CLI-76-13, 4 NRC 67, 77 (1976); *see also Kansas Gas and Electric Co.* (Wolf Creek Generating Station, Unit 1), ALAB-462, 7 NRC 320, 328 (1978) ("Given the legal responsibility imposed upon a public utility to provide at all times adequate, reliable service — and the severe consequences which may attend upon a failure to discharge that responsibility — the most that can be required is that the forecast be a reasonable one in the light of what is ascertainable at the time made."); 68 Fed. Reg. at 55,909 ("The NRC has acknowledged the primacy of State regulatory decisions regarding future energy options. However, this acknowledgment does not relieve the NRC from the need to perform a reasonable assessment of the need for power.").

[57] *See, e.g.,* Nuclear Energy Institute; Denial of Petition for Rulemaking, 68 Fed. Reg. 55,905, 55,910 (Sept. 29, 2003) (citing *Claiborne,* CLI-98-3, 47 NRC at 88, 94).

associated with proposed licensing actions."[58] Otherwise "[q]uibbling over the details of an economic analysis" would effectively "stand[ ] NEPA on its head by asking that the license be rejected not due to environmental costs, but because the economic benefits are not as great as estimated."[59] Finally, we note that because a need-for-power assessment necessarily entails forecasting power demands in light of substantial uncertainty and the duty of providing adequate and reliable service to the public, need-for-power assessments are properly conservative.[60]

C. Mootness

We admitted Contention DEIS-1-G as a contention of omission.[61] When such omissions are cured by the subsequent issuance of licensing-related documents, "the contention *must* be disposed of or modified."[62] At that time, the intervenor must timely file a new or amended contention if it intends to challenge the sufficiency of the new information.[63] Resolution of the mooted contention requires no more than a finding by the presiding officer that the matter has become moot.[64]

---

[58] *South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 17 (2010) (citing 68 Fed. Reg. at 55,910) (rejecting a need-for-power-related contention because, in part, the Joint Petitioners' load forecast claim called for a more detailed need-for-power analysis than the NRC requires).

[59] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 145 (2004) (internal quotation marks omitted).

[60] *See Nine Mile Point,* ALAB-264, 1 NRC at 365-68, *cited with approval in Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-79-5, 9 NRC 607, 609-10 (1979); *see also Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-355, 4 NRC 397, 410 (1976) ("To be sure, if demand does turn out to be less than predicted it can be argued . . . that the cost of the unneeded generating capacity may turn up in the customers' electric bills. This is not an ineluctable result, for oft times the surplus can be profitably marketed to other systems or the new capacity can replace older, less efficient units. But should the opposite occur and demand outstrip capacity, the consequences are far more serious.").

[61] LBP-11-7, 73 NRC at 294.

[62] *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 382 (2002) (emphasis added) (citing *Catawba,* CLI-83-19, 17 NRC at 1050); *Exelon Generation Co.* (Early Site Permit for Clinton ESP Site), LBP-05-19, 62 NRC 134, 182 (2005).

[63] *See* 10 C.F.R. § 2.309(f)(1); *McGuire/Catawba,* CLI-02-28, 56 NRC at 383 (footnote and citations omitted); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-99-23, 49 NRC 485, 493 (1999). But even without filing a new or amended contention an intervenor's contention migrates to, and applies likewise to the subsequent licensing document. Thus, here although DEIS-1-G states a challenge to the DEIS, we view the contention as also challenging the FEIS. *See, e.g., Levy,* LBP-11-1, 73 NRC at 26 n.13.

[64] *USEC Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 444-45 (2006); *see also Louisiana Energy Services, L.P.* (National Enrichment Facility), LBP-05-13, 61 NRC 385, 410-11,

(Continued)

D. Supplementing Environmental Record

As the Commission recently reaffirmed, "[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.'"[65] In other words, Staff's review (the FEIS itself) and the adjudicatory record become the pertinent environmental record of decision.[66] Our review of DEIS-1-G therefore encompasses all pertinent environmental analyses properly before us.

IV. FACTUAL FINDINGS AND LEGAL CONCLUSIONS

A. Scope of DEIS-1-G

Contention DEIS-1-G challenges the DEIS's need-for-power assessment of proposed STP Units 3 and 4. As admitted by the Board, Contention DEIS-1-G states:

> NRC Staff's DEIS analysis of the need for power is incomplete because it fails to account for reduced demand caused by the adoption of an energy efficient building code in Texas, the implementation of which could significantly reduce peak demand in the ERCOT region.[67]

As pled by Intervenors, DEIS-1-G challenges the EIS's treatment of building codes as an approach to demand-side management. Therefore, because the scope of a contention is limited to the issues of law and fact pled with particularity in the contention and any factual and legal material in support thereof,[68] DEIS-1-G

424-26, *aff'd,* CLI-05-28, 62 NRC 721, 723 (2005) (dismissing portions of two environmental contentions as moot in a partial initial decision on the finding that the omissions alleged by intervenors had been cured).

[65] *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)).

[66] *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).

[67] LBP-11-7, 73 NRC at 294.

[68] *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), CLI-10-5, 71 NRC 90, 100 (2010); *McGuire/Catawba,* CLI-02-28, 56 NRC at 379; *see also Seabrook,* ALAB-899, 28 NRC 93, 97 & n.11 (1988) (stating that the "intervenor is not free to change the focus of its admitted contention, at will, as the litigation progresses"), *aff'd in part and remanded in part on other matters, Massachusetts v. NRC,* 924 F.2d 311 (D.C. Cir.), *cert. denied,* 502 U.S. 899 (1991).

is limited to the analysis of energy savings from implementing energy-efficient building codes in Texas.

Applicant and Staff assert that Intervenors' arguments, and concomitantly, their evidence, regarding DEIS-1-G should be narrowed to exclude two primary considerations: (1) energy savings from renovations for existing buildings;[69] and (2) future code updates in Texas.[70]

1. Energy Savings from Renovations

Regarding the application of building codes to renovations, we disagree with Applicant and Staff that the concept of renovations, along with Intervenors' supporting testimony and exhibits, should be excluded from the record. Even Applicant's witness, Mr. Pieniazek, conceded that the American Council for an Energy-Efficient Economy (ACEEE) Report, upon which Intervenors based DEIS-1-G, "already accounts for savings from renovations of existing buildings."[71] Therefore, because renovations are both fairly within the bounds of the contention and were not expressly excluded from the contention as admitted, they fall within the scope of DEIS-1-G.[72]

For the first time, in his rebuttal testimony,[73] Intervenors' witness, Mr. Mosenthal, stated that his initial estimates of energy savings are "likely significantly low" because they only include savings from new construction, not renovation.[74] To support this statement, Mr. Mosenthal noted that new construction only represents about 1% or 2% of the total electrical load in any year.[75] Mr. Mosenthal also assumed that buildings are renovated once every 25 years, implying that annually 4% of energy consumption of existing buildings would be affected by code-based renovations.[76] As a result, Mr. Mosenthal testified that renovations represent up to two to three times more savings than his analysis in his direct testimony — bringing his estimate of savings in 2020 to 2,800-4,200 MW.[77]

---

[69] Applicant Motion in Limine at 7; Staff Motion in Limine at 14.

[70] Applicant Motion in Limine at 5; Staff Motion in Limine at 11.

[71] Exh. STP000032 ("Surrebuttal Testimony of Applicant Witness Adrian Pieniazek Regarding Contention DEIS-1-G" (Aug. 17, 2011)) at 4-5.

[72] *See Pilgrim,* CLI-10-11, 71 NRC at 299.

[73] Although Mr. Mosenthal first raised the issue of renovations in his rebuttal testimony, both Applicant and Staff had a full and fair opportunity to respond by offering testimony and exhibits. *See* Exhs. STP000032 to STP000035; Exhs. NRC000066 to NRC000072.

[74] Exh. INTR00041 (Revised Rebuttal Testimony of Philip Mosenthal and Affidavit) at 10 (Mosenthal Rebuttal Testimony).

[75] Mosenthal Rebuttal Testimony at 10.

[76] *Id.*

[77] *Id.*

However, at hearing, Mr. Mosenthal clarified that he did not perform a revised analysis of impacts from renovations, nor could he support his assumption of a 25-year renovation period.[78] Moreover, Mr. Mosenthal testified that renovation of part of a building does not require the entire building to be brought up to code[79] and that some renovations do not require compliance with energy-efficiency code requirements.[80] Even so, Mr. Mosenthal emphasized that his rebuttal testimony was intended only to "point[ ] out that the likely savings from retrofit are likely to be significantly more than new construction."[81]

In response, Staff analyzed the savings from retrofits more broadly, including not only renovations, but also additions and alterations.[82] For its calculations, Staff assessed savings in the residential sector and assumed that the savings in commercial and industrial sectors would be similar.[83] Staff first calculated a 40% baseline percentage of electricity use potentially affected by the building code changes because typically only heating and cooling systems are affected by a retrofit.[84] Next, Staff calculated the impact of the updated building energy code on electricity consumption in typical residences (12.6% for newer, 47.0% for older).[85] After making these two calculations, Staff estimated the impact of applying code updates during retrofits to the differences in electricity consumption under updated building energy codes for entire buildings. Staff projected the fraction of cooling energy consumption impacted by the code to be 51.4%; the weighted average savings for new and older residences to be 40.3%; and the space-conditioning portion of a household's electricity use to be 40%.[86] According to Staff, this would produce a maximum household electricity savings of 8.3%, were the code applied to the entire house.[87] From this, Staff further reduced this savings to account for the fact that only a fraction of the house would be affected by the retrofit.[88] Next, Staff calculated the fraction of households that would be exposed to savings, i.e., those having a significant retrofit subject to enforcement, to be 9%.[89] Taken

---

[78] Tr. at 1822.

[79] Tr. at 1825-26.

[80] Tr. at 1825.

[81] Tr. at 1822-23.

[82] Exh. NRC000071 (Summary of Building Energy Code Impacts on Demand, Including New Construction & Retrofits (Aug. 17, 2011)) at 1.

[83] *Id.*

[84] Exh. NRC000066 (Savings Achieved from Application of 2009 Building Energy Code Retrofits (Aug. 17, 2011)) at 1.

[85] *Id.*

[86] *Id.* at 1-2.

[87] *Id.* at 2.

[88] *Id.*

[89] *Id.*

together, these adjustments would produce a reduction of total electricity use in residences of 0.1% annually, according to Staff.[90] Finally, Staff took this factor and with scaling factors for the ERCOT region relative to Texas and baseload power relative to peak power, adjusted the ACEEE Report estimates to project the net effect on total residential electricity consumption, yielding a savings of 72 MW baseload in 2015 and 143 MW baseload in 2020.[91] According to Staff, these savings represent 39% of the savings that Staff initially calculated.[92] Accordingly, Staff asserts that even when energy savings due to renovations are added to Staff's initial savings estimate, they do not impact Staff's conclusion regarding the need for power from proposed STP Units 3 and 4, i.e., without any plant retirements, the need for power would be (638)[93] MW in 2015 and 548 MW in 2020, and with retirements of plants older than 50 years, the need for power would be 1750 MW in 2015 and 5398 MW in 2020.[94]

Accordingly we find that the additional savings from renovations — however likely implicit in the baseline ERCOT data used to assess need for power in the FEIS — are dominated by the savings obtained from new construction and do not change the assessment of need for power in the ERCOT region. There is no factual support for Mr. Mosenthal's assertion in his testimony that savings from renovations could be two to three times the savings attributable to new construction. On the other hand, Staff performed a detailed analysis of the savings from renovations, demonstrating that the savings from energy-efficient building codes is principally driven by savings from new construction. Because Staff's testimony and evidence — and our decision — supporting the assessment of renovations form part of the environmental record of this proceeding and supplement the respective analyses in the FEIS, we conclude the record in this proceeding achieves compliance with NEPA and Part 51.

2. Energy Savings from Future Code Updates

Regarding future building code updates, a fair reading of Contention DEIS-1-G clearly does not encompass code updates that Texas, at some point in the future, might adopt. However, Intervenors' witness, Mr. Mosenthal, suggests that Texas will adopt future energy-efficient building codes that will substantially increase savings — for residential, to 39% in 2015, to 45% in 2020, and to 55% in 2025; for commercial, to 22% in 2015, to 29% in 2020, and to 32% in 2025.[95]

---

[90] *Id.*

[91] *Id.*

[92] Exh. NRC000071, at 1.

[93] Here, a negative need indicates excess capacity.

[94] *Id.* at 1.

[95] Exh. INTR20001 (Revised Direct Testimony of Philip Mosenthal and Affidavit) at 9.

As originally pled by Intervenors, however, Contention DEIS-1-G dealt solely with Texas' adoption of an energy-efficient building code in June 2010, modeled after the International Energy Conservation Code (IECC).[96] In support of the contention, Intervenors' Motion for DEIS Contentions referred to the David Power Comments,[97] which in turn indicated that the State Energy Conservation Office had announced that Texas would be adopting the IECC 2009 building code.[98] Thus, Contention DEIS-1-G and the factual support that Intervenors submitted in support of that contention, were focused on current, not future, events. Specifically, Intervenors made no suggestions as to when future code updates would become effective, much less what they would require or the energy savings they would achieve. Moreover, our ruling admitting Contention DEIS-1-G solely contemplated Texas' adoption of energy-efficient building codes in June 2010.[99] Therefore, Mr. Mosenthal's testimony and exhibits dealing with the savings from future code updates are outside the scope of Contention DEIS-1-G.

Additionally, we observe that the possible future adoption of building codes is remote and speculative. Prior to 1999, according to Staff, Texas had no mandatory statewide energy code for either residential or commercial buildings.[100] Statewide codes (with supplements) were not adopted until 2001.[101] Then in 2003 and again in 2006, Texas declined to update its codes, even though updated codes were proposed and a process existed to consider them.[102] It was not until 2010 that Texas adopted an energy-efficient building code, which even Mr. Mosenthal conceded was a necessary condition for accepting state energy program funding under the American Recovery and Reinvestment Act (ARRA).[103] This was only the second statewide adoption of energy-efficient building codes. Therefore, without any apparent trend in the adoption of energy-efficient building codes and without any apparent funding incentive, such as ARRA provided, the future adoption of energy-efficient building codes is remote and speculative and, therefore, inappropriate for consideration under NEPA and NRC case law.[104]

---

[96] Motion for DEIS Contentions at 4.

[97] Intervenors offered these comments, by Mr. Power, as expert support for their six proffered DEIS-related contentions.

[98] David Power Comments at 4.

[99] LBP-11-7, 73 NRC at 290, 294.

[100] Exh. NRC000049, at 1-2.

[101] *Id.*

[102] *Id.* at 2; Tr. at 1738 (Pieniazek Testimony).

[103] Tr. at 1800 (Mosenthal Testimony); *see also* Exh. NRC000049, at 3.

[104] *See, e.g., Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 44 (1989) (citing *Limerick Ecology Action, Inc. v. NRC,* 869 F.2d 719, 739 (3d Cir. 1989)) (holding that consideration of "remote and speculative" impacts is not required); *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005) (holding that NEPA does not require consideration of speculative impacts).

B. Evidentiary Record

1. Testimony

During the evidentiary hearing on DEIS-1-G, Applicant presented one witness, Adrian Pieneazek, to testify about the impact of energy-efficient building codes on the need-for-power assessment for proposed STP Units 3 and 4. Based on his education and experience, Applicant's witness was found qualified to testify on DEIS-1-G.[105]

Staff presented two witnesses to testify on DEIS-1-G, Michael Scott and Daniel Mussatti. Based on their respective education and experience, Staff's witnesses were found qualified to testify on DEIS-1-G.[106]

Intervenors presented one witness to testify regarding DEIS-1-G, Philip Mosenthal. Based on his education and experience, Intervenors' witness was found qualified to testify on DEIS-1-G.[107]

2. Documentary Exhibits

In support of its position on DEIS-1-G, Applicant offered the following exhibits: Exhs. STP000001 to STP000003, Exhs. STP000005 to STP000008, Exh. STP000010, Exh. STP000028, Exh. STP000029, and Exhs. STP000032 to STP000035. These exhibits were admitted.[108]

Staff offered the following exhibits in support of its position on DEIS-1-G: Exhs. NRC00003A to NRC00003D (segmented FEIS), Exhs. NRC000031

---

[105] Tr. at 1712-14; *see* Exh. STP000002 (Adrian Pieniazek Resume (May 9, 2011)); Exh. STP000001 ("Direct Testimony of Applicant Witness Adrian Pieniazek Regarding Contention DEIS-1-G" (May 9, 2011)) (Pieniazek Direct Testimony); Exh. STP000028 ("Rebuttal Testimony of Applicant Witness Adrian Pieniazek Regarding Contention DEIS-1-G" (May 31, 2011)) (Pieniazek Rebuttal Testimony); Exh. STP000032 ("Surrebuttal Testimony of Applicant Witness Adrian Pieniazek Regarding Contention DEIS-1-G" (Aug. 17, 2011)) (Pieniazek Surrebuttal Testimony).

[106] Tr. at 1740; *see* Exh. NRC000032 (Professional Qualifications of Daniel C. Mussatti); Exh. NRC000033 (Professional Qualifications of Dr. Michael J. Scott); Exh. NRC000031 ("Prefiled Direct Testimony of Daniel C. Mussatti and Dr. Michael J. Scott Regarding Contention DEIS-1," "Affidavit of Daniel C. Mussatti Concerning Prefiled Testimony Regarding Contention DEIS-1," and "Affidavit of Dr. Michael J. Scott Concerning Prefiled Testimony Regarding Contention DEIS-1") (Mussatti/Scott Direct Testimony); Exh. NRC000062 ("Prefiled Rebuttal Testimony of Daniel C. Mussatti and Dr. Michael J. Scott Regarding Contention DEIS-1," "Affidavit of Daniel C. Mussatti Concerning Prefiled Rebuttal Testimony Regarding Contention DEIS-1," and "Affidavit of Dr. Michael J. Scott Concerning Prefiled Rebuttal Testimony Regarding Contention DEIS-1.") (Mussatti/Scott Rebuttal Testimony).

[107] Tr. at 1785; Exh. INT000002 (Resume of Philip Mosenthal); Exh. INTR20001 (Revised Direct Testimony of Philip Mosenthal and Affidavit) (Mosenthal Direct Testimony); Exh. INTR00041 (Revised Rebuttal Testimony of Philip Mosenthal and Affidavit) (Mosenthal Rebuttal Testimony).

[108] Tr. at 1456.

to NRC000057, and Exhs. NRC000062 to NRC000072. These exhibits were admitted.[109]

Intervenors offered the following exhibits in support of their position on DEIS-1-G: Exh. INTR20001, Exhs. INT000002 to INT000004, Exh. INT000007, Exh. INT000009, Exhs. INT000011 to INT000017, Exh. INT000019, Exh. INT000020, Exh. INT000040, and Exh. INTR00041. These exhibits were admitted.[110]

C. Legal Analysis and Findings

To resolve Contention DEIS-1-G, we must turn first to whether Contention DEIS-1-G (challenging the DEIS) was mooted by new analyses contained in the FEIS and second, whether new analyses performed for this adjudication disprove the contention and demonstrate a need for power from proposed STP Units 3 and 4.

1. Was Contention DEIS-1-G Rendered Moot?

a. Recitation of Evidence

Contention DEIS-1-G alleges that Chapter 8 of the DEIS failed to account for the reduced demand that could result from the implementation of proposed Texas energy-efficient building code rules that were ultimately adopted on June 4, 2010.[111] Both Staff and Applicant emphasized that Texas' adoption of these rules postdated issuance of the DEIS. Given the timing of events, the Board admitted Contention DEIS-1-G as a "contention of omission,"[112] concluding that the "DEIS analysis of the need for power is incomplete because it fails to account for reduced demand caused by the adoption of an energy efficient building code in Texas, the implementation of which could significantly reduce peak demand in the ERCOT region."[113] At the hearing, one of Staff's witnesses, Mr. Scott, conceded that the DEIS did not consider the adoption of energy-efficient building codes.[114]

Nevertheless, both Staff and Applicant witnesses maintained that the FEIS does consider the impact of Texas' new energy-efficient building codes on the need for power from proposed STP Units 3 and 4.[115] Even so, only Applicant contended

---

[109] Tr. at 1450, 1452, 1459.

[110] Tr. at 1461, 1468, 1514-15.

[111] LBP-11-7, 73 NRC at 289-94 *see also* Motion for DEIS Contentions at 4.

[112] LBP-11-7, 73 NRC at 294.

[113] *Id.*

[114] Tr. at 1779.

[115] Tr. at 1780 (Scott Testimony); Pieniazek Direct Testimony at 15; *see also* FEIS at 8-18.

that, as a result, Contention DEIS-1-G is moot.[116] For Applicant, Mr. Pieniazek testified that, as part of a sensitivity analysis, the FEIS increased ERCOT's current energy-efficiency adjustment (242 MW) by 5% of the change in cumulative growth from 2010 to 2012 and by 10% in and after 2013.[117] According to Mr. Pieniazek, the adjustment accounts for energy-efficiency programs associated with new Public Utility Commission of Texas (PUCT) and municipal utility goals that are not accounted for in ERCOT's econometric modeling.[118] This approach, Mr. Pieniazek testified, quantitatively accounts for uncertainties in future demand reductions due to energy efficiency, which would include the energy-efficient building codes.[119]

Mr. Pieniazek also testified that the FEIS qualitatively assessed the impact of energy-efficient building codes in its recognition that, even though Texas adopted a new set of energy-efficient building codes, "[t]here is almost no currently available, reliable information that suggests the impacts of the latest statewide code adoption, ARRA-funded projects, or other very recent programs have been significant on a statewide basis or that they require a significant adjustment to the ERCOT forecasts."[120] Furthermore, Mr. Pieniazek testified that the FEIS, in the course of responding to public comments, assessed building codes and concluded the impact (1) would be speculative, as predicted in the ACEEE Report (cited by Intervenors in support of Contention DEIS-1-G), and (2) is already embodied in the ERCOT forecasts used as a foundation for the FEIS's need-for-power assessment.[121]

Recognizing these points, Intervenors argued that the FEIS still does not cure the omission in the DEIS because the FEIS only addressed the impacts of the new energy-efficient building codes qualitatively and as part of a quantitative sensitivity analysis, rather than in the base forecasts.[122]

b. Legal Analysis and Findings

The Board finds that the FEIS's consideration of energy-efficient building

---

[116] Applicant's Initial Statement at 9-13. As a legal matter, Staff contends that even if the FEIS does adequately address the energy-efficient building codes, it did not need to do so. Staff's Initial Statement at 36. Consequently, the question of mootness, from Staff's perspective, is irrelevant.

[117] Pieniazek Direct Testimony at 15 (citing FEIS at 8-26).

[118] Pieniazek Direct Testimony at 15.

[119] *Id.*; Tr. at 1715-17.

[120] Pieniazek Direct Testimony at 15-16 (quoting FEIS at 8-26).

[121] *Id.* at 17 (quoting FEIS at E-76 to -77).

[122] Tr. at 1859-60 (Mr. Eye, counsel for Intervenors); Intervenors' Initial Statement at 6-7; *see also* Tr. at 1829-30 (Mosenthal Testimony).

codes cures the DEIS's omission that formed the basis for Contention DEIS-1-G. As the Commission has stated

> [t]here is, in short, a difference between contentions that merely allege an "omission" of information and those that challenge substantively and specifically how particular information has been discussed in a license application. Where a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by the applicant or *considered by the Staff* in a draft EIS, the contention is moot. Intervenors must timely file a new or amended contention . . . in order to raise specific challenges regarding the new information.[123]

Thus, to satisfy this contention of omission, the FEIS need only "consider" the issue.[124]

In Chapter 8 of the FEIS, Staff acknowledged the new energy-efficient building codes in Texas[125] and considered their impact both qualitatively and quantitatively. In section 8.2, the FEIS summarized its position on why the new building codes are not likely to have a significant impact:

> Based on review team discussions with ERCOT staff and extensive examination of Texas public documents and websites, the review team concluded that while there may be some long-range impacts resulting from these programs not currently captured by the ERCOT models, there is almost no currently available, reliable information that suggests the impacts of these programs have been significant on a statewide basis or that they require a significant adjustment to the ERCOT forecasts.

---

[123] *McGuire/Catawba,* CLI-02-28, 56 NRC at 382-83 (emphasis added).

[124] As a legal matter, the Commission has explained why a contention of omission may be cured:

> A significant change in the nature of the purported NEPA imperfection, from one focusing on comprehensive information omission to one centered on a deficient analysis of subsequently supplied information, *warrants issue modification by the complaining party.* Otherwise, absent any new pleading, the other parties would be left to speculate whether the concerns first expressed had been satisfied by the new information.

Id. at 383 (quoting *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-02-2, 55 NRC 20, 30 (2002)) (emphasis in original).

[125] The FEIS first acknowledges the new building codes in section 8.2:

> In addition, SECO [State Energy Conservation Office] adopted rules implementing the 2009 International Energy Conservation Code and 2009 International Residential Code as the basis for building codes for single family and other residential housing throughout the State, effective April 1, 2011 and January 1, 2012, respectively. Some Texas municipal utilities that are in the ERCOT region but not directly regulated by the State are ahead of this schedule and some have a range of active energy conservation programs that have already saved significant amounts of electricity locally and project to save significantly more by 2020.

FEIS at 8-18 (citations omitted).

> They are not included in Table 8-2. A portion of their possible effect is included in the review team's sensitivity tests depicted in Table 8-5.[126]

And in Section 8.3, the FEIS elaborated on its qualitative and quantitative analysis:

> The 2010 ERCOT firm load forecast was reduced following discussions with ERCOT forecasters concerning the potential impacts of a number of recent events on the 2010 forecast. To account for the entire unaccounted-for portion of new energy efficiency programs, the current 242 MW adjustment for HB 3693 programs was increased by 5 percent of the change in the cumulative growth from 2010 to 2012 in the ERCOT forecast for 2012 and by 10 percent in and after 2013. This additional adjustment accounts for new PUCT and municipal utility goals not captured by the ERCOT econometric forecast. Enhanced funding of energy conservation and regulatory actions, such as the new residential building codes adopted by the State and several municipalities within the State, may not be fully captured by the 2010 ERCOT forecast. However, new energy codes have been adopted continuously by Texas municipalities during the 2000-2010 period ahead of statewide actions in 2010 and much of their impact would have been included in the ERCOT forecast. For example, most of the large utilities had adopted the 2006 or even the 2009 version of the International Energy Conservation Code before the State did. The corresponding electricity savings would have been reflected in the trend in electricity consumption during the period that formed the basis for ERCOT's forecast. There is almost no currently available, reliable information that suggests the impacts of the latest statewide code adoption, ARRA-funded projects, or other very recent programs have been significant on a statewide basis or that they require a significant adjustment to the ERCOT forecasts.[127]

Therefore, the need-for-power analysis in the FEIS not only qualitatively considered the impacts of new energy-efficient building codes, but also quantitatively adjusted the energy demand assessment to account for these impacts. As a result, Contention DEIS-1-G, alleging an omission of information, became moot with issuance of the FEIS's new analyses.

Following issuance of the FEIS, Intervenors had an opportunity to modify the contention or submit a new contention challenging the adequacy of Staff's consideration of the effects of the new building codes. They did not do so. So too, Applicant had an opportunity to move for summary disposition of the contention based on the FEIS's new analyses mooting the contention. It did not do so. As a result, we proceed to address and rule on the merits of Contention DEIS-1-G based on the full record of testimony and evidence before us.

---

[126] *Id.* at 8-19 (citations omitted).

[127] *Id.* 8-25 to -26 (citations omitted).

2. *Is There a Need for Power Given Savings from Energy-Efficient Building Codes?*

a. *Recitation of Evidence*

In calculating the potential savings due to Texas' adoption of energy-efficient building codes, all of the parties referenced the 2007 ACEEE Report.[128] According to Intervenors' witness, Mr. Mosenthal, "[t]he ACEEE analysis was fairly simple." "[It] assumed a 15% improvement in all residential and commercial new construction electrical efficiency, starting in 2009 and continuing until 2019, at which point it assumed a 30% improvement for the following 4 years, resulting in a total peak load reduction of 2,362 MW in 2023," for Texas.[129]

For Applicant, Mr. Pieniazek testified that he did not try to estimate the energy savings associated with building codes from scratch. Instead, he "corrected the savings that the Intervenors provided based on the latest and newest information."[130] Mr. Pieniazek testified that he started with the forecasted savings reported in the 2007 ACEEE Report, which Intervenors submitted in support of Contention DEIS-1-G.[131] He then adjusted those savings based on two considerations: (1) the reduction in growth estimates between the 2006 and 2010 ERCOT forecasts — by multiplying by 52.1%; and (2) the difference in service area between the ERCOT region and the entire State — by multiplying by 85%.[132] According to Mr. Pieniazek, this approach resulted in a corrected peak power savings of 1046 MW in 2023.[133]

Staff took a similar approach; Staff witness Scott testified that he also started with the forecasted savings reported in the 2007 ACEEE Report and adjusted for four considerations: (1) the savings before 2011 (334 MW) that the ACEEE Report predicted, but which cannot be achieved because Texas did not implement the new codes until 2011; (2) the difference in service area between the ERCOT region and the entire State — by multiplying by 85%; (3) the difference between the 2006 and the 2010 ERCOT growth rate forecasts — by multiplying by 65.5%; and (4) the line losses, which were assumed to decrease linearly in the future from 6.2% in 2015 to 5.8% in 2020.[134] According to Mr. Scott, this approach resulted in a corrected peak power savings of 1191 MW in 2023.[135] For comparison, Mr. Scott testified that this savings would represent 1.5% of summer peak demand

---

[128] *See* Exh. STP000008.

[129] Mosenthal Direct Testimony at 6.

[130] Tr. at 1720.

[131] *Id.*; Pieniazek Direct Testimony at 22.

[132] Tr. at 1721; Pieniazek Direct Testimony at 22-24.

[133] Tr. at 1721; Pieniazek Direct Testimony at 24.

[134] Tr. at 1768-69; Mussatti/Scott Direct Testimony at 35-37.

[135] Mussatti/Scott Direct Testimony at 39.

and is also likely a bounding estimate of savings, given that true code savings depend on the effectiveness of training builders to meet the code, the quality of enforcement by code officials, and the amount of take-back by customers in terms of greater energy usage.[136]

So too, Intervenors' witness, Mr. Mosenthal, estimated savings due to Texas' adoption of energy-efficient building codes by making adjustments to the reported savings from the ACEEE Report.[137] Mr. Mosenthal testified that he adjusted the reported savings for four considerations: (1) the savings before 2011, in light of the fact that Texas implemented the code in 2011, but the ACEEE Report assumed adoption in 2009; (2) the ratio of savings between the 2009 IECC (as embodied in the 2010 code update) and the 2001 IECC (existing practice), along with savings from future code updates in Texas; (3) the more recent 2010 ERCOT forecast instead of the 2007 ACEEE reference forecast; and (4) the lower code compliance rate of 80% for commercial buildings and 60% for residential buildings, which would increase to 90% in 2017 for both.[138] According to Mr. Mosenthal, 80% of load growth will be from new construction, not from increased energy use in existing buildings,[139] and therefore savings from energy-efficient building codes would result in peak demand electricity savings of 494 MW in 2015 and 1,404 MW in 2020.[140] In his rebuttal testimony, Mr. Mosenthal further suggested that if savings from renovations were also included, which he did not include in his analysis, the savings would be two to three times greater.[141]

Although the parties varied in their approaches to calculating the savings in Texas from adopting energy-efficient building codes, the parties did not dispute the FEIS's reported supply and demand of power in the ERCOT region.[142] According to Staff's witnesses, the FEIS principally considered the need for baseload generation[143] in the ERCOT region based on underlying ERCOT data.[144]

---

[136] *Id.*

[137] Mosenthal Direct Testimony at 6.

[138] *Id.* at 6-8.

[139] Tr. at 1813.

[140] Mosenthal Direct Testimony at 4, tbl. 1.

[141] Mosenthal Rebuttal Testimony at 10. As we discussed earlier, however, Mr. Mosenthal did not support his estimates of savings from renovations, which based on Staff's analysis we found to be small compared to the savings from new construction. *See supra* p. 242.

[142] *See* Mussatti/Scott Direct Testimony at 14-29 (Scott Testimony); Pieniazek Direct Testimony at 8-14; Mosenthal Direct Testimony tbls. 1, 2.

[143] According to Staff's witnesses, the focus of the FEIS is on baseload, rather than peak power, because the Applicant stated that the purpose of STP Units 3 and 4 is to provide baseload generation. Mussatti/Scott Direct Testimony at 13 (Mussatti and Scott Testimony). As a result, in the FEIS, the Staff considered the combined output of both proposed units at STP to be approximately 2700 MW baseload. Mussatti/Scott Direct Testimony at 28 n.12.

[144] Mussatti/Scott Direct Testimony at 17-22.

In doing so, Mr. Scott testified that the FEIS indicates a need for power between 0 MW to 5993 MW in 2015 and 5115 to 17,551 MW in 2020, depending on whether retirements of plants greater than 50 years old are considered.[145] Staff's witness, Mr. Scott, testified that these are peak load values, although they can be correlated to baseload power by multiplying by a factor of 0.39.[146] With the correlation to baseload, Mr. Scott testified, there would be a baseload power need from 0 MW, with no plant retirements, to 2337 MW, with the retirement of plants over 50 years old in 2015, and from 1995 MW, with no plant retirements, to 6845 MW, with the retirement of plants over 50 years old in 2020.[147] According to Mr. Scott, this means that in 2020, even without any plant retirements, there would be a need for at least one of the proposed STP units, and with the retirement of plants greater than 50 years old, there would be a need for baseload power generation equal to both proposed STP Units 3 and 4, plus two to three additional units.[148]

b. Legal Analysis and Findings

We find the ACEEE reported savings of 2362 MW in 2023 to be an overestimate of the savings that the 2010 energy-efficient building codes will achieve in Texas. All the parties agree that the analysis in the ACEEE Report is outdated, and that the ACEEE Report's projection of a 2362 MW peak demand savings by 2023 relied on assumptions that rendered the estimated savings too high. The parties also agree that the ACEEE Report contains faulty assumptions in the following respects: (1) that the ACEEE Report relies upon 2006 ERCOT data and therefore does not account for current ERCOT load forecasts (which forecast a substantially lower increase in demand for power and therefore a substantially lower potential for savings due to the new energy-efficient building code);[149] (2) that the ACEEE Report makes forecasts for the entire state (not just the smaller ERCOT region that forms the basis for the need-for-power analysis for STP Units 3 and 4);[150] (3) that the ACEEE Report assumes savings prior to the actual effective date of the

[145] *Id.* at 28.

[146] *Id.* For Intervenors, Mr. Mosenthal, did not dispute baseload correlation, only that the energy-efficient building codes could affect the provisions of baseload, not just peak power. *See* Mosenthal Direct Testimony at 11.

[147] Mussatti/Scott Direct Testimony at 28.

[148] *Id.* at 28-29.

[149] Pieniazek Direct Testimony at 22-23; Mussatti/Scott Direct Testimony at 36-37; Mosenthal Direct Testimony at 7.

[150] Pieniazek Direct Testimony at 23-24; Mussatti/Scott Direct Testimony at 36-37; Mosenthal Rebuttal Testimony at 10.

new energy-efficient building codes;[151] and (4) that the ACEEE Report assumes a 100% compliance rate with the new energy-efficient building codes, which is not realistic or consistent with the assumptions currently made by Texas.[152]

In contrast, we find that Staff's and Applicant's estimated savings were a reasonable and bounding assessment of what the 2010 energy-efficiency codes will achieve in Texas. First, although only Intervenors assumed less than 100% compliance with the building codes, both Staff and Applicant maintain this reduced rate is a reasonable adjustment.[153] It is reasonable to estimate that initial compliance will be well below 100%, but will increase to reach 90% compliance by 2017 (to account for the fact that Texas has committed to achieving a 90% compliance rate by 2017 to ensure receiving funds under ARRA). It is worth noting that the decision by Staff and Applicant not to discount the rate of compliance with the new codes is a conservative assumption, in that not reducing the compliance rate would increase potential energy savings.

Second, it was reasonable for both the Staff and Applicant to scale the ACEEE estimates to account for the ERCOT region's use of approximately 85% of Texas' electricity because the ACEEE Report was a projection for all of Texas. All the parties agree that the ERCOT region is the appropriate area of analysis and we so find.

Third, it was reasonable for both Staff and Applicant to base their savings calculations on current 2010 ERCOT data — as Intervenors did — instead of the 2006 ERCOT data that were used in the 2007 ACEEE Report. In 2006, ERCOT forecast significantly higher increases in demand than it now does. The potential savings from new building codes identified in the ACEEE Report were approximately proportional to ERCOT's predicted increase in demand. Today, ERCOT forecasts a significantly smaller increase in demand, and the potential savings identified by the ACEEE Report are correspondingly affected. Both Staff and Applicant offered reasonable adjustments: Applicant adjusted by 52.1% based on the ratio of 2023 peak demand predicted in 2010 relative to 2006; and Staff adjusted by 65.5% based on the 2010 ERCOT growth rate relative to the ACEEE Report growth rate. By the same token, it was not reasonable for Intervenors to adjust their estimated savings by the ratio of the 2009 IECC savings relative to the 2001 IECC savings — representing the ratio of savings between the impact from the 2010 code update and *alleged* current practice. Even Intervenors' witness, Mr. Mosenthal, agreed that many local jurisdictions in Texas adopted energy-efficient building codes prior to Texas' adoption in 2010, and therefore

---

[151] Pieniazek Rebuttal Testimony at 4-5; Mussatti/Scott Direct Testimony at 36, 38; Mosenthal Direct Testimony at 6.

[152] Pieniazek Rebuttal Testimony at 11-12; Mussatti/Scott Rebuttal Testimony at 4; Mosenthal Direct Testimony at 8.

[153] Mussatti/Scott Rebuttal Testimony at 4 (Scott Testimony); Pieniazek Rebuttal Testimony at 12.

"some proportion of code savings are likely implicitly embedded in the ERCOT forecast."[154] Further, we find particularly credible Attachment 2 to the Direct Testimony of Staff witnesses Mussatti and Scott. It indicates that the population-weighted average code in effect in March 2010 in Texas was approximately equal to the IECC 2006 code.[155] And because we find that savings to be achieved from the statewide adoption of the 2009 building energy codes should be compared to the 2006 code rather than, as Intervenors assumed, the 2001 code, we find that Intervenors' estimates of savings overestimate the impacts of the codes.

Fourth, it was reasonable for Staff, Applicant, and Intervenors to shift the date when the codes became effective in Texas. The ACEEE Report assumed new building codes would take effect at the beginning of 2009. But as the witnesses for all parties testified, the new codes took effect in 2011 and 2012.[156]

Fifth, it was reasonable, albeit additionally conservative, for Staff to adjust the ACEEE reported savings upward by approximately 6% to account for line losses during transmission and distribution not considered in the ACEEE Report. This adjustment has the effect of increasing the calculated savings of the building codes.[157]

In sum, while each of the three parties calculates savings due to the building energy codes by a different method, all reach the same basic conclusion that even though building codes will save power, there will remain a need for power in the ERCOT region between 2015 and 2020.[158] In terms of peak savings for new construction in 2015, Staff estimated a savings of approximately 600 MW, the Applicant approximately 500 MW, and the Intervenors approximately 500 MW.[159] In 2020, Staff estimated approximately 1200 MW of savings, the Applicant approximately 850 MW, and the Intervenors estimated approximately 1400 MW of savings.[160] Further, Staff conservatively estimated savings for new construction and retrofits due to the building codes to be approximately 1600 MW peak in 2020.[161] Yet, given the overall peak demand in the ERCOT region

---

[154] Mosenthal Rebuttal Testimony at 4.

[155] *See* Mussatti/Scott Direct Testimony at 30-32, Attach. 2 (indicating the population-weighted, coded average was 2.99, compared to the IECC 2006 coded value of 3); *see also* Exh. STP000010.

[156] Pieniazek Direct Testimony at 18-19; Mussatti/Scott Direct Testimony at 29; Mosenthal Direct Testimony at 6.

[157] *See* Tr. at 1769.

[158] Intervenors' witness, Mr. Mosenthal, conceded as much during the evidentiary hearing. Tr. at 1817.

[159] Mussatti/Scott Direct Testimony, tbl. 4; Pieniazek Direct Testimony at 28-29; Mosenthal Direct Testimony, tbl. 1.

[160] Mussatti/Scott Direct Testimony, tbl. 4; Pieniazek Direct Testimony at 28-29; Mosenthal Direct Testimony, tbl. 1.

[161] Exh. NRC000071, at 1.

of 70,517 MW in 2015 and 75,762 MW in 2020 and the inherent variability of long-term power forecasting, the parties' estimated savings are comparable.

As a consequence, we find that savings from energy-efficient building codes are not sufficient to eliminate the need for power in the ERCOT region. Even accounting for the additional impact of renovations from Staff's conservative calculations, there is a need for power. Without any plant retirements, the need would be (638) MW in 2015 and 548 MW in 2020; with retirements of plants older than 50 years, the need would be 1750 MW in 2015 and 5398 MW in 2020.[162] While the need for baseload power in 2020 is somewhat less than the net generating capacity of proposed STP Units 3 and 4, when no retirements of existing plants are considered, consideration of plant retirements is reasonable. This is particularly so for plants older than 50 years, given that, on average, NRG Energy plants have been retired after only 39.5 years of operation since the market opened to competition in 2002.[163] Therefore, there is a need for power in the ERCOT region after reasonably accounting for savings from the new energy-efficient building codes that could in part be satisfied by proposed STP Units 3 and 4.

D. Findings of Fact and Conclusions of Law

The Board has considered the testimony and evidence presented by the parties on Contention DEIS-1-G. Based upon a review of the entire record in this proceeding and the proposed findings of fact and conclusions of law submitted by the parties, and based upon the factual and legal analyses set forth above, which is supported by reliable, probative, and substantial evidence in the record, the Board has decided all matters in controversy concerning this contention and makes the following findings of fact and conclusions of law. Staff has met its burden of showing that the FEIS for proposed STP Units 3 and 4, as supplemented by the record for this hearing, complies with the requirements of NEPA and 10 C.F.R. Part 51. The evidence confirms the claims of Staff and Applicant that there is a need for the power generated by proposed STP Units 3 and 4. As explained above, we find that Staff and Applicant have reasonably accounted for the impact of energy-efficient building codes in Texas on the need-for-power assessment, as raised by Intervenors in Contention DEIS-1-G. Moreover, Staff and Applicant have reasonably justified the need for power that would be generated by proposed STP Units 3 and 4. Contention DEIS-1-G is therefore resolved in favor of Staff and Applicant.

---

[162] *See id.*

[163] *See* Pieniazek Rebuttal Testimony at 17-18; *see also* Tr. at 1723.

Pursuant to 10 C.F.R. § 2.1210, it is, this 29th day of February 2012, ORDERED that:

A. The FEIS, as supplemented by the evidence introduced at the evidentiary hearing, adequately accounts for reduced demand caused by the adoption of energy-efficient building codes in Texas and demonstrates a need for power from proposed STP Units 3 and 4. Thus, Intervenors' Contention DEIS-1-G is resolved on the merits in favor of Staff and Applicant.

B. In accordance with 10 C.F.R. § 2.1210, this Partial Initial Decision will constitute a final decision of the Commission forty (40) days from the date of issuance (or the first agency business day following that date if it is a Saturday, Sunday, or federal holiday, *see* 10 C.F.R. § 2.306(a)), i.e., on April 9, 2012, unless a petition for review is filed in accordance with 10 C.F.R. § 2.1212, or the Commission directs otherwise. Any party wishing to file a petition for review on the grounds specified in 10 C.F.R. § 2.341(b)(4) must do so within fifteen (15) days after service of this Partial Initial Decision. The filing of a petition for review is mandatory for a party to have exhausted its administrative remedies before seeking judicial review. Within ten (10) days after service of a petition for review, parties to the proceeding may file an answer supporting or opposing Commission review. Any petition for review and any answer shall conform to the requirements of 10 C.F.R. § 2.341(b)(2)-(3).

THE ATOMIC SAFETY AND
LICENSING BOARD

Michael M. Gibson, Chairman
ADMINISTRATIVE JUDGE

Gary S. Arnold
ADMINISTRATIVE JUDGE

Randall J. Charbeneau
ADMINISTRATIVE JUDGE

Rockville, Maryland
February 29, 2011

Cite as 75 NRC 256 (2012) **LBP-12-6**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Paul S. Ryerson, Chairman
E. Roy Hawkens
Paul B. Abramson

In the Matter of **Docket No. 40-3392-MLA**
(ASLBP No. 11-910-01-MLA-BD01)

HONEYWELL INTERNATIONAL, INC.
(Metropolis Works Uranium
Conversion Facility) **February 29, 2012**

DECOMMISSIONING FUNDING

In accordance with 10 C.F.R. § 40.36, a source materials licensee must demonstrate that sufficient funds will be available to cover the cost of decommissioning its facility. Through its regulations, the NRC seeks to ensure "that decommissioning can be carried out in a safe and timely manner and that lack of funds does not result in delays that may cause potential health and safety problems." Proposed Rule: "Decommissioning Planning," 73 Fed. Reg. 3812, 3812-13 (Jan. 22, 2008).

DECOMMISSIONING FUNDING

A licensee has numerous options for meeting its decommissioning funding obligation, including: (1) prepayment into an account segregated from the licensee's assets and outside its control; (2) an external sinking fund in which deposits are made annually, coupled with a surety method or insurance that decreases in value as the accumulated assets in the sinking fund increase; or (3) a surety or insurance method (surety bond, letter of credit, line of credit, or insurance policy) where proceeds are payable to a trust established for decommissioning

costs. *See* 10 C.F.R. § 40.36(e). Only one permissible method — a guarantee of available funds by the licensee itself — does not involve the protection of either a prepaid segregated account or having a third party committed to paying the licensee's projected decommissioning costs if the licensee is unable, or otherwise fails, to do so. Understandably, the Commission requires a licensee that wishes to be the sole guarantor of its own liabilities to satisfy a stringent test.

DECOMMISSIONING FUNDING

To use the self-guarantee mechanism to fulfill its decommissioning funding obligation, a licensee that issues bonds must annually satisfy the financial test set forth in 10 C.F.R. Part 30, Appendix C, § II.B.3.

EXEMPTIONS

Section 40.14 of 10 C.F.R. provides that the NRC "may" grant such exemptions from the applicable regulatory requirements "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."

SPECIAL CIRCUMSTANCES

The Board concludes, as a matter of law, that special circumstances must exist before it may grant the requested exemption. A Licensing Board is not free to reexamine fundamental policy judgments that are reflected in Commission regulations by creating exceptions to them in situations that will frequently recur. In such situations, the proper recourse lies in petitioning the Commission to change the regulation, not in seeking piecemeal revision of the Commission's rules by a licensing board. It is the role of the Commission to review licensing board decisions, and not the role of licensing boards to review and to reconsider the wisdom of the Commission's regulations.

SPECIAL CIRCUMSTANCES

When interpreting "special circumstances" under 10 C.F.R. § 2.335 — which employs language very similar to the definition of "special circumstances" under 10 C.F.R. § 50.12(a)(2)(ii) upon which Applicant relies — the Commission has made clear that more is required than that enforcement of a regulation might not be necessary in certain individual circumstances. Rather, it is also required that those circumstances be unusual if not unique, and that the Commission did

not previously consider such circumstances — either explicitly or by necessary implication — when it promulgated the relevant regulation in the first place.

EXEMPTIONS

The Commission's regulations do not operate as a one-way street or safe harbor. In other words, they do not merely establish a standard that an applicant is entitled to invoke for its benefit, but that may then be disregarded whenever an applicant wants to argue its case on an individual, fact-specific basis. Not only would such a practice in effect transfer much ultimate policymaking from the Commission to its Staff, but addressing case by case the inevitable multitude of requests for individual exemptions would divert resources that are better allocated to the agency's primary mission of ensuring that licensees comply with safety and environmental standards.

AUTHORITY

The Licensing Board will not consider an exemption request that was not made to the NRC Staff in the first instance. Although the Commission has delegated to the Board authority to adjudicate the issues raised by Applicant's hearing request, it has not empowered the Board to serve as an initial reviewer of exemption requests. *See* 10 C.F.R. §§ 2.319, 2.321(c). That role belongs to the NRC Staff. *See* 10 C.F.R. §§ 2.100-2.103; *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), LBP-77-35, 5 NRC 1290, 1291 (1977).

EXEMPTIONS

In the circumstances of the case, Applicant's request for an exemption fails to satisfy the requirements of 10 C.F.R. § 40.14. Because granting the requested exemption could adversely affect the likelihood that adequate funds would be available to decommission Applicant's facility, granting the exemption would potentially endanger life or property. Thus, granting Applicant's requested exemption would not be in the public interest.

TABLE OF CONTENTS

I. INTRODUCTION 259
II. BACKGROUND 260
III. KEY LEGAL ISSUES 268

IV. SUMMARY AND ANALYSIS OF TESTIMONY AND EXHIBITS 274
A. Honeywell's Testimony and Exhibits 274
B. NRC Staff's Testimony and Exhibits 278

V. FINDINGS OF FACT 283
A. Circumstances Not Temporary 283
B. Circumstances Considered by the Commission 284
C. Honeywell's Financial Condition 285
D. Adverse Factors 287

VI. CONCLUSIONS OF LAW 294

VII. CONCLUSION 295

ADDITIONAL STATEMENT OF JUDGE ABRAMSON 297

INITIAL DECISION

I. INTRODUCTION

Before the Board is a request by Honeywell International, Inc. (Honeywell) for an exemption from the Commission's regulations pursuant to 10 C.F.R. § 40.14. The request concerns the Metropolis Works (MTW) uranium conversion facility in Metropolis, Illinois, that Honeywell owns and operates. Specifically, Honeywell seeks an exemption from the requirements of 10 C.F.R. § 40.36 and 10 C.F.R. Part 30, Appendix C to allow it to act as a self-guarantor of the funds necessary for eventually decommissioning the MTW facility, without satisfying the financial test for self-guarantors set forth in those regulations.[1] The cost of decommissioning Honeywell's MTW facility is currently estimated to be $187 million.[2]

The Board denies Honeywell's request for two reasons. Each independently prevents the Board from concluding that the requested exemption from the Commission's regulations would be in the public interest or otherwise satisfy the requirements of 10 C.F.R. § 40.14.

First, no special circumstances exist. Honeywell does not claim that its failure to satisfy the Commission's financial test for self-guarantors results from a

[1] *See* LBP-11-19, 74 NRC 61, 62 (2011); Request for Hearing on Denial of Decommissioning License Amendment Request (June 22, 2011) at 1 [Hearing Request].

[2] *See* Exh. HNY000001 (Testimony of John Tus and Bruce Den Uyl) at 8.

merely temporary condition, which is likely to be rectified soon. On the contrary, Honeywell candidly admits that it is unlikely to be able to comply with a key element of the Commission's test — that is, having a substantial positive tangible net worth — within the foreseeable future.[3] Nor has Honeywell demonstrated that its lack of a positive tangible net worth is a situation that the Commission failed to consider, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived. Rather, Honeywell simply disagrees with the Commission's determination that having a positive tangible net worth is a useful test of financial strength. Honeywell thinks the opposite: "Overall, we do not believe that a minimum tangible net worth criteria is useful or relevant."[4]

Second, Honeywell has failed to show that, despite its inability to satisfy the NRC's explicit regulatory requirements for self-guarantors during the relevant time period, the agency should rely solely on Honeywell's asserted financial strength. Honeywell must therefore guarantee the availability of decommissioning funding by other methods (such as providing a surety bond or letter of credit).

Although we deny Honeywell's request for an outright exemption, we emphasize that nothing in the Board's decision precludes Honeywell and the NRC Staff from negotiating a more suitable alternative if they wish to do so. For example, perhaps the NRC's concerns might be adequately protected if the NRC Staff were to condition a regulatory exemption allowing Honeywell to act as a self-guarantor (and thus to avoid the cost of a surety bond) upon Honeywell's collateralizing its decommissioning funding obligations with a first-priority security interest in assets of sufficient aggregate value to more than cover such obligations.[5] We of course do not require such negotiations, or endorse any particular approach, but merely note that the opportunity remains available to the parties. Likewise, insofar as Honeywell contends that the Commission's requirements for self-guarantors are not useful or relevant in evaluating the financial condition of numerous similarly situated corporations, Honeywell is free to petition the Commission to amend its rules at any time.[6]

II. BACKGROUND

Honeywell owns and operates the MTW uranium conversion facility in Metropolis, Illinois.[7] In accordance with 10 C.F.R. § 40.36, a source materials li-

[3] Tr. at 70 (Dec. 15, 2011 Evidentiary Hearing).

[4] Exh. HNY000001, at 21.

[5] *See* Tr. at 93-98 (Dec. 15, 2011 Evidentiary Hearing).

[6] 10 C.F.R. § 2.802.

[7] Hearing Request at 1-2.

censee such as Honeywell must demonstrate that sufficient funds will be available to cover the cost of decommissioning its facility.[8] Through its regulations, the NRC seeks to ensure "that decommissioning can be carried out in a safe and timely manner and that lack of funds does not result in delays that may cause potential health and safety problems."[9]

A licensee has numerous options for meeting its decommissioning funding obligation, including: (1) prepayment into an account segregated from the licensee's assets and outside its control; (2) an external sinking fund in which deposits are made annually, coupled with a surety method or insurance that decreases in value as the accumulated assets in the sinking fund increase; or (3) a surety or insurance method (surety bond, letter of credit, line of credit, or insurance policy) where proceeds are payable to a trust established for decommissioning costs.[10]

Only one permissible method — a guarantee of available funds by the licensee itself — does not involve the protection of either a prepaid segregated account or having a third party committed to paying the licensee's projected decommissioning costs if the licensee is unable, or otherwise fails, to do so. Understandably, the Commission requires a licensee that wishes to be the sole guarantor of its own liabilities to satisfy a stringent test. To use the self-guarantee mechanism to fulfill its decommissioning funding obligation, a licensee (such as Honeywell) that issues bonds must annually satisfy the financial test set forth in 10 C.F.R. Part 30, Appendix C.[11] That test requires, in pertinent part, that a licensee maintain a bond rating of "A" or better and have a "[t]angible net worth at least 10 times the total current decommissioning cost estimate."[12] Tangible net worth means shareholder equity less goodwill and other intangibles.[13]

From 1994 until 2006, Honeywell met the requirements for a self-guarantee in all years except 2002, when it briefly fell out of compliance with the 10:1

---

[8] 10 C.F.R. § 40.36.

[9] Exh. NRC000014 (Proposed Rule: "Decommissioning Planning," 73 Fed. Reg. 3812 (Jan. 22, 2008)) at 3812-13.

[10] *See* 10 C.F.R. § 40.36(e); *see also* Exh. NRC000001 (Testimony of Roman Przygodzki, Kenneth Kline, and Thomas Fredrichs (Oct. 14, 2011)) at 3-4.

[11] 10 C.F.R. Part 30, Appendix C, § II.B.3.

[12] 10 C.F.R. Part 30, Appendix C, § II.A. The Appendix C test includes certain additional requirements, which are not in issue.

[13] Exh. HNY000001, at 20; Exh. NRC000001, at 5.

tangible net worth requirement.[14] Honeywell requested and received a temporary exemption, until it returned to full compliance in mid-2003.[15]

On November 3, 2006, Honeywell again notified the NRC Staff that it no longer satisfied the financial test for a self-guarantee in 10 C.F.R. Part 30, Appendix C.[16] Its tangible net worth had declined to $1.929 billion as of December 31, 2005, thus resulting in a 7.9:1 ratio instead of a 10:1 ratio.[17] Honeywell informed the NRC Staff that it intended to request an exemption, in the form of a license amendment, from the portion of the financial test that requires licenses to have a tangible net worth of at least 10 times the total current decommissioning cost estimate.[18]

On December 1, 2006, Honeywell requested that the NRC Staff approve an alternative financial test under 10 C.F.R. § 40.14,[19] which allows for exemptions from the requirements of 10 C.F.R. Part 40 (and thus of the Part 30, Appendix C requirements that are incorporated by reference in Part 40). Section 40.14 permits such exemptions as "are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest."[20] Specifically, Honeywell sought an exemption (in this case, a modification of the regulatory requirement) allowing it to include the value of goodwill, an intangible asset, toward meeting the 10:1 tangible net worth requirement.[21] In its exemption request, Honeywell acknowledged that licensees had traditionally not been permitted to include the value of goodwill to meet the 10:1 tangible net worth requirement of 10 C.F.R. Part 30, Appendix C.[22] Honeywell contended,

---

[14] Exh. HNY000012 (Letter from NRC to Larry Smith, Plant Manager, Honeywell, Denying Amendment Request (Apr. 25, 2011)) at 6-7; Exh. NRC000006 (Letter from Jeffery Neuman, Honeywell, to Director, NRC/NMSS, Regarding Meeting Held Between Honeywell Representatives and NRC Staff to Review the Financial Assurance Requirements for Decommissioning Liability at Honeywell for the Metropolis Facility (Nov. 3, 2006)) at 1; *see also* NRC Staff's Initial Statement of Position (Oct. 14, 2011) at 32-33 [NRC Staff Initial Statement of Position]; Honeywell Written Statement of Initial Position (Oct. 14, 2011) at 4 [Honeywell Initial Statement of Position].

[15] *See* Exh. NRC000006, at 1; NRC Staff Initial Statement of Position at 32-33.

[16] Exh. NRC000006, at 1.

[17] *Id.* at 3; Exh. HNY000004 (Letter to NRC from Honeywell Re: Request for Exemption from Decommissioning Financial Assurance Requirements (Dec. 1, 2006)), Attachment 1, at 5; Exh. HNY000011 (Letter from NRC to Honeywell Providing a Denial of the Honeywell Request for an Exemption from Decommissioning Financial Assurance Requirements (Dec. 11, 2009)) at 2.

[18] Hearing Request at 3.

[19] Exh. HNY000004.

[20] 10 C.F.R. § 40.14.

[21] Exh. HNY000004.

[22] *Id.*

however, that the 10:1 tangible net worth portion of the financial test did not accurately reflect the financial strength of a conglomerate such as itself.[23]

On May 11, 2007, the NRC Staff granted Honeywell's exemption request, but imposed a license condition limiting the term of the exemption to 1 year: that is, until May 11, 2008.[24] According to the NRC Staff, the purpose of the condition was to "allow[ ] the Staff to reassess Honeywell's financial situation within one year of the exemption and monitor the progress of the NRC's rulemaking relating to decommissioning planning."[25]

When Honeywell filed its exemption request in 2006, the NRC was considering revisions to its decommissioning funding guarantee regulations. The NRC Staff informed Honeywell that, although it would consider its exemption request, if Honeywell sought a permanent change in the tangible net worth requirement, it should argue for those changes in the rulemaking process.[26] On January 22, 2008, the NRC published a proposed rule on facility decommissioning that addressed issues similar to those contained in Honeywell's 2006 exemption request.[27] The proposed rule would have amended Appendix C of 10 C.F.R. Part 30 to permit inclusion of intangible assets, such as goodwill, in meeting the 10:1 net worth requirement.[28] In addition, however, the proposed rule also would have required that the guarantor's tangible net worth be at least $19 million.[29] Honeywell was aware of the proposed rule, and participated in the rulemaking process by submitting comments.[30]

On April 11, 2008, Honeywell requested an extension of its exemption for another year, claiming that the rationale for seeking an extension of the exemption was largely the same as in Honeywell's initial request, even though its tangible net worth had declined still further — to negative $1.451 billion as of December 31, 2007.[31] Honeywell also attempted to justify its request for an extension of the exemption by noting, inaccurately, that "the exemption [was] entirely consistent

---

[23] *Id.*

[24] Exh. NRC000007 (Honeywell International, Inc. License No. SUB-526, Amendment 0 (May 11, 2007)).

[25] NRC Staff Initial Statement of Position at 4.

[26] Exh. NRC000001, at 6-7.

[27] Exh. NRC000014, at 3831.

[28] *Id.*

[29] *Id.*

[30] Tr. at 66 (Dec. 15, 2011 Evidentiary Hearing).

[31] Exh. HNY000005 (Letter to NRC from Honeywell Re: Request for Exemption of Decommissioning Financial Assurance Requirements (Apr. 11, 2008)); Exh. HNY000011, at 2.

with a proposed rule promulgated by the NRC [Staff] on January 22, 2008."[32] On August 22, 2008, the NRC Staff granted Honeywell's request to extend the exemption.[33] However, in extending the exemption, the NRC Staff added the condition that the exemption would expire upon the earlier of "(1) May 11, 2009, or (2) the effective date of a final rule amending 10 C.F.R. Part 30 consistent with the proposed rule published in the Federal Register on January 22, 2008."[34]

On April 1, 2009, with its tangible net worth still at a substantial negative state, Honeywell applied for its third consecutive exemption from the 10:1 tangible net worth requirement, requesting that the exemption be continued through the earlier of either (1) May 11, 2010, or (2) the effective date of a final rule amending 10 C.F.R. Part 30 consistent with the proposed rule published in the *Federal Register* on January 22, 2008.[35] Again, Honeywell claimed that the rationale for the exemption was "largely the same as" in Honeywell's initial exemption request in 2006 and, again erroneously, that the exemption was "entirely consistent with [the] proposed rule published on January 22, 2008."[36] However, Honeywell's tangible net worth had now declined by an additional $3.814 billion, resulting in a negative $5.265 billion tangible net worth by the end of 2008.[37] On December 11, 2009, the NRC Staff denied Honeywell's third exemption request.[38] In a three-page decision, the NRC Staff explained its denial on the ground that Honeywell's negative $5.265 billion tangible net worth failed to meet either the financial test contained in 10 C.F.R. Part 30, Appendix C or that contained in the proposed rule published on January 22, 2008.[39]

Honeywell appealed the NRC Staff's denial of its third exemption request to the United States Court of Appeals for the District of Columbia Circuit.[40]

---

[32] Exh. HNY000005, at 2. Honeywell's 2008 exemption request was not consistent with the proposed rule because Honeywell had a tangible net worth of negative $1.451 billion as of December 31, 2007, whereas the proposed rule required guarantors to have a minimum tangible net worth of $19 million. *See* HNY000011, at 2; *supra* note 29 and accompanying text.

[33] Exh. HNY000010 (Letter to Honeywell from NRC Re: Granting Extension of One-Year Exemption (Aug. 22, 2008)); Exh. NRC000009 (Letter to D. Anderson, Sr. VP, Honeywell Global Headquarters from M Tschiltz, NRC/NMSS, Re: Notice that Staff Found That Honeywell Passed Annual Self-Guarantee Financial Test and Has Met the Regulatory Requirements to Provide Financial Assurance (Aug. 22, 2008)).

[34] Exh. NRC000008 (Honeywell International, Inc. Materials License No. SUB-526, Amendment 2 (Aug. 22, 2008)) at 6.

[35] *See* Exh. HNY000006 (Letter to NRC from Honeywell Re: Request for Extension of Exemption from Decommissioning Financial Assurance Requirements (Apr. 1, 2009)) at 1.

[36] *Id.* at 1-2.

[37] Exh. HNY000011, at 2.

[38] *Id.* at 3.

[39] *Id.*

[40] *Honeywell International, Inc. v. NRC,* 628 F.3d 568 (D.C. Cir. 2010).

Upon review, the Court found that the NRC Staff's decision failed adequately to explain the basis for denying the 2009 exemption request.[41] The Court stated that "[w]hile the Commission might reasonably have concluded that a decline in tangible net worth over a given period is not rectified by a high goodwill value, or by other potential indicators of a company's financial health and stability, the Commission's decision leaves too much to inference."[42] Accordingly, the Court vacated the NRC Staff's denial of Honeywell's 2009 exemption request and remanded that request to the NRC for further proceedings.[43]

On remand, the NRC Staff again denied Honeywell's 2009 exemption request.[44] In a nine-page memorandum, dated April 25, 2011, the NRC Staff elaborated on the basis for its denial, noting that the global economic downtown in late 2008 had cast doubts on corporate bond ratings — which partially constituted the grounds upon which the NRC Staff had relied in granting Honeywell's 2006 and 2008 exemption requests.[45] In addition, the NRC Staff explained that, between 2007 and 2008, Honeywell's tangible net worth had declined significantly, from negative $1.451 billion to negative $5.265 billion — thus forcing Honeywell to rely more heavily on intangible assets, which the NRC Staff found to be relatively illiquid, to meet the 10:1 alternative net worth requirement.[46] Also of significance to the NRC Staff was the fact that the 2009 exemption request was Honeywell's third consecutive exemption request.[47] The NRC Staff concluded that multiple consecutive exemption requests implied that the circumstances underlying the 2009 exemption were not temporary, particularly when compared with Honeywell's isolated 1-year exemption request for 2002.[48]

Subsequently, on June 17, 2011, the NRC published a final rule addressing decommissioning financial assurance.[49] The final rule goes into effect on December 17, 2012, after which, although self-guaranteeing licensees will be allowed to use intangible assets, including goodwill, to meet the 10:1 net worth requirement in 10 C.F.R. Part 30, Appendix C,[50] they will still be required to maintain a minimum positive tangible net worth of at least $21 million.[51]

---

[41] *Id.* at 580.

[42] *Id.* at 581.

[43] *Id.*

[44] Exh. HNY000012, at 9.

[45] *Id.* at 4-6; *see* Exh. NRC000001, at 7.

[46] Exh. HNY000012, at 6.

[47] *Id.* at 4, 6-7.

[48] *Id.*; *see also* NRC Staff Initial Statement of Position at 32-33; Exh. NRC000006, at 1.

[49] Exh. NRC000015 (Final Rule: "Decommissioning Planning," 76 Fed. Reg. 35,512 (Jun. 17, 2011)) at 35,512.

[50] *Id.* at 35,524.

[51] *Id.*

On June 22, 2011, Honeywell filed a request for a hearing concerning the NRC Staff's April 25, 2011 denial of Honeywell's remanded 2009 exemption request.[52] The Board granted Honeywell's hearing request on July 27, 2011.[53] On August 18, 2011, citing its primary interest in an expeditious resolution on the merits "at the earliest practicable date," Honeywell waived the opportunity for initial briefing of legal issues, stating that "any legal issues can and should be addressed as part of the written submissions of the parties" in connection with the evidentiary hearing.[54] On August 23, 2011, the Board issued an Initial Scheduling Order.[55]

In accordance with the Board's Initial Scheduling Order, the parties completed disclosures on September 15, 2011.[56] On October 14, 2011, the parties submitted their written direct testimony, which included their respective initial statements of position, along with exhibits.[57] The parties submitted written rebuttal testimony, including respective reply statements of position, along with exhibits on November 3, 2011.[58] On November 14, 2011, the NRC Staff and Honeywell filed a Joint Statement informing the Board that they were not filing motions in limine.[59]

---

[52] Hearing Request at 1-2. The NRC Staff filed a response opposing Honeywell's hearing request on the ground that it was impermissibly late. NRC Staff's Opposition to Hearing Request (July 15, 2011) at 1-2. On July 20, 2011, Honeywell submitted a reply to the NRC Staff's response. Honeywell Reply to NRC Staff Response to Hearing Request (July 20, 2011) at 1 [Honeywell Reply to Hearing Request].

[53] LBP-11-19, 74 NRC at 64.

[54] Honeywell Position on Briefing Legal Issues (Aug. 18, 2011) at 1 [Honeywell Position on Briefing Legal Issues].

[55] Licensing Board Order (Initial Scheduling Order) (Aug. 23, 2011) at 1 (unpublished) [Initial Scheduling Order].

[56] *Id.* at 3.

[57] *See, e.g.,* NRC Staff Initial Statement of Position at 1; Honeywell Initial Statement of Position at 1. The parties' written direct testimony, along with their written rebuttal testimony, were filed in accordance with the Board's instructions. *See* Licensing Board Order (Providing Direction on Prefiled Evidentiary Material) (Sept. 9, 2011) at 1 (unpublished).

[58] *See, e.g.,* NRC Staff's Reply to Honeywell's Initial Statement of Position (Nov. 3, 2011) at 1; Honeywell Rebuttal Statement of Position (Nov. 3, 2011) at 1. In response to the Board's Order (Scheduling Pre-Hearing Conference), on November 21, 2011, the NRC Staff filed a document containing affidavits from their witnesses attesting to the veracity of their respective direct and reply testimonies. Licensing Board Order (Scheduling Pre-Hearing Conference) (Nov. 18, 2011) at 1 (unpublished); Exh. NRC000062 (Affidavits of Roman Przygodzki, Kenneth M. Kline, Thomas L. Fredrichs, Paul Bailey, and John Collier (Nov. 21, 2011)). Although this document was not initially numbered as an exhibit, during the prehearing conference call on December 6, 2011, the Board and parties agreed that the affidavits would be collectively entered into the record as Exhibit NRC000062 at the evidentiary hearing. Tr. at 6 (Dec. 6, 2011 Pre-Hearing Conference Call).

[59] Joint Statement Regarding Filings Due November 14, 2011 (Nov. 10, 2011) at 1-2 [Joint Statement]. In addition, in their Joint Statement, the parties also informed the Board that neither party

(Continued)

The parties explained that while they disagreed over the relevancy of certain testimony and exhibits, they considered motions in limine unnecessary because they would largely just repeat arguments already contained in the parties' respective statements of position.[60] The agreement, however, was without prejudice to either party's ability to argue, at the hearing or in post-hearing briefs, concerning the relevance and materiality of evidence, or to provide further support for its positions on the nature of the exemption, the scope of review, or the relevant time period.[61]

The Board held an evidentiary hearing on December 15, 2011, in the Atomic Safety and Licensing Board Panel's Hearing Room in Rockville, Maryland.[62] By agreement of the parties, the hearing was conducted pursuant to Subpart L to 10 C.F.R. Part 2.[63] At the hearing, the Board admitted all the parties' respective exhibits into evidence and received live testimony.[64] Although given the opportunity in the Initial Scheduling Order, neither party sought permission to cross-examine any witnesses.[65]

During the hearing, and again in a January 5, 2012 Order (Requesting Clarification of Honeywell Response), the Board ordered Honeywell to submit supplemental information concerning whether the goodwill upon which it proposes to rely was encumbered.[66] Honeywell complied, submitting exhibits HNY000065 and HNY000066, which detailed the status of the goodwill of both Honeywell and its subsidiaries.[67]

---

intended to file motions for cross-examination, but that both parties would be filing proposed questions for the Board in camera. *Id.* at 2. On November 14, 2011, the parties submitted their respective proposed questions for the Board. NRC Staff's Proposed Questions for Oral Hearing (Nov. 14, 2011) at 1 [NRC Staff Proposed Questions]; Honeywell's Questions for the Licensing Board on NRC Staff's Pre-filed Direct and Rebuttal Testimony (Nov. 14, 2011) at 1 [Honeywell Proposed Questions].

[60] Joint Statement at 1-2.

[61] *Id.* at 2.

[62] Tr. at 1 (Dec. 15, 2011 Evidentiary Hearing); Licensing Board Order (Notice of Hearing) (Sept. 13, 2011) at 1 (unpublished).

[63] *See* Tr. at 7 (Aug. 11, 2011 Pre-Hearing Conference Call).

[64] Tr. at 7-8 (Dec. 15, 2011 Evidentiary Hearing). The Board admitted Exhibits HNY000001 to HNY000064, NRC000001, NRCR00002, and NRC000003 to NRC000062 into the record. *Id.*

[65] *See* Joint Statement at 2.

[66] Tr. at 71-76, 129-131 (Dec. 15, 2011 Evidentiary Hearing); Licensing Board Order (Requesting Clarification of Honeywell Response) (Jan. 5, 2012) at 1 (unpublished).

[67] Exh. HNY000065 (Affidavit of John Tus (Jan. 4, 2012)); Exh. HNY000066 (Affidavit of John Tus (Jan. 12, 2012)). In addition, the parties also submitted joint proposed transcript corrections, which were adopted in their entirety by the Board. Joint Proposed Transcript Corrections (Jan. 4, 2012) at 1; Licensing Board Order (Adopting Transcript Corrections) (Jan. 6, 2012) at 1 (unpublished).

On January 25, 2012, Exhibits HNY000065 and HNY000066 were admitted, and the evidentiary record for the proceeding was closed.[68]

III. KEY LEGAL ISSUES

We address five questions at the outset.

First, must the Board consider Honeywell's exemption request *de novo,* or is our role limited to testing the reasonableness of the NRC Staff's April 25, 2011 decision to deny Honeywell's request? Honeywell contends that the Board must consider its request *de novo,*[69] and the NRC Staff does not disagree.[70] Accordingly, we examine Honeywell's request *de novo.* The Board accords no weight to the NRC Staff's earlier determination, nor are we limited to consideration of the reasons given in the NRC Staff's analysis.

Second, what is the required burden of proof, and which party bears it? It is undisputed that the Board makes factual determinations in accordance with the preponderance of the evidence.[71] The NRC Staff contends that Honeywell, as the applicant for an exemption, bears the burden of proof on all issues.[72] Honeywell agrees that it bears the burden of proof on some issues, but not all. Specifically, Honeywell claims that, "because the issues involve an order issued by the NRC Staff and a licensing action requested by Honeywell, both parties have burdens of proof."[73] According to Honeywell, "the NRC Staff, as the proponent of denying the license amendment, has the burden of proof for its decision to deny an exemption, while Honeywell has the burden to show that its application satisfies the applicable regulatory standards and that the license amendment should be granted."[74]

We agree with the NRC Staff that Honeywell bears the burden of proving by a preponderance of the evidence that it is entitled to the exemption it requests. For one thing, Honeywell's assertion that "the issues involve an order issued by the

---

[68] Licensing Board Order (Admitting Additional Exhibits and Closing the Evidentiary Record) (Jan. 25, 2012) at 1 (unpublished). While the NRC Staff and Honeywell both submitted Proposed Findings of Fact and Conclusions of Law, along with Proposed Questions for the Board, these documents are not part of the evidentiary record. *See* NRC Staff Proposed Questions at 1; Honeywell Proposed Questions at 1; Honeywell's Proposed Findings of Fact and Conclusions of Law (Feb. 10, 2012) at 1 [Honeywell Proposed Findings]; NRC Staff's Proposed Findings of Fact and Conclusions of Law (Feb. 10, 2012).

[69] Honeywell Initial Statement of Position at 18-20.

[70] Tr. at 124-25 (Dec. 15, 2011 Evidentiary Hearing).

[71] Honeywell Initial Statement of Position at 18; Tr. at 125-26 (Dec. 15, 2011 Evidentiary Hearing).

[72] NRC Staff Initial Statement of Position at 14-16 (citing 10 C.F.R. § 2.325).

[73] Honeywell Initial Statement of Position at 18.

[74] *Id.*

NRC Staff" seems inconsistent with its claim that this Board must consider its exemption request *de novo,* and not merely review the NRC Staff's earlier order denying Honeywell's request.

Moreover, Honeywell's position — that is, that some burdens shift to the NRC Staff as the "proponent" of denying the license amendment — would lead to an anomalous result. As all parties appear to agree, if the evidence before the NRC Staff had been perfectly balanced — so that a preponderance of the evidence favored neither party — the NRC Staff would have been required to deny Honeywell's request because it failed to carry its burden. Honeywell posits, however, that this Board — viewing the very same, perfectly balanced evidence pursuant to its request for a hearing — would then be required to *grant* Honeywell's request in light of the NRC Staff's failure to carry *its* alleged burden. Honeywell would improve its position by losing its case in front of the NRC Staff. Surely that cannot be.

In any event, which party bears the burden of proof ultimately makes no difference in this case.[75] As explained below, we conclude that the preponderance of the evidence clearly requires the Board to deny Honeywell's request for an exemption on two separate and independent grounds. Our decision would be no different if we were to agree with Honeywell that the NRC Staff — rather than Honeywell — had the burden of proof on some issues.

Third, what findings must the Board make before it may consider granting Honeywell's requested exemption? The parties agree that 10 C.F.R. § 40.14 controls.[76] It provides that the NRC "may" grant such exemptions from the applicable regulatory requirements "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."[77]

Fourth, to justify granting the exemption Honeywell requests, must there be "special circumstances" — that is, either circumstances that are merely temporary or circumstances that were not considered by the Commission when it originally promulgated the pertinent regulation? Perhaps because Honeywell waived the opportunity to brief key legal issues prior to submission of the parties' statements of position in connection with the evidentiary hearing,[78] neither party directly addressed the issue. Implicitly, however, Honeywell appears to acknowledge such a requirement. Its 2006 exemption request expressly claimed "special

---

[75] Honeywell appears to agree that, "as a practical matter, there is little difference in the ultimate standard used." Honeywell Proposed Findings at 13.

[76] NRC Staff Initial Statement of Position at 11-12, 16-20; *see* Honeywell Initial Statement of Position at 15-17.

[77] 10 C.F.R. § 40.14.

[78] Honeywell Position on Briefing Legal Issues at 1 ("Honeywell does not believe that initial briefing is necessary or warranted.").

financial circumstances"[79] and at the evidentiary hearing its counsel referred to Honeywell's "unique financial circumstances"[80] (although Honeywell's witnesses also claimed that the Commission's tangible net worth requirement "essentially is not a meaningful test for *any* major company").[81] For its part, the NRC Staff appears to agree that Honeywell cannot properly challenge the wisdom of the Commission's regulations under the guise of seeking a narrow exemption.[82]

The Board concludes, as a matter of law, that special circumstances must exist before it may grant the requested exemption. We are not free to reexamine fundamental policy judgments that are reflected in Commission regulations by creating exceptions to them in situations that will frequently recur. In such situations, the proper recourse lies in petitioning the Commission to change the regulation, not in seeking piecemeal revision of the Commission's rules by a licensing board. It is the role of the Commission to review licensing board decisions, and not the role of licensing boards to review and to reconsider the wisdom of the Commission's regulations.

This policy is expressed in numerous Commission regulations and decisions, and must be considered in determining whether Honeywell's requested exemption is "in the public interest" within the meaning of 10 C.F.R. § 40.14. Honeywell itself points the Board toward a "special circumstances" requirement. Honeywell contends that, in exercising our discretion under section 40.14, the Board should be guided by the Commission's more detailed discussion of exemptions in the regulations that apply to Part 50 licensees.[83] Citing 10 C.F.R. § 50.12 (a)(2)(ii), Honeywell states: "An exemption should be granted if 'special circumstances' exist, such as when compliance is not necessary to satisfy the purpose of the regulations from which an exemption is sought."[84]

Honeywell fails, however, to read section 50.12(a)(2)(ii) in its entire context. In addition to the provision on which Honeywell relies, section 50.12(a)(2) concludes with an overarching provision to the effect that an exemption may be appropriate where "[t]here is present any *other* material circumstance *not considered when the regulation was adopted* for which it would be in the public interest to grant an exemption."[85] For an exemption to be granted, section 50.12(a)(2) implies the existence of circumstances that were not considered by the Commission when it promulgated the pertinent regulation in the first place.

---

[79] Honeywell Initial Statement of Position at 4.

[80] Tr. at 114 (Dec. 15, 2011 Evidentiary Hearing).

[81] *See id.* at 47-48 (Dec. 15, 2011 Evidentiary Hearing) (emphasis added).

[82] Tr. at 20 (Aug. 11, 2011 Pre-Hearing Conference).

[83] Honeywell Initial Statement of Position at 16 n.37.

[84] *Id.*

[85] 10 C.F.R. § 50.12(a)(2)(vi) (emphasis added).

This interpretation of "special circumstances" is also consistent with the Commission's decisions under 10 C.F.R. § 2.335, concerning waivers of Commission regulations in adjudicatory proceedings. Much like section 50.12(a)(2)(ii), section 2.335(b) states that "[t]he sole ground for petition of waiver or exception is that special circumstances with respect to the subject matter of the proceeding are such that the application of the rule or regulation (or a provision of it) would not serve the purposes for which the rule or regulation was adopted."[86] Expanding on the literal language of section 2.335, however, the Commission has further required that (1) such petitions must allege "special circumstances" that were "not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived," and (2) those circumstances must be "unique," rather than "common to a large class of facilities."[87]

In other words, when interpreting "special circumstances" under section 2.335 — which employs language very similar to the definition of "special circumstances" under section 50.12(a)(2)(ii) upon which Honeywell relies — the Commission has made clear that more is required than that enforcement of a regulation might not be necessary in certain individual circumstances. Rather, it is *also* required that those circumstances be unusual if not unique, and that the Commission did not previously consider such circumstances — either explicitly or by necessary implication — when it promulgated the relevant regulation in the first place.

This construction of "special circumstances" is also mandated by sound policy considerations. The Commission's regulations do not operate as a one-way street or safe harbor. In other words, they do not merely establish a standard that an applicant is entitled to invoke for its benefit, but that may then be disregarded whenever an applicant wants to argue its case on an individual, fact-specific basis. Not only would such a practice in effect transfer much ultimate policy-making from the Commission to its staff, but addressing case-by-case the inevitable multitude of requests for individual exemptions would divert resources that are better allocated to the agency's primary mission of ensuring that licensees comply with safety and environmental standards.

The pertinent regulatory history does not suggest that the tangible net worth requirement for self-guarantors should be lightly excused, either by the NRC Staff or by this Board. Indeed, when the Commission initially proposed financial requirements for self-guarantors, it included a $1 billion tangible net worth requirement.[88] When it ultimately decided to drop that absolute test in favor

---

[86] 10 C.F.R. § 2.335(b).

[87] *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 559-60 (2005) (internal citations omitted).

[88] Self-Guarantee as an Additional Financial Assurance Mechanism, 58 Fed. Reg. 68,726, 68,726 (Dec. 29, 1993).

of the test in the final rule that tangible net worth must be at least 10 times decommissioning costs, the Commission emphasized that nonetheless "tangible net worth will be an important factor in the requirements for self-guarantee."[89] The Commission voiced a preference for "conservative criteria," noting that "when *the Commission* has gained some experience with self-guarantee, it may consider an appropriate revision of the financial criteria."[90]

Honeywell's case presents especially strong reasons to apply the rule that fundamental and nontemporary modifications to regulations of the kind it seeks should be sought from the Commission rather than through exemption requests. It is significant that Honeywell in fact *did* participate in the recent Commission rulemaking proceeding concerning the regulation in question.[91] It was partially successful, in that, effective December 17, 2012, the Commission's requirements for self-guarantors will permit some recognition of goodwill.[92] Honeywell nonetheless failed to persuade the Commission to revise its regulations to allow a company to act as a self-guarantor if it lacks a positive tangible net worth of at least $21 million.[93] In effect, Honeywell's continued efforts to seek an exemption have the appearance of an attempted end-run around the Commission's decision *not* to revise its regulations in a way that would allow Honeywell to qualify as a self-guarantor *without* an exemption from the minimum tangible net worth requirement.

Fifth, must the Board evaluate Honeywell's exemption request on the basis of information that was available as of 2009, or should the Board consider more recent information? The NRC Staff argues for the first approach,[94] and Honeywell argues for the second.[95]

We agree with the NRC Staff. The Court of Appeals expressly remanded "Honeywell's April 11, 2009 exemption request to the Commission for further proceedings."[96] On remand before the NRC Staff, Honeywell never filed an NRC Form 313 (Application for Material License) seeking to expand the scope of that request, which sought an exemption only through May 11, 2010.

On the contrary, Honeywell expressly advised the NRC Staff on March 8, 2011 that it intended to submit "a new, updated request for an exemption . . . *once*

---

[89] *Id.* at 68,728.
[90] *Id.* (emphasis added).
[91] Tr. at 66 (Dec. 15, 2011 Evidentiary Hearing).
[92] Exh. NRC000015, at 35,524.
[93] *See id.*
[94] NRC Staff Initial Statement of Position at 20-21.
[95] Honeywell Reply to Hearing Request at 21-26.
[96] *Honeywell,* 628 F.3d at 581.

the NRC completes its review of the pending request."[97] As Honeywell explained, "another exemption request would be pointless until the Commission adequately explains the reasons for rejecting Honeywell's third request."[98] Likewise, Honeywell's reply in support of a hearing before this Board characterized the issue to be heard as limited to reconsideration of its 2009 exemption request:

> As explained in Honeywell's request for hearing, Honeywell's application relates to an *annual* financial test. *The application at issue relates to the 2009 test.* Honeywell can re-apply at any time based on the latest financial data. However, *the issues raised by the 2009 application* will continue to recur until resolved, and the most efficient administrative process will be to address *these issues* now.[99]

Moreover, the Board will not consider an exemption request that was not made to the NRC Staff in the first instance. Although the Commission has delegated to the Board authority to adjudicate the issues raised by Honeywell's hearing request,[100] it has not empowered the Board to serve as an initial reviewer of exemption requests. That role belongs to the NRC Staff.[101]

Thus, in considering Honeywell's 2009 request, we must — as did the NRC Staff on remand — place ourselves in the shoes of the NRC Staff as of the time that request was initially ruled upon.[102]

On remand, as Honeywell points out,[103] the NRC must consider all relevant information. The key, however, is "relevant." Relevance is appropriately limited to the issues raised by the 2009 exemption application. We might of course conclude, after the fact, that Honeywell should have been accepted as a self-guarantor from May 2009 through May 2010 — if we consider its financial condition as of the end of 2010 and 2011. But that would be much like wagering on the outcome of the Super Bowl after the game has been played.

In any event, the Board's ruling on this question also ultimately makes no difference. As explained below, our finding on at least one of the two dispositive issues — that is, whether "special circumstances" exist sufficient to justify an

---

[97] Exh. HNY000040 (Letter from Larry Smith, Plant Manager, Honeywell, to NRC Document Control Desk, (Mar. 8, 2011)) at 3 (emphasis added).

[98] *Id.* (quoting *Honeywell,* 628 F.3d at 577).

[99] Honeywell Reply to Hearing Request at 6 n.8 (emphasis added).

[100] *See* 10 C.F.R. §§ 2.319, 2.321(c).

[101] *See* 10 C.F.R. §§ 2.100-2.103; *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), LBP-77-35, 5 NRC 1290, 1291 (1977) (finding no authority in the Atomic Energy Act or in NRC regulations for the Board to grant an exemption in the first instance).

[102] Exh. HNY000053 (Standard & Poor's, "Global Credit Portal, Ratings Direct, Summary: Honeywell Inc." (Feb. 11, 2011)) at 4-5.

[103] Honeywell Initial Statement of Position at 21 (citing *Union Camp Corp. v. United States,* 53 F. Supp. 2d 1310, 1327 (Ct. Int'l Trade 1999)).

exemption from the Commission's regulations — necessarily would not change regardless of whether we look at Honeywell's circumstances as of 2009 or as of the present time.

IV. SUMMARY AND ANALYSIS OF TESTIMONY AND EXHIBITS

The parties submitted their written direct prefiled testimony on October 14, 2011, and their written rebuttal prefiled testimony on November 3, 2011.[104] In total, the Board received prefiled testimony from seven witnesses: two on behalf of Honeywell and five on behalf of the NRC Staff.[105]

During the evidentiary hearing, the Board heard live testimony, first from Honeywell's two witnesses, and then from the NRC Staff's five witnesses.[106] At the conclusion of the Board's witness questioning, the parties were given the opportunity to submit proposed rebuttal questions for the Board to ask.[107] After reviewing the questions, the Board recalled the NRC Staff witnesses to respond to a question proposed by Honeywell.[108]

The veracity of all testimony, both prefiled and live, was attested to by the respective witnesses, through either an affidavit or an oral oath.[109]

A. Honeywell's Testimony and Exhibits

Honeywell proffered two witnesses to testify on its behalf: John Tus and Bruce Den Uyl. Mr. Tus is the Vice President and Treasurer of Honeywell.[110] As such, he participates in preparing Honeywell's Securities and Exchange Commission filings and is responsible for overseeing aspects of Honeywell's capital structure, public debt ratings, and financial liquidity.[111] Mr. Den Uyl is the Managing Director and co-head of the Financial Advisory Services practice at

---

[104] *See* Initial Scheduling Order at 3; Exh. HNY000001; Exh. NRC000001; Exh. HNY000059 (Rebuttal Testimony of John Tus and Bruce Den Uyl (Nov. 3, 2011)); Exh. NRC000053 (Reply Testimony of Roman Przygodzki, Kenneth Kline, Thomas Fredrichs, Paul Bailey, and John Collier (Nov. 3, 2011)).

[105] *See* Exh. HNY000001; Exh. NRC000001; Exh. HNY000059; Exh. NRC000053.

[106] *See* Tr. at 29, 76-77 (Dec. 15, 2011 Evidentiary Hearing).

[107] *See, e.g., id.* at 99-100.

[108] *Id.* at 101.

[109] *See, e.g., id.* at 29, 76-77; Exh. HNY000002 (Affidavit of John Tus (Oct. 14, 2011)); Exh. HNY000003 (Affidavit of Bruce Den Uyl (Oct. 14, 2011)); Exh. HNY000060 (Affidavit of John Tus (Nov. 3, 2011)), Exh. HNY000061 (Affidavit of Bruce Den Uyl (Nov. 3, 2011)); Exh. NRC000062.

[110] Exh. HNY000002.

[111] *Id.*

AlixPartners.[112] He has over twenty-five (25) years of experience as a consultant to private companies and government agencies on financial and economic issues.[113]

In their testimony, Mr. Tus and Mr. Den Uyl discussed the basis for their opinion that the NRC Staff's denial of Honeywell's 2009 exemption request should be overturned.[114] Their main justification for why the 2009 exemption should have been granted was that the alternative test proposed in Honeywell's 2009 exemption, which would allow for inclusion of goodwill in meeting the 10:1 tangible net worth requirement in the 10 C.F.R. Part 30, Appendix C financial test, provided "more than ample basis for the NRC to conclude that . . . decommissioning funds will be available for the MTW."[115] In support of this view, Messrs. Tus and Den Uyl stated that Honeywell's free cash flow, which was in excess of $3.5 billion in 2010, could be used under normal circumstances to fund the MTW facility's decommissioning cost estimate, which is currently only $186,610,047, or 5% of Honeywell's 2010 free cash flow.[116] Moreover, the witnesses asserted that the alternative test would ensure that adequate funds would be available for decommissioning because numerous mechanisms, including a bond rating downgrade reporting requirement and the annual recertification requirement, "ensure that potential problem situations will be identified and addressed in a timely manner or that additional assurance mechanisms can be employed if needed."[117]

In addition, Messrs. Tus and Den Uyl pointed to bond ratings as strong indicators of Honeywell's financial strength, and hence its ability to pay any future decommissioning costs associated with the MTW facility. Mr. Tus described Honeywell as a "*Fortune* 75 diversified technology and manufacturing leader."[118] He testified that Honeywell's long-term bonds are rated A2 by Moody's and A by Standard & Poor's, thus making them investment grade.[119] According to

---

[112] Exh. HNY000003.

[113] *Id.*

[114] *See* Exh. HNY000059, at 2-3.

[115] Exh. HNY000001, at 6-7; *see also* HNY000001 at 30, 31.

[116] *See* Exh. HNY000001, at 8, 32, 35, 41; *see also* Tr. at 38 (Dec. 15, 2011 Evidentiary Hearing). The estimated decommissioning cost for the MTW facility is based on a site reclamation cost estimate submitted to the NRC in January 2010. Exh. HNY000001, at 8.

[117] Exh. HNY000001, at 24, 26, 31, 32, 34.

[118] *Id.* at 8; *see also* Tr. at 35-36, 37 (Dec. 15, 2011 Evidentiary Hearing). Mr. Tus and Mr. Den Uyl emphasized the importance of Honeywell's diversification among multiple industries as a factor differentiating it from other A- or A2-rated single-industry companies that defaulted or nearly defaulted during the recent recession. *See* Exh. HNY000059, at 4-5. Similarly, they stressed that many of the articles that the NRC Staff rely on pertaining to default rates in 2009 focus on speculative-grade, or junk-rated, companies, while Honeywell was then and still is an "A-rated" investment-grade company. *See id.* at 5-7.

[119] Exh. HNY000001, at 9, 12; *see also* Tr. at 35 (Dec. 15, 2011 Evidentiary Hearing).

Mr. Tus, bond credit ratings are reliable indicators of financial strength, even during recessions such as the one experienced from 2008 to 2010, because they are the result of a rigorous quantitative and qualitative assessment of corporate creditworthiness.[120] In support of this proposition, Messrs. Tus and Den Uyl noted that the risk of an A- or A2-rated company defaulting within 1 year is, on average, roughly between 0.065% and 0.08%, while the risk of an A- or A2-rated company defaulting within 5 years is still on average only between 0.680% and 0.788%.[121] Thus, they stated that "[p]ut simply, 'A-rated' companies are unlikely to default, and, if they do, there is likely to be a significant time lag and rating downgrades prior to actual default."[122]

Further, Messrs. Tus and Den Uyl asserted that Honeywell's intangible assets, including its goodwill, provide additional assurance of Honeywell's financial strength and ability to fully meet any decommissioning liabilities for the MTW facility. Mr. Tus testified that "Honeywell's business model is such that it often engages in acquisitions or other business combinations that generate significant amounts of goodwill."[123] According to Mr. Tus, this is exemplified by the fact that Honeywell has acquired approximately sixty-five companies at a cost of $8.5 billion since January 1, 2003.[124] A table included in Mr. Tus's initial prefiled testimony showed that Honeywell's goodwill increased in value from $8.403 billion as of December 31, 2006, to $11.597 billion as of December 31, 2010.[125] Mr. Den Uyl contended that such goodwill could be used to meet Honeywell's decommissioning obligations because, contrary to the NRC Staff's assertions, goodwill is relatively liquid and "can often be converted into cash as quickly as tangible assets."[126]

While Honeywell's goodwill has steadily increased since 2006, Mr. Tus acknowledged that Honeywell's tangible net worth has significantly decreased since 2006: positive $70 million as of December 31, 2006; negative $1.451 billion

---

[120] Exh. HNY000001, at 10-12, 15, 26, 30, 33-34; *see also* Tr. at 43-47 (Dec. 15, 2011 Evidentiary Hearing). Similarly, Mr. Den Uyl contended that Moody's quarterly downgrade-to-upgrade ratio of 18.3:1 in the first quarter of 2009 along with Standard & Poor's report that 18.34% of nondefaulting issuers were downgraded during 2009 "demonstrate that, contrary to the NRC's assertions, ratings agencies are not reluctant to downgrade ratings when conditions warrant, but that they also take into account longer-term trends and expectations of future performance." Exh. HNY000001, at 38.

[121] *See* Exh. HNY000001, at 12-13, 25, 31, 33.

[122] *Id.* at 33; *see also id.* at 35.

[123] *Id.* at 16, 27.

[124] *Id.* at 16.

[125] *Id.* at 17. Mr. Tus and Mr. Den Uyl testified that goodwill is assessed annually using standard accounting practices to ensure that it is appropriately valued. *Id.* at 17-18. Honeywell's ratio of tangible net worth, including goodwill, to decommissioning liabilities was approximately 44:1 as of December 31, 2010, and 32:1 as of December 31, 2008. *Id.* at 31.

[126] Exh. HNY000059, at 7-9; *see also* Tr. at 69-70 (Dec. 15, 2011 Evidentiary Hearing).

as of December 31, 2007; negative $5.265 billion as of December 31, 2008; negative $3.697 billion as of December 31, 2009; and negative $3.384 billion as of December 31, 2010.[127] According to Mr. Tus, this decrease in tangible net worth is simply a result of Honeywell's business model, which focuses on acquisitions.[128] When asked whether Honeywell would again have a positive net worth, Mr. Tus testified that he "probably do[es] not see Honeywell returning to a positive tangible net worth situation given the strategy that we've laid out before us."[129]

In the opinion of Messrs. Tus and Den Uyl, however, tangible net worth is not a good indicator of financial strength given that many financially strong companies such as United Technologies Corp., Danaher, IBM, and Proctor & Gamble also had negative tangible net worth as of year-end 2010.[130] Specifically, the witnesses maintained that "for highly-rated companies, a negative tangible net worth is not a reflection of financial weakness," but instead "is at best a crude measure of the worth of a diversified company in today's global environment."[131] Mr. Tus stated that tangible net worth bears no relation to the overall financial condition of any company in the *Fortune* 500 and that tangible net worth is essentially not a meaningful test for the financial strength of any major company.[132] Further, Mr. Tus estimated that of the *Fortune* 500 companies, approximately 100, or 20%, have a negative tangible net worth and thus would not meet the Commission's standards for a self-guarantee under 10 C.F.R. Part 30, Appendix C.[133] As a result, Messrs. Tus and Den Uyl concluded that "[o]verall, we do not believe that a minimum tangible net worth criteria is useful or relevant."[134]

Moreover, these witnesses both testified that they believe the recent final rule on decommissioning financial assurance, which will allow the use of intangibles in meeting the 10:1 financial test in 10 C.F.R. Part 30, Appendix C but still require a minimum tangible net worth of $21 million for self-guaranteeing licensees,

---

[127] Exh. HNY000001, at 20.

[128] Tr. at 65 (Dec. 15, 2011 Evidentiary Hearing).

[129] *Id.* at 70.

[130] Exh. HNY000001, at 21, 40-41, 44.

[131] *Id.* at 7, 27; *see also id.* at 29, 39-40; Tr. at 42, 47 (Dec. 15, 2011 Evidentiary Hearing). Further, Mr. Tus testified that:

> [T]hrough hundreds of hours of discussion with each of the rating agencies whose real[ ] responsibility . . . is to evaluate our default risk when they give us a rating, [none] have [ever] raised the issue of tangible net worth as one of the factors considered in determining whether we should be A-rated or not.

Tr. at 47 (Dec. 15, 2011 Evidentiary Hearing).

[132] Tr. at 47-48 (Dec. 15, 2011 Evidentiary Hearing).

[133] *Id.* at 51-52.

[134] Exh. HNY000001, at 29; *see also id.* at 44 ("[T]he minimum tangible net worth criteria is not particularly meaningful as applied to large diversified companies like Honeywell.").

is baseless and inapplicable to Honeywell. That is because, in their view, "the proposed rule contains no recent analysis to support the use of a minimum tangible net worth."[135] Instead, they opined that "[a] minimum *net worth* test makes more sense and would better reflect the strength of a company's ability to provide decommissioning financial assurance."[136]

Based on these factors, Messrs. Tus and Den Uyl concluded that the alternative test proposed by Honeywell is adequate to ensure Honeywell's ability to fund its decommissioning costs for the MTW facility and that denial of Honeywell's 2009 exemption request therefore cannot be justified.[137]

B. NRC Staff's Testimony and Exhibits

Five witnesses testified on behalf of the NRC Staff: Roman Przygodzki, Kenneth Kline, Thomas Fredrichs, Paul Bailey, and John Collier. Of those witnesses, three were directly involved in reviewing Honeywell's requests for an exemption from the 10:1 tangible net worth requirement in the 10 C.F.R. Part 30, Appendix C financial test — Roman Przygodzki, Kenneth Kline, and Thomas Fredrichs — and two were not — Paul Bailey and John Collier.[138]

Mr. Fredrichs was the primary financial reviewer for Honeywell's first exemption request in 2006.[139] He is a Senior Licensee Financial Policy Advisor in the NRC's Office of Nuclear Reactor Regulation. In that role, he serves as an expert on the evaluation of reactor licensee financial qualifications and provides guidance to the Commission and various NRC Offices on issues pertaining to licensee financial qualifications and performance.[140]

Mr. Kline was the primary reviewer for Honeywell's second exemption request in 2008. In addition, he also began reviewing Honeywell's third exemption soon after it was submitted in April of 2009, but became busy later that year with various other projects.[141] Mr. Kline is a Financial Assurance Project Manager in the NRC's Office of Federal and State Materials and Environmental Management Programs.[142] As such, he reviews and analyzes decommissioning funding plans, financial instruments, financial statements, and other documents associated with the NRC Staff's review of licensing actions.[143]

---

[135] *Id.* at 43-44.
[136] *Id.* at 45 (emphasis in original).
[137] *Id.* at 47.
[138] Exh. NRC000001, at 3; Exh. NRC000053, at 2.
[139] Exh. NRC000001, at 3.
[140] *Id.* at 1-2.
[141] *Id.* at 3.
[142] *Id.* at 1.
[143] *See id.*

Mr. Przygodzki became the primary contributor to the NRC Staff's decision on Honeywell's third consecutive exemption request around October of 2009 when Mr. Kline became busy with other projects.[144] He was involved with both the NRC Staff's initial decision on Honeywell's 2009 exemption request and the NRC Staff's April 2011 decision on remand.[145] Until October 21, 2011, Mr. Przygodzki was a Financial Assurance Project Manager in the NRC's Office of Federal and State Materials and Environmental Management Programs and performed duties similar to Mr. Kline's.[146] He currently serves as a Financial Analyst with the U.S. Pension Benefit Guaranty Corporation.[147]

Messrs. Bailey and Collier both work for ICF International, Mr. Bailey as a Senior Fellow and Mr. Collier as a Vice President. ICF International is a professional services company that is active in public policy areas including energy, environment, health, and transportation.[148] While neither Mr. Bailey nor Mr. Collier specifically reviewed the exemption requests at issue in this proceeding, each has had over 20 years of experience in the areas of financial assurance and cost estimation.[149]

Messrs. Przygodzki, Kline, and Fredrichs testified that, in 2006, Honeywell applied for, and was granted, an exemption allowing it to include goodwill in the definition of "tangible net worth" for purposes of meeting the 10:1 tangible net worth requirement of the 10 C.F.R. Part 30, Appendix C financial test for self-guarantors.[150] According to Mr. Fredrichs, in granting the 2006 exemption request, the NRC Staff relied on Honeywell's bond ratings, along with other financial data, including Honeywell's tangible net worth to decommissioning cost ratio of 7.9:1.[151] Further, Mr. Fredrichs noted that, in granting the 2006 exemption request, the NRC Staff specifically informed Honeywell that, if it wished to use goodwill permanently to meet the 10:1 financial test, Honeywell would have to seek such a change through rulemaking.[152]

Unlike the 2006 exemption request, however, Mr. Kline acknowledged that, when Honeywell applied for a similar exemption from the 10:1 tangible net

---

[144] Tr. at 78 (Dec. 15, 2011 Evidentiary Hearing).

[145] Exh. NRC000001, at 3.

[146] *Id.* at 1; Exh. NRC000053, at 1.

[147] Exh. NRC000053, at 1.

[148] *Id.* at 1-2.

[149] Exh. NRC000054 (Statement of Professional Qualifications of Paul Bailey (Nov. 3, 2011)) at 1; Exh. NRC000055 (Statement of Professional Qualifications of John Collier (Nov. 3, 2011)) at 1.

[150] Exh. NRC000001, at 3.

[151] *Id.* at 6. As Mr. Fredrichs testified, although the 7.9:1 ratio was lower than the 10:1 ratio required by 10 C.F.R. Part 30, Appendix C, it was actually higher than the 6:1 ratio required by the parent company guarantee test in 10 C.F.R. Part 30, Appendix A. *Id.*

[152] *Id.*

worth requirement of 10 C.F.R. Part 30, Appendix C in 2008, the NRC Staff's decision to grant the exemption request "was a much closer call."[153] Nonetheless, he justified the NRC Staff's decision to grant the 2008 exemption request, stating that 2007 was the first year Honeywell had a negative tangible net worth, and "its history suggested that it would come back into compliance with the 10-to-1 test."[154] This was especially true, in Mr. Kline's opinion, given Federal Reserve reports at the time claiming that the economy was stabilizing and that economic growth would pick up gradually over the next 2 years.[155]

According to Messrs. Przygodzki and Kline, however, by the time that it applied for its third consecutive exemption in 2009, Honeywell's financial condition had deteriorated such that the exemption was no longer warranted.[156] They testified that, while the NRC Staff had numerous reasons for denying the 2009 exemption request, the stated basis for the denial of the exemption in the NRC Staff's 2009 decision centered on the multi-billion-dollar decline in tangible net worth that Honeywell experienced from 2007 to 2008.[157]

On remand from the United States Court of Appeals for the District of Columbia Circuit, the NRC Staff again denied Honeywell's 2009 exemption request in an April 2011 decision.[158] As Mr. Przygodzki testified, the first justification that the NRC Staff proffered in that decision concerned the unreliability of bond ratings.[159] According to Mr. Przygodzki, the global financial crisis had entered a far more serious phase by the time the NRC Staff was reviewing Honeywell's 2009 exemption request.[160] As a result, the reliability of the bond ratings was being called into question.[161] In support of this claim, the NRC Staff witnesses cited a 2009 World Bank report stating that "[i]n the United States . . . faulty credit ratings and flawed rating processes are widely perceived as being among the key contributors to the global financial crisis . . . ."[162] Specifically, Mr. Przygodzki stated that the NRC Staff was concerned that the credit rating agencies either might not timely react to market events or might be reluctant to downgrade the ratings of certain companies for fear of the adverse impact that a downgrade

---

[153] *Id.* at 3, 7; Tr. at 79 (Dec. 15, 2011 Evidentiary Hearing).

[154] Exh. NRC000001, at 7.

[155] *Id.*

[156] *See id.* at 2.

[157] *Id.* at 8.

[158] *See id.* at 2.

[159] *See id.* at 9.

[160] *Id.* at 13; Exh. NRC000053, at 3.

[161] Exh. NRC000001, at 9-13, 29; Exh. NRC000053, at 3, 9, 11-12.

[162] Exh. NRC000053, at 9 (quoting Exh. NRC000044 (Jonathan Katz, Emanuel Salinas & Constantinos Stephanou, The World Bank Group, Credit Rating Agencies: No Easy Regulatory Solutions (Oct. 2009)) at 1).

could have on the company.[163] Even if bond ratings were reliable in 2009, Messrs. Przygodzki, Kline, and Fredrichs all reiterated that "although bonds ratings are relevant to whether a licensee can self-guarantee decommissioning funding, they by no means address all of the NRC's concerns in this area."[164]

In addition, Mr. Przygodzki asserted that numerous other reasons, as enumerated in the NRC Staff's April 2011 denial decision, caused the NRC Staff to deny Honeywell's 2009 exemption request, including concerns regarding the ability of Honeywell's free cash flow and assets to guarantee the availability of decommissioning funds. According to Mr. Przygodzki, the NRC Staff rejected Honeywell's claim that a large free cash flow supported issuance of the exemption, "[b]ecause free cash flow is not committed to the NRC and financial distress might substantially eliminate this potential source of funding."[165] Similarly, Mr. Przygodzki stated that the NRC Staff also rejected Honeywell's argument that its strong asset base provided decommissioning financial assurance because such assets were already accounted for in a separate part of the 10 C.F.R. Part 30 financial test.[166]

Further, Mr. Przygodzki stated that Honeywell's significant decline in tangible net worth prior to its 2009 exemption request played a significant role in the NRC Staff's April 2011 denial decision.[167] He testified that Honeywell's tangible net worth when it requested the 2009 exemption was negative $5.3 billion — a $3.8 billion decline since its previous exemption request in 2008.[168] Such a drastic decline in tangible net worth, he noted, would require Honeywell to rely significantly more on goodwill in meeting the 10:1 net worth test than ever before.[169] Mr. Przygodzki and Mr. Collier asserted that such a heavy reliance on goodwill was problematic because goodwill is relatively illiquid, thus increasing the potential for delays in converting goodwill into cash, and hence delays in decommissioning.[170]

---

[163] Exh. NRC000001, at 12; Exh. NRC000053, at 6, 7-8, 15 ("Other reports identified additional concerns with credit rating agencies, particularly with respect to conflicts of interest and information disclosure.").

[164] Exh. NRC000053, at 5; *see also id.* at 5-7.

[165] Exh. NRC000001, at 14-15; *see also* Tr. at 83 (Dec. 15, 2011 Evidentiary Hearing).

[166] Exh. NRC000001, at 15.

[167] *Id.*

[168] *Id.*

[169] *Id.* at 15, 17 ("[W]hereas Honeywell needed $3.7 billion in goodwill to meet the 10-to-1 test in 2008, for 2009 it would have needed $6.8 billion. . . . This meant that Honeywell was greatly increasing its reliance on an asset class that might not promptly pay for decommissioning costs."); *see also id.* at 30; Exh. NRC000053, at 21.

[170] Exh. NRC000001, at 15-17; Exh. NRC000053, at 17-19, 20, 21-22; Tr. at 80 (Dec. 15, 2011 Evidentiary Hearing); *see also* Exh. NRC000053, at 3 ("Honeywell's heavy reliance on goodwill to

(Continued)

Moreover, Messrs. Przygodzki, Kline, and Fredrichs all testified that Honeywell's continuing decline in tangible net worth between 2008 and 2009 was significant because it "made clear that [Honeywell] would not soon return to compliance with § 40.36(e)."[171] As Mr. Fredrichs testified, Honeywell had initially claimed that the exemption would be temporary, and the NRC Staff relied on these claims in granting the exemptions because "we always thought that they would bridge that gap, that they would . . . come back into compliance."[172] However, according to these witnesses, by 2009 it was clear that "[w]hat might have been an anomaly was now a trend."[173]

In sum, Mr. Pryzgodzki testified that the April 2011 denial letter found that the unreliability of bond ratings during the global financial crisis, together with Honeywell's increased reliance on relatively illiquid goodwill, all elevated the risk that funds might not be available to decommission the MTW facility when needed: "[T]here were questions as to whether Honeywell would be able to timely produce the cash needed to decommission the facility."[174] Should decommissioning funds prove to be unavailable when needed, Mr. Przygodzki contended, the spread of contamination from a compromised facility could pose serious public health and safety concerns.[175] As a result, Mr. Przygodzki asserted that Honeywell's 2009 exemption request failed to meet the 10 C.F.R. § 40.14 requirement that the exemption must not endanger life or property of the common defense and security.[176] For similar reasons, the witness stated that Honeywell's 2009 application failed to meet the second part of 10 C.F.R. § 40.14, which requires that an exemption be in the public interest:[177] "[T]he statements of consideration

---

self-guarantee financial assurance in 2009 . . . created the risk that, if Honeywell fell into financial distress, it might experience a delay generating funds for decommissioning activities."). Further, according to Mr. Przygodzki, the global financial crisis led the NRC Staff to believe that Honeywell's goodwill, which it relied so heavily on in the 2009 exemption request, might be subject to significant impairment at rates faster than any financial tests could adequately capture. Exh. NRC000001, at 18; *see also* Tr. at 84-85, 86, 88 (Dec. 15, 2011 Evidentiary Hearing). According to the NRC Staff, in order to have fallen out of compliance with the 2009 exemption, Honeywell would have had to have sustained a goodwill impairment of roughly $3 billion. Tr. at 91 (Dec. 15, 2011 Evidentiary Hearing). Nonetheless, the NRC Staff claimed that comparable, and even larger, goodwill impairments have recently occurred. *Id.* at 91-92.

[171] Exh. NRC000001, at 19.

[172] Tr. at 104-05 (Dec. 15, 2011 Evidentiary Hearing).

[173] Exh. NRC000001, at 19.

[174] Tr. at 81 (Dec. 15, 2011 Evidentiary Hearing); Exh. NRC000001, at 20.

[175] *See* Tr. at 81-82 (Dec. 15, 2011 Evidentiary Hearing).

[176] Exh. NRC000001, at 20; *see also* Exh. NRC000053, at 4.

[177] Exh. NRC000001, at 22; Tr. at 82 (Dec. 15, 2011 Evidentiary Hearing). Mr. Przygodzki conceded, however, that Honeywell's 2009 exemption request did meet the first requirement of

(Continued)

for the financial assurance rules have stated that delays in decommissioning are of concern, and that would certainly endanger life or property."[178]

V. FINDINGS OF FACT

Upon reviewing the evidentiary record, the Board finds the following facts by a preponderance of the evidence:

A. Circumstances Not Temporary

1. For the reasons more fully set forth in Findings 2 through 11, Honeywell's request for an exemption from the requirements of 10 C.F.R. § 40.36 and 10 C.F.R. Part 30, Appendix C does not involve circumstances that are expected to be only temporary.

2. Although Honeywell had used a self-guarantee method in previous years, as of December 31, 2005, Honeywell no longer satisfied the Appendix C requirement of having a tangible net worth at least ten times its current decommissioning cost estimate.[179]

3. As of December 31, 2005, Honeywell's tangible net worth had declined to $1.929 billion, thus resulting in a 7.9:1 ratio instead of the required 10:1 ratio.[180]

4. As of December 31, 2006, Honeywell's tangible net worth had further declined to $70 million.[181]

5. As of December 31, 2007, Honeywell's tangible net worth had further declined to a negative $1.451 billion.[182]

6. As of December 31, 2008, Honeywell's tangible net worth had further declined to a negative $5.265 billion.[183]

7. As of December 31, 2009, Honeywell's tangible net worth had somewhat improved, but remained a negative $3.7 billion.[184]

---

10 C.F.R. § 40.14 because it was "authorized by law" to the extent that it was not prohibited by law. Exh. NRC000001, at 22. As Mr. Przygodzki testified, the NRC Staff did not include discussions regarding whether Honeywell's 2009 exemption request met the "authorized by law," threat to "life or property or common defense and security," or "otherwise in the public interest" portions of 10 C.F.R. § 40.14 because the NRC Staff sought to respond only to the specific arguments that Honeywell made in support of its 2009 exemption request. *Id.*

[178] Tr. at 81-82 (Dec. 15, 2011 Evidentiary Hearing).

[179] Exh. NRC000006, at 1.

[180] *Id.* at 3: Exh. HNY000004, Attachment 1, at 5; Exh. HNY000011, at 2.

[181] Exh. HNY000001, at 20.

[182] Exh. HNY000005; Exh. HNY000011, at 2.

[183] Exh. HNY000011, at 2.

[184] Exh. HNY000001, at 20.

8. As of December 31, 2010, Honeywell had a tangible net worth of negative $3.4 billion.[185]

9. Honeywell continues to have a negative net worth, thus resulting in its failure to satisfy the requirements of 10 C.F.R. Part 30, Appendix C for seven consecutive years (2005-2011).[186]

10. Honeywell continues to pursue a business strategy (acquisition of other businesses with substantial intangible assets) that makes it unlikely that Honeywell will reverse its tangible net worth situation any time soon.[187]

11. In the opinion of Honeywell's Treasurer, John Tus, he "probably do[es] not see Honeywell returning to a positive tangible net worth situation given the strategy that we've laid out before us."[188]

B. Circumstances Considered by the Commission

12. For the reasons more fully set forth in Findings 13 through 19, Honeywell's request for an exemption from the requirements of 10 C.F.R. § 40.36 and 10 C.F.R. Part 30, Appendix C does not involve circumstances that the Commission failed to consider, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived.

13. Honeywell's financial circumstances are not so unusual that the Commission might not have foreseen them when it promulgated the requirements of 10 C.F.R. Part 30, Appendix C. On the contrary, Honeywell itself contends that other, similarly situated companies "*often* have a negative tangible net worth due, in part, to growing via acquisitions."[189]

14. As Honeywell points out, well-known companies such as United Technologies, Danaher, IBM, and Proctor & Gamble each had a negative tangible net worth as of year-end 2010.[190]

15. Honeywell's Treasurer estimated that, of all *Fortune* 500 companies, approximately 20% — that is, 100 major corporations — might have a negative tangible net worth and thus could not satisfy the Commission's standards for a self-guarantee under Appendix C.[191]

16. Rather than demonstrate that its own financial circumstances are unusual

---

[185] *Id.*

[186] *Id.*

[187] Exh. HNY000008 (Letter from Honeywell to NRC Providing Supplemental Information to Request for Extension of Exemption from Decommissioning Financial Assurance Requirements (Oct. 13, 2009)) at 2, 5; Exh. NRC000001, at 19-20.

[188] Tr. at 70 (Dec. 15, 2011 Evidentiary Hearing).

[189] Exh. HNY000001, at 21 (emphasis added).

[190] *Id.* at 21, 40-41, 44.

[191] Tr. at 51-52 (Dec. 15, 2011 Evidentiary Hearing).

or unique, Honeywell contends that "[o]verall, we do not believe that a minimum tangible net worth criteria is useful or relevant."[192]

17. Honeywell asserts that, "for highly rated companies" (that is, the only companies that might possibly qualify under Appendix C, given the requirement for an "A" bond rating), "a negative tangible net worth is not a reflection of financial weakness."[193]

18. Honeywell asserts that a tangible net worth "bears no relation to the overall financial condition" of any *Fortune* 500 company and "essentially is not a meaningful test for any major company."[194]

19. Rather than demonstrating that Honeywell's financial circumstances are unusual or unique, Honeywell's exemption request directly challenges the wisdom of the Commission's decision to employ a tangible net worth test in 10 C.F.R. Part 30, Appendix C.

C. Honeywell's Financial Condition

20. For the reasons more fully set forth in Findings 21 through 45, in 2009 Honeywell was a financially healthy *Fortune* 75 diversified technology and manufacturing company.

21. Honeywell serves customers worldwide with aerospace products and services; control technologies for buildings, homes, and industry; automotive products; turbochargers; and specialty materials.[195]

22. Honeywell is the parent company for all Honeywell subsidiaries and affiliates.[196]

23. Honeywell has more than 130,000 employees doing business in more than 100 countries, with a market capitalization of approximately $34 billion as of September 30, 2011.[197]

24. In 2010, Honeywell's $33.4 billion in sales were distributed among four primary lines of business: automated control solutions (41%), aerospace (32%), specialty materials (14%), and transportation systems (13%).[198]

25. Bond credit ratings take into account numerous financial metrics and qualitative analyses, including the assessment of a business's market position, diversification, liquidity, and ability to generate future cash flows. Bond rating

---

[192] Exh. HNY000001, at 29.

[193] *Id.* at 7, 29, 39-40.

[194] *See* Tr. at 47-48 (Dec. 15, 2011 Evidentiary Hearing).

[195] Exh. HNY000001, at 8.

[196] *Id.*

[197] Exh. HNY000013 (Presentation to NRC Staff, "Financial Assurance for Decommissioning" (Mar. 14, 2011)) at 2.

[198] Exh. HNY000001, at 8.

agencies also monitor a company to determine whether its rating should be changed, and then downgrade or upgrade the rating as appropriate.[199]

26. Honeywell's long-term bonds have been rated "A2" by Moody's and "A" by Standard & Poor's, the minimum ratings allowed for a self-guarantor under the 10 C.F.R. Part 30, Appendix C financial test, for 17 years.[200]

27. An "A" rating is an "investment-grade" rating, which corresponds to a very low default rate.[201]

28. Honeywell did not experience any limitations on its ability to access the commercial paper markets throughout the global financial crisis that began in 2007.[202]

29. Since December 31, 2005, Honeywell's quarter-end cash balances have been no less than $1.2 billion.[203]

30. Free cash flow is the cash a company generates from its operations less the cost of its capital expenditures — essentially, the money that a company could return to shareholders if the company grew no further.[204]

31. Honeywell's free cash flow grew from $2.2 billion in 2006 to $3.6 billion in 2010, even after making a $600 million voluntary pension contribution.[205]

32. While Honeywell's sales and net income declined by 15% and 23% respectively between 2008 and 2009, it maintained a free cash flow of $3.1 to $3.3 billion.[206]

33. Honeywell's total decommissioning liabilities for the MTW facility are approximately $187 million.[207]

34. Tangible assets are assets that have a physical existence, such as cash, equipment, inventory, and real estate. Accounts receivable are also usually considered tangible assets for accounting purposes.[208]

35. Honeywell's tangible assets have increased from approximately $21 billion at the end of 2006 to approximately $24 billion at the end of 2010.[209]

36. Net worth, or shareholder equity, represents a company's total assets minus its total liabilities.[210]

---

[199] *Id.* at 33-35, 37-39.

[200] *Id.* at 9; Exh. HNY000013, at 13; 10 C.F.R. Part 30, Appendix C.

[201] Exh. HNY000001, at 12, 31-32.

[202] *See id.* at 31-32; Tr. at 73 (Dec. 15, 2011 Evidentiary Hearing).

[203] Exh. HNY000001, at 31-32.

[204] *Id.* at 21-22.

[205] *Id.* at 9.

[206] *Id.* at 9.

[207] *Id.* at 8.

[208] *See id.* at 20; *see also* Tr. at 57-58 (Dec. 15, 2011 Evidentiary Hearing).

[209] *See* Exh. HNY000001, at 20.

[210] *See id.* at 45.

37. Honeywell's net worth grew from $7.1 billion in 2008 to $10.8 billion in 2010.[211]

38. Honeywell's tangible net worth increased during the course of the NRC Staff review of the pending amendment application at issue here: from negative $5.3 billion at the end of 2008, to negative $3.7 billion at the end of 2009, to negative $3.4 billion at the end of 2010.[212]

39. Honeywell's goodwill increased in value from $8.403 billion as of December 31, 2006, to $11.597 billion as of December 31, 2010.[213]

40. Honeywell's goodwill is assessed annually using standard accounting practices.[214]

41. Since at least 2005 (the period of time covered by the three consecutive exemption requests), Honeywell has had no impairments of goodwill.

42. Even in 2008, when the NRC expressed concern that Honeywell needed to apply 67% of its goodwill to satisfy the 10 C.F.R. Part 30, Appendix C financial test, if it had been permitted to include goodwill toward satisfaction of that test, Honeywell would have to write down more than 30% of its goodwill before it would no longer meet the financial test.

43. Honeywell's ratio of tangible net worth, including goodwill, to decommissioning liabilities was approximately 44:1 as of December 31, 2010, and 32:1 as of December 31, 2008.[215]

44. Honeywell currently has $4 billion in cash.[216]

45. Honeywell has a $2.8 billion 5-year committed revolving credit facility.[217]

D. Adverse Factors

46. For the reasons more fully set forth in Findings 47 through 96, notwithstanding Honeywell's financial condition, granting its 2009 request for an exemption from the requirements of 10 C.F.R. § 40.36 and 10 C.F.R. Part 30, Appendix C could adversely affect the likelihood that adequate funds would be available to decommission Honeywell's MTW uranium conversion facility. Honeywell's bond ratings were not necessarily a good indicator of its financial condition at a time when markets were fluctuating rapidly and generally in decline. For this and other reasons, it was possible that Honeywell could fall into financial distress rapidly before the NRC's next annual reevaluation.

---

[211] *Id.* at 9-10.
[212] *Id.* at 20.
[213] *Id.* at 17.
[214] *Id.* at 17-18.
[215] *Id.* at 31.
[216] Tr. at 73 (Dec. 15, 2011 Evidentiary Hearing).
[217] Exh. HNY000001, at 9; Exh. HNY000059, at 9-10.

47. In 2007, the global economy entered the early stages of possibly the most severe economic crisis since the Great Depression.[218]

48. In late 2008, not long after the NRC Staff granted Honeywell's second exemption request, the global economy took a sharp downward turn.[219]

49. When Honeywell applied for an exemption in April 2009, future business and economic conditions remained highly uncertain.[220]

50. The Congressional Budget Office had recently stated that "[t]he sudden decline in economic activity in the second half of [2008] signaled that the recession could be severe . . . [and that] [n]ormally, sharp contractions in economic activity are followed by rapid rebounds, but this forecast anticipates that the recovery in 2010 will be slow[.]"[221]

51. This significant uncertainty was not limited to narrow sectors of the economy. For example, although the financial sector experienced high numbers of corporate defaults in 2008 and 2009, other sectors of the economy were also affected.[222]

52. Throughout late 2008 and 2009, the economy experienced a rising number of corporate defaults across broad sectors. By the end of May 2009, the number of defaults, 135, more than quadrupled the number of defaults during the same period in 2008.[223]

53. By the time the NRC Staff issued its December 2009 denial decision, corporate defaults were on pace to reach an unprecedented level.[224]

54. When Honeywell requested its third exemption in 2009, it had the same bond ratings — an "A" rating by Standard & Poor's and an "A2" rating by Moody's — that it had when the Staff granted the first two exemptions. Although

---

[218] Exh. NRC000028 (Jon Hilsenrath, Serena Ng, & Damian Paletta, *Worst Crisis Since '30s, With No End Yet in Sight,* Wall Street Journal (Sept. 18, 2008)); Exh. NRC000047 (Financial Crisis Inquiry Commission, Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States (Jan. 2011)) at 353-86.

[219] Exh. NRC000001, at 9-11; *see also* Exh. NRC000048 (Federal Reserve Bank of St. Louis, The Financial Crisis: A Timeline of Events and Policy Actions (2011)) at 6-9; Exh. NRC000034 (Ingo Fender & Jacob Gyntelberg, *Overview: Global Financial Crisis Spurs Unprecedented Policy Actions,* BIS Quarterly Review (Dec. 2008)) at 1.

[220] Exh. NRC000001, at 10-11, 12-14.

[221] Exh. NRC000037 (Congressional Budget Office, The Budget and Economic Outlook: Fiscal Years 2009 to 2019 (January 2009)) at 4.

[222] Exh. HNY000025 (Moody's Default and Recovery Rates of Corporate Bond Issuers, 1920-2009) at 3.

[223] Exh. NRC000039 (David Wessel, *Another Milestone: U.S. Corporate Defaults to Date Match Total for All '08,* Wall Street Journal (May 29, 2009)).

[224] Exh. NRC000041 (U.S. Corporate Defaults, The Economist (June 18, 2009)); Exh. NRC000043 (Chelsea Emery & Emily Chasan, *Unprecedented U.S. Corp. Defaults Seen for '09,* Reuters Business and Financial News (Sept. 29, 2009)).

excellent ratings, they are the minimum ratings allowed under Appendix C. As Honeywell's Treasurer testified, Honeywell's amount of debt and level of profitability prevented it from qualifying for higher bond ratings.[225]

55. By 2009, the financial downturn in late 2008 also had raised significant questions about the reliability of bond ratings in general. Credit rating agencies came under widespread scrutiny in 2008 and 2009 for failing to accurately rate companies that had fallen into financial distress. For example, Standard & Poor's did not downgrade the "A" bond rating of Lehman Brothers until the very same day the company filed for bankruptcy, September 15, 2008.[226]

56. In October 2009, just 2 months before the NRC Staff initially denied Honeywell's exemption request, the World Bank reported: "In the United States and Europe faulty credit ratings and flawed rating processes are widely perceived as being among the key contributors to the global financial crisis. . . . That has brought them under intense scrutiny and led to proposals for radical reforms."[227]

57. In 2009, the World Bank identified several factors that might cause rating agencies to delay downgrading the bond ratings of even troubled companies. The World Bank explained that:

> A downgrade can have such an adverse effect on a rated sovereign or corporate issuer that it can destabilize the issuer or the market for its securities. Rating agencies may therefore be reluctant to downgrade because of the impact on the (usually not publicly disclosed) triggers in private financial contracts, even if the downgrade is already reflected in market prices.[228]

58. In 2009, the World Bank also explained that factors such as incompetence and time horizon may also lead to delays in downgrading bond ratings.[229]

59. Other organizations began to question the reliability of bond ratings in 2009. In September 2009, the U.S. Securities and Exchange Commission

---

[225] Tr. at 68-69 (Dec. 15, 2011 Evidentiary Hearing).

[226] *See* Exh. NRC000026 (Standard & Poor's, Research Update: Lehman Bros. Holdings Downgraded to "Selective Default"; Other Lehman Entities to "BB-" or "R" (Sept.15, 2008)).

[227] Exh. NRC000044, at 1; *see also* Exh. NRC000046 (Richard J. Herring, Pew Financial Reform Project, Policy Issues Concerning the Reform of the Credit Rating Agencies (Nov. 19, 2009)) at 17 ("In view of the widespread criticism of the performance of the [credit rating agencies] before and during the credit crisis, it is surprising that we still lack consensus about how they should be reformed.").

[228] Exh. NRC000044, at 4-5.

[229] *Id.* at 4. "Time horizon" refers to the fact that "ratings are intended to be 'through the cycle' indicators — based on hard data and subject to appeal processes — that strike a balance between short-term accuracy and longer-term stability." *Id.* In other words, ratings are not necessarily intended to capture short-term changes in companies' financial positions.

unanimously approved a number of rulemaking actions to strengthen oversight of credit rating agencies.[230]

60. In April 2009, the European Union approved regulations establishing registration and supervision requirements for credit rating agencies.[231]

61. Also in April 2009, G-20 leaders reached an agreement stating that agencies whose ratings are used for regulatory purposes should be subject to oversight.[232]

62. The widespread concern in 2009 that a company's bond ratings might not accurately reflect its financial condition likewise raised the concern that, notwithstanding its bond rating, Honeywell might fall into financial distress during the period covered by its exemption request.

63. As Honeywell asserts, credit rating agencies "focus on long-term risk and the level and predictability of an issuer's future cash generation in relation to its commitments to repay debtholders." This means, however, that bond ratings may not capture downward trends that the rating agencies perceive to be short-term, even where the agencies are aware of those trends.[233]

64. Overall, among companies that Standard & Poor's rated as having investment grade bonds, fourteen defaulted in 2008, and another eleven defaulted in 2009.[234]

65. Likewise, among companies that Moody's rated as having investment-grade bonds, fourteen defaulted in 2008, and another eleven defaulted in 2009.[235]

66. In contrast, there were only two investment-grade defaults for Moody's and five for Standard and Poor's over the entire period 2003-2007.[236]

67. If a licensee's bond rating were to drop significantly in a short period of time, the licensee could have difficulty meeting the requirement in Appendix C, § II.C that it establish alternate financial assurance within 120 days after notifying the NRC of its downgrade.[237]

---

[230] Exh. NRC000057 (Press Release, U.S. Securities and Exchange Commission, SEC Votes on Measures to Further Strengthen Oversight of Credit Rating Agencies (Sept. 17, 2009)); Exh. NRC000058 (Fact Sheet, U.S. Securities and Exchange Commission, Strengthening Oversight of Credit Rating Agencies Open Meeting of the Securities and Exchange Commission (Sept. 17, 2009)).

[231] Exh. NRC000044, at 5.

[232] *Id.*

[233] Honeywell Initial Statement of Position at 37; Exh. HNY000001, at 37-39; Exh. NRC000053, at 7-8, 14-15, 16.

[234] Exh. HNY000030, at 9, tbl. 4; Exh. HNY000031 (Standard & Poor's — 2009 Annual Global Corporate Default Study and Rating Transitions) at 1-2, tbl. 1.

[235] Exh. HNY000026 (Moody's Default and Recovery Rates of Corporate Bond Issuers, 1920-2010) at 15.

[236] Exh. HNY000026, at 15; Exh. HNY000031, at 1-2, tbl. 1.

[237] Exh. NRC000053, at 8-9, 19.

68. Obtaining alternate financial assurance in a timely manner could be difficult during a period when there is a sudden tightening of loan conditions, as occurred in 2008 and 2009.[238] This would give rise to the risk that for some period of time a licensee could be unable to provide financial assurance through any NRC-approved method.[239]

69. Honeywell's tangible net worth when it requested the 2009 exemption was negative $5.3 billion. This was a decline of $3.8 billion from when Honeywell submitted its 2008 exemption request.[240]

70. Because of this decline in tangible net worth, for 2009 Honeywell would have needed to rely on significantly more goodwill to meet the alternative 10:1 ratio that the NRC Staff had previously approved.

71. Whereas Honeywell needed $3.7 billion in goodwill to meet this alternative financial test in 2008, for 2009 that amount would have been $6.8 billion. This was an increase of $3.1 billion.[241]

72. Compared to tangible assets, and even compared to certain other intangible assets, in certain circumstances goodwill may be relatively illiquid, and difficult to convert promptly into cash.

73. The rights to a patent, copyright, or franchise can be identified separately and bought or sold. Goodwill, on the other hand, is inseparable from a business and is transferable only as an inseparable intangible asset of an enterprise.[242]

74. To convert goodwill into cash, a company like Honeywell would have to negotiate and execute the sale of an entire business or business line.[243]

75. Selling a business or business line can involve numerous steps. These steps can include solicitations of interest, the execution of confidentiality agreements, analyses of business plans and staff qualifications, appraisals, negotiations, inspections of financial and accounting records, reviews of procedures, the drafting and execution of contracts, and other actions.[244]

76. The process of selling an entire business is often much more complicated and more time-consuming than the sale of only tangible assets like buildings, vehicles, or equipment.[245]

---

[238] *Id.*

[239] *Id.*

[240] Exh. NRC000018 (NRC Staff Table, Honeywell Financial Data Relied on in Exemption Requests (Sept. 15, 2011)).

[241] *Id.*; Exh. NRC000021 (NRC Staff Chart, Tangible Net Worth Shortfall to Meet 10-to-1 Test of 10 CFR 30, Appendix C (Sept. 15, 2011)).

[242] Exh. NRC000023 (Generally Accepted Accounting Principles Guide § 23.04).

[243] Exh. NRC000001, at 15-17; Exh. NRC000053, at 18-19.

[244] Exh. NRC000053, at 18-19.

[245] *Id.*

77. Another factor affecting the liquidity of goodwill is encumbrances related to corporate indebtedness. In its post-hearing response to the Board's questions, Honeywell stated that its "$7,117 million of senior unsecured public debentures are governed by bond indentures that restrict Honeywell's ability to mortgage principal manufacturing properties located within the U.S. or to pledge the shares of the capital stock of any subsidiary owing such properties. . . ."[246] Accordingly, to that degree Honeywell's indebtedness encumbers or restricts its goodwill.

78. If Honeywell cannot mortgage certain properties, it cannot raise funds from loans against, or sale of, those properties without permission of the bondholders, and the goodwill associated with such properties is encumbered. Similarly, if Honeywell is unable to pledge the shares of a subsidiary owning certain properties, this restricts the sale of, or borrowing against, those shares and thereby makes difficult or impossible using the goodwill associated with the subsidiary as a foundation for financing or assuring decommissioning funding.

79. In 2009, Honeywell would have needed to rely on significantly more goodwill — $3.1 billion more — to meet the conditions of its prior exemptions. This increased the possibility that, if Honeywell fell into financial distress and had to begin decommissioning the MTW facility, it would have needed to convert goodwill into cash to generate decommissioning funding.

80. To support its 2009 exemption request, Honeywell also had to devote a much higher percentage of its goodwill toward meeting the 10:1 alternative net worth test that the NRC Staff had previously approved. In 2007, Honeywell needed only 7% of its goodwill to meet this requirement.

81. By 2008 the percentage of Honeywell's goodwill needed to meet the alternative financial test had increased to 40%.

82. For 2009, Honeywell would have needed 67% of its goodwill to meet the alternative financial test. This was a 67% increase over 2008, and an 857% increase over 2007.[247]

83. For 2009, to meet the alternative financial test, Honeywell would have been both increasingly relying on assets that might not be readily available to fund decommissioning activities and relying on a much greater share of those assets to provide financial assurance.[248]

84. Honeywell's reliance on such a high percentage of its goodwill to satisfy the 10:1 ratio in 2009 raised a concern regarding the possibility of goodwill impairment. Impairment occurs when the fair market value of goodwill is less than its stated value.[249]

---

[246] Exh. HNY000065, at 1-2.

[247] Exh. NRC000018; *see also* NRC000022 (NRC Staff Chart, Percentage of Honeywell's Total Goodwill Relied on to Meet Tangible Net Worth Test (September 15, 2011)).

[248] Exh. NRC000001, at 17-19; Exh. NRC000018; Exh. NRC000022.

[249] Tr. at 84 (Dec. 15, 2011 Evidentiary Hearing); Exh. NRC000001, at 17-18.

85. If Honeywell were to experience goodwill impairment that was not promptly recognized, it could have fallen out of compliance with the conditions of its exemption without the NRC or even Honeywell itself becoming aware of the noncompliance. This risk was greater in 2009 than in prior years because of Honeywell's increased reliance on goodwill to meet the conditions of its exemption.[250]

86. In 2009, goodwill impairment of approximately $3.36 billion would have placed Honeywell out of compliance with the condition of its exemption allowing it to use goodwill to meet the 10:1 net worth requirement in Appendix C. By comparison, in 2008 it would have taken goodwill impairment of approximately $5.48 billion for Honeywell to fall out of compliance with that condition.[251]

87. In June 2009, KPMG, a major international auditing firm, cautioned that goodwill valuation "is not an exact science and that it has never been more difficult than it is now to ascribe a value to an entity."[252] Over the time period in question, the goodwill reported on Honeywell's balance sheets associated with acquisitions remained at the value originally booked. KPMG, however, reported that in the United States "goodwill impairment in 2008 more than doubled to US$339.6 billion, with the median charge going up ten-fold. . . . [and] [t]he number of companies in the U.S. study that had impairment in 2008 increased to nearly 20 percent; up almost three-fold from the previous year."[253] KPMG stated that "the situation could actually worsen still further during the remainder of 2009."[254]

88. It would not have been unprecedented for a large company like Honeywell to experience goodwill impairment of over $3 billion, the amount that would have caused Honeywell to fall out of compliance with the conditions of its exemption.[255]

89. At the end of 2008, the parent company of Western Nuclear, an NRC licensee that is covered by a parent company guarantee, had taken a goodwill impairment charge of almost $6 billion.[256]

---

[250] Tr. at 86 (Dec. 15, 2011 Evidentiary Hearing); Exh. NRC000001, at 17-19; Exh. NRC000053, at 23-24.

[251] These amounts are obtained by taking Honeywell's goodwill for each year and subtracting its tangible-net-worth shortfall. On Exhibit NRC000018, this involves subtracting the first row in the bottom table from the second row in the top table.

[252] Exh. NRC000040 (Press Release, KPMG, Goodwill Impairment in 2009 (June 12, 2009)); *see also* Tr. at 88 (Dec. 15, 2011 Evidentiary Hearing); Exh. HNY000033 (Statement of Financial Accounting Standards No. 142, Goodwill and Other Intangible Assets (June 2001)) at 15.

[253] Exh. NRC000040.

[254] *Id.*

[255] Tr. at 92-93 (Dec. 15, 2011 Evidentiary Hearing).

[256] Exh. NRC000036 (U.S. Securities and Exchange Commission, Freeport-McMoRan Copper & Gold Inc. Form 10-K Annual Report For Fiscal Year Ending Dec. 31, 2008) at 141.

90. In March 2002, Tyco International had taken a goodwill impairment charge of over $6 billion, a charge that reflected nearly all of the goodwill associated with Tyco Capital.[257]

91. If Honeywell were to fall into financial distress, it is uncertain whether its free cash flow would remain at a level necessary to fund decommissioning activities.[258]

92. Free cash flow could be diverted for purposes other than decommissioning and, if Honeywell were in financial distress, the NRC's claim on Honeywell's free cash flow might be subordinated to the claims of other stakeholders.

93. In the event of Honeywell's financial distress or bankruptcy, the use of any other permissible methods for assuring availability of decommissioning funds (use of dedicated set-aside funds or recourse to a letter of credit or other surety mechanism) provides a measure of security of the payment of decommissioning funding that is not provided through an assumption that funding obligations can be satisfied out of free cash flow.

94. As with free cash flow, there could be no guarantee Honeywell's market capitalization would remain the same if the company were to fall into financial distress. To the contrary, the factors that might cause Honeywell to enter financial distress would likely be reflected in declining market capitalization.

95. Although Honeywell contends that its revolving credit facility might be used to pay decommissioning costs, Honeywell's access to funds under its credit facility could be terminated if Honeywell were to fall into financial distress.[259]

96. Requiring Honeywell to incur the cost of complying with 10 C.F.R. § 40.36(e) is not unreasonable. No other NRC licensee has been granted an exemption allowing it to use goodwill to meet the financial test for either the self-guarantee method (Appendix C) or the parent guarantee method (Appendix A).[260]

VI. CONCLUSIONS OF LAW

1. Honeywell's request for an exemption from the requirements of 10 C.F.R. § 40.36 and 10 C.F.R. Part 30, Appendix C does not involve special circumstances and therefore must be denied as a matter of law. Specifically, Honeywell's

---

[257] Exh. NRC000051 (U.S. Securities and Exchange Commission, Tyco International Ltd. Amendment No. 2 on Form 10-K/A to Form 10-K Annual Report for Fiscal Year Ended September 30, 2002) at 94-95.

[258] Tr. at 83 (Dec. 15, 2011 Evidentiary Hearing); Exh. NRC000001, at 14-15; Exh. NRC000053, at 24.

[259] Exh. HNY000018 (Honeywell Form 10-K, Annual Report for Fiscal Year Ended Dec. 31, 2008) at 76-77.

[260] Exh. NRC000001, at 20-21.

request involves neither circumstances that are expected to be only temporary nor circumstances that the Commission failed to consider, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived. This is so regardless of whether the Board considers Honeywell's circumstances as of 2009 or as of the present time.

2. Honeywell's 2009 request for an exemption fails to satisfy the requirements of 10 C.F.R. § 40.14. Because granting the requested exemption could adversely affect the likelihood that adequate funds would be available to decommission Honeywell's MTW uranium conversion facility, granting the exemption would potentially endanger life or property. Thus, granting Honeywell's requested exemption would not be in the public interest.

VII. CONCLUSION

Honeywell's request for an exemption from the requirements of 10 C.F.R. § 40.36 and 10 C.F.R. Part 30, Appendix C is DENIED.

In accordance with 10 C.F.R. § 2.1210, this Initial Decision will constitute final action of the Commission on Honeywell's 2009 exemption request forty (40) days after its issuance (i.e., on April 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.[261] 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.[262] A party who seeks judicial review of this decision must first seek Commission review, unless otherwise authorized by law.[263]

---

[261] 10 C.F.R. § 2.1210(a); 10 C.F.R. § 2.1212; 10 C.F.R. § 2.341(b).

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

[263] 10 C.F.R. § 2.1212.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Paul S. Ryerson, Chairman
ADMINISTRATIVE JUDGE

E. Roy Hawkens
ADMINISTRATIVE JUDGE

Paul B. Abramson
ADMINISTRATIVE JUDGE

Rockville, Maryland
February 29, 2012

Additional Statement of Judge Abramson

I concur with my colleagues in concluding that Honeywell has failed to demonstrate that it is entitled to an exemption from the requirement that it have a positive tangible net worth in order to be permitted to self-guaranty its decommissioning obligations. However, for me the decision is much simpler than we have explained in the Initial Decision to which this Additional Statement is appended.

The governing regulation provides, as we have noted, four permissible methods for providing adequate assurances that there will be sufficient funds for satisfaction of decommissioning obligations as and when needed. With one narrow exception, all of those permissible methods provide either set-aside dedicated funds that are outside the reach of Honeywell and its creditors, or a guaranty by a third party to fulfill the obligations of Honeywell should it fail to meet them itself. In the latter situation, the third party's obligations run directly to the NRC and are thereby similarly free of the reach of any of Honeywell's creditors. The NRC has agreed to accept the credit risk of Honeywell alone only under the very explicitly crafted conditions of 10 C.F.R. Part 30, Appendix C, and the provision from which Honeywell seeks an exception requires it to have a specified minimum tangible net worth. As we discussed at length in the Initial Decision, Honeywell seeks to modify that provision to permit it to include certain intangible assets; i.e., it seeks to amend that provision to enable it to use the sum of its tangible net worth and that portion of its intangible assets identified as goodwill in place of tangible net worth alone.

The Commission has quite explicitly crafted this provision for a specific purpose aimed at protecting the public from bearing the costs of decommissioning; to create a credit situation that gives the NRC, and therefore all of our stakeholders, confidence that licensees can fulfill their decommissioning financial obligations all by themselves.[1] The Commission has, as we noted, made perfectly clear that this provision is fundamental to its willingness to accept the credit risk of solely the licensee (when it accepts the self-guarantee of the licensee). It has reconsidered the necessity of the provision on several occasions, and has consistently retained some requirement for at least a minimally positive tangible net worth.

From my perspective, there is simply no rationale for a grant of the relief requested by Honeywell, nor should, in my view, the Staff have granted the requested modification of this particular requirement on any of the times when Honeywell had a negative tangible net worth, with the possible exception of the

[1] A good example of the importance of this matter to the Commission is evident in the fact that during the financial crisis referred to in the Initial Decision, the Commission required those licensees of nuclear power plants who found that the value of assets in their set-aside decommissioning funds had decreased during that financial downturn to promptly "top up" those funds to the required levels.

first instance when the situation might indeed have been temporary. The modification previously accepted, and the proposed modification currently sought by Honeywell, both so modify the requirement as to gut its significance. Permission to include intangible assets of any sort is plainly outside the contemplation of the current regulation, and not only does goodwill represent a large portion of Honeywell's assets but it is not readily convertible into cash to fulfill the obligations at issue. Permitting this modification does not serve the public interest, instead substantially deviating from the financial risk profile established in the requirement.[2] For this reason alone, I would not grant the requested exemption.

Further, Honeywell asks that we accept, in addition to consideration of its goodwill toward the 10:1 ratio, its financial condition, as evidenced by its bond ratings, its free cash, and availability of potential drawings on its revolver, as sufficient financial backstop for its obligations. As we noted in the Initial Decision, the rating of Honeywell's bonds was at the minimum acceptable level and was subject to some uncertainty in the time frame in question because of the possibility of a rapid change in financial stability as evidenced by occurrences affecting other similarly situated corporations. And, as our findings implied, so was the availability of either free cash or drawing on the Honeywell revolver to satisfy those obligations. For these reasons, I do not find that Honeywell's financial condition was such that it would be appropriate for the agency to directly accept the credit risk of Honeywell during that period when the tangible net worth test was also not met.

Nonetheless, I agree that there are undoubtedly other methods by which Honeywell can avoid the cost to which it objects of purchasing and supplying to the NRC a letter of credit or other surety. Among them are a myriad of collateralized first priority security arrangements that would put the NRC in substantively similar secure financial situations as it would be through use of any of the other permissible methods of assuring adequate decommissioning funding.

---

[2] I note that the evaluations assigned to goodwill on Honeywell's balance sheets was established at the acquisition of the enterprises with which it was associated, and that amount is, although consistent with GAAP, simply the excess of the purchase price of each enterprise over the valuation of tangible and identifiable intangible (such as patents) assets less the assumed liabilities. As we indicated in the Initial Decision, goodwill can only be converted into cash available for payment of decommissioning obligations in connection with a sale of the enterprise with which it was associated — an activity that is complex and time-consuming and as to which there is no guarantee of receipt of sums represented by the booked valuation of goodwill. Therefore, I do not find it to be a reliable measure of Honeywell's ability to satisfy its decommissioning obligations in a timely manner, and I do not believe it appropriate, despite subsequent approval by the Commission, that the 10:1 ratio requirement be modified to be a computation of the ratio of the sum of tangible net assets plus goodwill to the decommissioning obligations. It is notable that even the Commission's new rule does not eliminate a requirement for some minimal tangible net worth — although the revised test bears no relationship to decommissioning funding needs.

Properly crafted, such collateralized obligations could be free of the reach of Honeywell's other creditors and accessible by the NRC as and when needed to satisfy the relevant decommissioning obligations. If, as Honeywell has testified, its assets are (except as we noted above) in essence unencumbered by its bond indentures and its revolving credit facility, then dedication of such collateral as is sufficient to provide adequate assurances should be a straightforward matter.

Cite as 75 NRC 301 (2012) **CLI-12-5**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of **Docket No. 50-443-LR**

NEXTERA ENERGY SEABROOK, LLC
(Seabrook Station, Unit 1) **March 8, 2012**

LICENSE RENEWAL PROCEEDINGS

The license renewal safety review — and any associated license renewal adjudicatory proceeding — focuses on the detrimental effects of aging posed by long-term reactor operation. *New Jersey Environmental Federation v. NRC,* 645 F.3d 220, 224 (3d Cir. 2011).

LICENSE RENEWAL PROCEEDINGS

LICENSE RENEWAL APPLICATIONS

Longstanding Staff guidance directly addresses the classification of electrical transformers for the purposes of license renewal, and has found them to be "active" components. Any degradation of the transformer's ability to perform its intended function is readily monitorable by a change in the electrical performance of the transformer and the associated circuits. Therefore, transformers are not subject to an aging management review during a license renewal proceeding and are outside the scope of license renewal.

LICENSE RENEWAL PROCEEDINGS

RULES OF PRACTICE: CONTENTION ADMISSIBILITY

As in any proceeding, the Board makes threshold decisions on materiality on a case-by-case basis, given the nature of the issue and the record presented before the Board. An application that complies with existing guidance may be challenged, provided that contention admissibility requirements are met.

NATIONAL ENVIRONMENTAL POLICY ACT: ALTERNATIVES

For wind power to merit detailed consideration as an alternative to renewing the license for a nuclear power plant, that alternative should be capable of providing "technically feasible and commercially viable" baseload power during the renewal period.

MEMORANDUM AND ORDER

This proceeding stems from the May 25, 2010 application of NextEra Energy Seabrook, LLC (NextEra) to renew its operating license for Seabrook Station, Unit 1 (Seabrook).[1] Beyond Nuclear, the Seacoast Anti-Pollution League, and the New Hampshire Sierra Club (collectively, Beyond Nuclear) filed a joint petition to intervene.[2] Separately, Friends of the Coast and the New England Coalition (collectively, Friends/NEC) filed their own joint petition.[3]

On February 15, 2011, the Board issued LBP-11-2, finding that all petitioners had demonstrated standing, and admitting one contention in part and three more in

[1] *See generally* Seabrook Station License Renewal Application (May 25, 2010) (Vol. I: ADAMS Accession No. ML101590098; Vol. II: ML101590101; Vol. III: ML101590091) (Application).

[2] Beyond Nuclear, Seacoast Anti-Pollution League and New Hamps[h]ire Sierra Club Request for Public Hearing and Petition to Intervene (Oct. 20, 2010) (Beyond Nuclear Petition).

[3] Friends of the Coast and New England Coalition Petition for Leave to Intervene, Request for Hearing, and Admission of Contentions (dated Oct. 20, 2010, but filed Oct. 21, 2010) (Friends/NEC Petition). Friends/NEC supported their petition with a Declaration by Mr. Paul Blanch. Declaration of Paul Blanch (Oct. 18, 2010) (Blanch Declaration), appended as Attachment 7 to Friends/NEC Petition (ADAMS Accession No. ML102940557).

their entirety.[4] NextEra has appealed LBP-11-2.[5] As discussed below, we affirm in part and reverse in part LBP-11-2.

I. REGULATORY BACKGROUND

As the U.S. Court of Appeals for the Third Circuit recognized, the scope of our license renewal process is limited.[6] The license renewal safety review — and any associated license renewal adjudicatory proceeding — focuses on the detrimental effects of aging posed by long-term reactor operation.[7]

Part 54 of our regulations sets forth the safety review standards for license renewal. Section 54.4 defines the scope of the review, which focuses on those systems, structures, and components (SSCs) that (1) perform the safety functions outlined in section 54.4(a)(1)(i)-(iii); (2) whose failure could prevent accomplishment of the safety-related functions outlined in section 54.4(a)(1)(i)-(iii); or (3) are relied on to demonstrate compliance with NRC regulations for fire protection, environmental qualification, pressurized thermal shock, anticipated transients without scram, or station blackout.[8] License renewal applicants must conduct aging management reviews of any SSC that performs one of these intended functions if the SSC is both "passive" (that is, it performs its intended function(s)

---

[4] LBP-11-2, 73 NRC 28 (2011) (at 40-44 (standing) and 46-78 (contentions)). In addition, the Board "decline[d] to consider the revised declaration of Paul Blanch and other materials submitted by Friends/NEC on December 6, 2010," and therefore denied as moot Friends/NEC's motion for leave to reply to NextEra's and the Staff's objections to the revised declaration. LBP-11-2, 73 NRC at 79, referring to both Supplement to Friends of the Coast and New England Coalition Petition for Leave to Intervene, Request for Hearing, and Admission of Contentions: Errors and Corrections and New Information (Dec. 6, 2010), and Motion by Friends of the Coast and New England Coalition for Leave to Reply to NRC Staff Objections; NextEra Energy Seabrook, LLC. Response in Opposition to the Friends of the Coast and New England Coalition Supplement to Its Petition (Dec. 20, 2010). The Board's specific ruling with regard to the revised Blanch Declaration and other materials is not now before us on appeal.

[5] NextEra Energy Seabrook, LLC's Notice of Appeal of LBP-11-02 as to the New England Coalition and Friends of the Coast (Feb. 25, 2011); Brief in Support of NextEra Energy Seabrook, LLC's Appeal of LBP-11-02 as to the New England Coalition and Friends of the Coast (Feb. 25, 2011) (NextEra Appeal I); NextEra Energy Seabrook, LLC's Notice of Appeal of LBP-11-02 as to Beyond Nuclear, the Seacoast Anti-Pollution League, and the Sierra Club of New Hampshire (Feb. 25, 2011); Brief in Support of NextEra Energy Seabrook, LLC's Appeal of LBP-11-02 as to Beyond Nuclear, the Seacoast Anti-Pollution League, and the Sierra Club of New Hampshire (Feb. 25, 2011) (NextEra Appeal II).

[6] *See New Jersey Environmental Federation v. NRC,* 645 F.3d 220, 224 (3d Cir. 2011).

[7] *See id.*

[8] 10 C.F.R. § 54.4(a).

"without moving parts or without a change in configuration or properties"[9]) and "long-lived" (that is, it is "not subject to replacement based on a qualified life or specified time period"[10]). Applicants must demonstrate "reasonable assurance"[11] that "the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB [current licensing basis] for the period of extended operation."[12]

In reviewing license renewal applications, the NRC is guided primarily by two documents — the Generic Aging Lessons Learned (GALL) Report and the License Renewal Standard Review Plan.[13] If the NRC concludes that an aging management program (AMP) is consistent with the GALL Report, then it accepts the applicant's commitment to implement that AMP, finding the commitment itself to be an adequate demonstration of reasonable assurance under section 54.29(a).[14]

License renewal applications are also subject to an environmental review under the National Environmental Policy Act (NEPA)[15] and our Part 51 regu-

---

[9] 10 C.F.R. § 54.21(a)(1)(i); *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 454 (2010); *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 466 (2008).

[10] 10 C.F.R. § 54.21(a)(1)(ii); *Oyster Creek,* CLI-08-23, 68 NRC at 466. *See* 10 C.F.R. §§ 54.21(a)(3), 54.29(a)(1). "[S]tructures and components associated only with active functions can be generically excluded from a license renewal aging management review. Functional degradation resulting from the effects of aging on active functions is more readily determinable, and existing programs and requirements are expected to directly detect the effects of aging." Final Rule: "Nuclear Power Plant License Renewal; Revisions," 60 Fed. Reg. 22,461, 22,472 (May 8, 1995) (1995 License Renewal Rule). *See also Pilgrim,* CLI-10-14, 71 NRC at 454 ("Existing regulatory programs . . . can be expected to 'directly detect the effects of aging' on active functions" (quoting 1995 License Renewal Rule, 60 Fed. Reg. at 22,472)); *Oyster Creek,* CLI-08-23, 68 NRC at 466-67.

[11] 10 C.F.R. § 54.29(a).

[12] 10 C.F.R. § 54.21(a)(3). *See also* 10 C.F.R. § 54.4(b) (regarding the limited scope of the intended functions). The "current licensing basis" is "the set of NRC requirements (including regulations, orders, technical specifications, and license conditions) applicable to a specific plant, and includes the licensee's written, docketed commitments for ensuring compliance with applicable NRC requirements and the plant-specific design basis." *Pilgrim,* CLI-10-14, 71 NRC at 453-54 (footnote omitted).

[13] "Generic Aging Lessons Learned (GALL) Report," NUREG-1801, Rev. 1 (Sept. 2005), Vol. 1 (ADAMS Accession No. ML052770419) & Vol. 2 (ADAMS Accession No. ML052110006) (GALL Report); "Generic Aging Lessons Learned (GALL) Report — Final Report," NUREG-1801, Rev. 2 (Dec. 2010) (ADAMS Accession No. ML103490041) (GALL Report Rev. 2); "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," NUREG-1801, Rev. 1 (Sept. 2005) (ADAMS Accession No. ML052770566) (Standard Review Plan).

[14] *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 36 (2010); *Oyster Creek,* CLI-08-23, 68 NRC at 467-68.

[15] 42 U.S.C. § 4332(2)(C)(i), (iii) (requiring an agency to prepare a detailed statement describing the reasonably foreseeable environmental impacts both of the proposed federal action and of any feasible alternative(s) to the proposed federal action).

lations implementing NEPA.[16] The Staff's review, and ultimately our own, are guided largely by a Generic Environmental Impact Statement (GEIS) that focuses specifically on license renewal applications.[17]

II. PROCEDURAL BACKGROUND

In its petition to intervene, Beyond Nuclear proffered one environmental contention.[18] And in their petition to intervene, Friends/NEC proffered four contentions, one of which was divided into six discrete parts.[19] NextEra and the NRC Staff submitted answers in which they argued that all contentions were inadmissible.[20] Friends/NEC and Beyond Nuclear each filed replies opposing the Staff's and NextEra's Answers.[21] The Board held oral argument on the petitions. Subsequently, in LBP-11-2, the Board admitted Beyond Nuclear's contention,

---

[16] *See generally* 10 C.F.R. Part 51.

[17] "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," NUREG-1437, Vol. 1 (May 1996) (ADAMS Accession No. ML040690705), & Vol. 2 (Sept. 2005) (ADAMS Accession No. ML052780376) (License Renewal GEIS). The GEIS sets forth the technical basis for our 1996 revisions to the Part 51 rules, as they relate to power reactor license renewal. *See* Final Rule: "Environmental Review for Renewal of Nuclear Power Plant Operating Licenses," 61 Fed. Reg. 66,537, 66,537 (Dec. 18, 1996) ("The amendments [to Part 51] are based on the analyses reported in NUREG-1437"); License Renewal GEIS, Vol. 1, § 1.1, at 1-1.

[18] Beyond Nuclear Petition at 6-49.

[19] Friends/NEC Petition at 10-79.

[20] NextEra Energy Seabrook, LLC's Answer Opposing the Petition to Intervene and Request for Hearing of Beyond Nuclear, Seacoast Anti-Pollution League, and New Hampshire Sierra Club (Nov. 15, 2010) at 16-36 (NextEra Answer to Beyond Nuclear Petition); NextEra Energy Seabrook, LLC's Answer Opposing the Petition to Intervene and Request for Hearing of Friends of the Coast and the New England Coalition (Nov. 15, 2010) at 24-105 (NextEra Answer to Friends/NEC Petition); NRC Staff's Answer to Petitions to Intervene and Requests for Hearing Filed by (1) Friends of the Coast and New England Coalition and (2) Beyond Nuclear, Seacoast Anti-Pollution League, and New Hampshire Sierra Club (Nov. 15, 2010) at 18-108 (Staff Answer to Petitions). Additionally, NextEra contended that Friends/NEC had failed to demonstrate standing. NextEra Answer to Friends/NEC Petition at 4-6.

[21] Combined Reply of Joint Petitioners (Beyond Nuclear, Seacoast Anti-Pollution League and New Hampshire Sierra Club) to Answers of NextEra Energy Seabrook, LLC and the United States Nuclear Regulatory Commission (Nov. 22, 2010) (Beyond Nuclear Reply); [Original] Friends of the Coast and New England Coalition Reply to NextEra and NRC Staff Answers to Friends of the Coast and New England Coalition Petition for Leave to Intervene, Request for Hearing, and Admission of Contentions (Nov. 22, 2010); [Revised] Friends of the Coast and New England Coalition Reply to NextEra and NRC Staff Answers to Friends of the Coast and New England Coalition Petition for Leave to Intervene, Request for Hearing, and Admission of Contentions (dated Nov. 22, 2010; served Nov. 23, 2010) (Friends/NEC Reply).

as well as two contentions and portions of a third, proffered by Friends/NEC.[22] Separately, Friends/NEC filed a motion for reconsideration of those portions in LBP-11-2 where the Board had ruled against them.[23] The Board denied their motion for reconsideration shortly thereafter.[24]

On appeal, NextEra challenges all of the Board's contention admissibility rulings.[25] Both Friends/NEC and Beyond Nuclear oppose NextEra's appeal.[26]

III. DISCUSSION

A. Applicable Standards

A request for hearing or petition for leave to intervene must set forth with particularity the contentions sought to be raised. For each contention, the request or petition must:

> (i) Provide a specific statement of the issue of law or fact to be raised or controverted . . . ;
>
> (ii) Provide a brief explanation of the basis for the contention;
>
> (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
>
> (iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;

---

[22] Friends/NEC's remaining contentions were excluded and are not at issue here. LBP-11-2, 73 NRC at 79.

[23] Friends of the Coast and New England Coalition, Inc. Motion for Leave to File for Reconsideration of Memorandum and Order LBP-11-02 (Feb. 25, 2011). Under NRC practice, the filing of this motion tolled our consideration of the two appeals. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-1, 53 NRC 1, 3 (2001) ("When a petition for review is filed with the Commission at the same time as a motion for reconsideration is filed with the Board, the Commission will delay considering the petition for review until after the Board has ruled" (citation omitted)); *Commonwealth Edison Co.* (Byron Nuclear Power Station, Units 1 and 2), ALAB-659, 14 NRC 983, 985 (1981) ("It simply is not customary for an appeal to proceed through at least the briefing process while the trial tribunal has before it an authorized and timely-filed petition for reconsideration of the decision or order in question" (footnote omitted)).

[24] Order (Denying Extension Request and Denying Motion for Leave to File for Reconsideration) (Mar. 9, 2011) (unpublished).

[25] NextEra does not challenge the Board's rulings on standing.

[26] Petitioners' Beyond Nuclear, Seacoast Anti-Pollution League and New Hampshire Sierra Club Reply in Opposition to NextEra Seabrook, LLC's Appeal of LBP-11-02 (Mar. 7, 2011) (Beyond Nuclear Opposition to Appeal); Friends of the Coast and New England Coalition Answer and Opposition to NextEra Energy Seabrook, LLC's Notice of Appeal of LBP-11-02 (Mar. 10, 2011) (Friends/NEC Opposition to Appeal). The Secretary granted Friends/NEC a 3-day extension of time within which to file its opposition. *See* Order (SECY Mar. 9, 2011) (unpublished).

> (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue . . . together with references to the specific sources and documents on which the requestor/petitioner intends to rely . . . ; [and]
>
> (vi) . . . [P]rovide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact.[27]

As we have outlined in earlier decisions, the NRC in 1989 revised its rules to prevent the admission of contentions "based on little more than speculation."[28] The agency deliberately "rais[ed] the admission standards for contentions . . . to obviate serious hearing delays caused in the past by poorly defined or [poorly] supported contentions."[29] Prior to our 1989 rule revision, intervenors were able to trigger hearings after merely copying a contention from another proceeding, even though these "[a]dmitted intervenors often had negligible knowledge" of the issues "and, in fact, no direct case to present."[30] Although under our current rules intervenors of course may use the discovery process to develop a case once contentions are admitted, "contentions shall not be admitted if at the *outset* they are not described with reasonable specificity or are not supported by some alleged fact or facts *demonstrating* a genuine material dispute" with the applicant.[31] We properly "reserve our hearing process for genuine, material controversies between knowledgeable litigants."[32]

We generally defer to Board rulings on contention admissibility unless we find "an error of law or abuse of discretion."[33] With these points in mind, we turn to NextEra's appeals.

B. Analysis of the Board's Rulings on Contention Admissibility

1. Friends/NEC Contention 1

> The license renewal application for Seabrook Station fails to comply with the requirements of 10 C.F.R. §§ 54.21(a) and 54.29 because Applicant has not proposed an

---

[27] 10 C.F.R. § 2.309(f)(1).

[28] *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999).

[29] *Id.*

[30] *Id.*

[31] *Id.* at 335 (internal quotation and citation omitted) (emphasis added).

[32] *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 219 (2003) (footnote omitted).

[33] *See, e.g., South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-21, 72 NRC 197, 200 (2010) (citing *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 336 (2009)).

> adequate or sufficiently specific plan for aging management of non-environmentally qualified inaccessible electrical cables and wiring for which such aging management is required. Without an adequate plan for aging management of non-environmentally qualified inaccessible electrical cables[,] protection of public health and safety cannot be assured.[34]

a. Background

NextEra's original Application contained an AMP addressing non-environmentally qualified inaccessible medium-voltage electrical cables and wiring. On October 29, 2010, NextEra submitted a supplement to the Application[35] to bring the Application into conformity with Revision 2 of the GALL Report.[36] This supplement amended the "Non-EQ Inaccessible Medium-Voltage Cables Program," expanding its scope to include certain low-voltage cables as well.[37]

In submitting Contention 1, Friends/NEC argued generally that the original Application's aging management program for non-environmentally qualified inaccessible electrical cables and wiring fails to demonstrate that the effects of aging will be adequately managed, to the detriment of public health and safety.[38] Friends/NEC submitted the Declaration of Mr. Paul Blanch in support of this contention. Friends/NEC offered a number of bases for the contention.[39] The Board in LBP-11-2 appears to rely on five particular bases, discussed below, in admitting Contention 1.[40]

The Board found generally that the combination of Mr. Blanch's Declaration and the cited technical documents provided the required minimum support for Contention 1.[41] The Board, however, limited the admissibility ruling to "the adequacy of the . . . AMP . . . to manage age-related degradation of the cable

---

[34] Friends/NEC Petition at 10-11.

[35] The supplement included amendments to two AMPs. *See* Letter from Paul O. Freeman, Site Vice President of NextEra Energy Seabrook, LLC, to NRC Document Control Desk (Oct. 29, 2010) (Application Supplement) (ADAMS Accession No. ML103060022), and enclosures. *See, particularly, id.,* Enclosure 2 to SBK-L-10179, "Changes to the Seabrook Station License Renewal Application Associated with Inaccessible Medium-Voltage Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements Program."

[36] *See* NextEra Appeal I at 5 (citing GALL Report Rev. 2).

[37] *Id.* at 5 (citing Application Supplement, Encl. 2 to SBK-L-10179, at 2, 6).

[38] Friends/NEC Petition at 11-13.

[39] *See id.* The record reflects some confusion as to the number of bases supporting the contention. For example, Judge Kennedy suggests there are at least seventeen bases. *See* Transcript of Hearing for Oral Argument (Nov. 30, 2010) (Tr.) at 86-87.

[40] NextEra does the same on appeal. *See* NextEra Appeal I at 10-11.

[41] LBP-11-2, 73 NRC at 55, 56.

insulation due to exposure to a wet or moist environment."[42] It expressly excluded assertions of current violations or noncompliance with the current licensing basis.[43]

In reaching this result, the Board acknowledged that Contention 1 was a challenge to an AMP that was assertedly consistent with the GALL Report,[44] but concluded that such an assertion by an applicant does not immunize it against a challenge to the AMP.[45] It likewise stated, without further discussion, that Friends/NEC's factual assertions, at least to some extent, may have been rendered moot by NextEra's October 29, 2010, Supplement to its Application.[46]

b. Discussion

The scope of the contention as admitted by the Board is difficult to discern. The Board expressly mentions four bases and alludes to another[47] but does not explain specifically why any of them supports the contention's admission, or whether it included, or excluded, any particular basis in making its admissibility decision. Instead, the Board issued a blanket finding that Friends/NEC "provid[ed] a specific statement of the contention[,] . . . challeng[ed] the adequacy of the proposed AMP[,] . . . [and] provide[d] references to the appropriate sections of the Application and supporting documents including the Blanch [D]eclaration . . . ."[48] NextEra interprets the Board's decision to admit Contention 1 as relying on the five claims discussed by the Board. NextEra asserts on appeal that, under 10 C.F.R. § 2.309(f)(1)(v), each of these five bases lacked the required factual or expert support to support a litigable contention.[49] Similarly, we assume that any

---

[42] *Id.* at 56.

[43] *Id.*

[44] *Id.* at 55 (citing GALL Report, Vol. 1, at iii, 1).

[45] *Id.* (citing *Vermont Yankee,* CLI-10-17, 72 NRC at 36, 38).

[46] *Id.* at 56. NextEra submitted the Application Supplement on October 29, 2010, shortly after Friends/NEC had filed their October 20, 2010 Petition. Friends/NEC did not file subsequently a new or amended Contention 1.

[47] *Id.* at 53-54.

[48] *Id.* at 54 (footnote omitted).

[49] NextEra Appeal I at 6-10. Friends/NEC's answer does not respond to these points. *See* Friends/NEC Opposition to Appeal at 5. Rather, Friends/NEC present only one argument in rebuttal of NextEra's appeal of the admission of Contention 1. They assert that NextEra untimely raised, for the first time on appeal, the argument that the Application Supplement rendered much of Contention 1 moot. *Id.* But the record directly contradicts Friends/NEC's appellate argument. *See* NextEra Answer to Friends/NEC Petition at 25, 28 n.15, 41-42; Staff Answer to Petitions at 19-20, 24; Tr. at 172 (Mr. Shadis, acknowledging NextEra's argument that the Application Supplement rendered some of Friends/NEC's arguments moot).

basis not addressed by the Board was not relied upon in making its admissibility decision.[50]

Friends/NEC argue that the Application does not address certain specific recommendations made in two reports prepared by the Sandia and Brookhaven National Laboratories.[51] The Board appeared to accept the argument that NextEra purportedly failed to address specific recommendations made in the two reports. NextEra argues on appeal (as it did before the Board) that Friends/NEC failed to identify with the required "particularity" the specific recommendations that NextEra should have addressed in the Application.[52] Our review of the record confirms that Friends/NEC identified no specific recommendations from either of these two reports.

As NextEra observes, the Sandia Report is one of the sources that provided the technical basis for the relevant section of the GALL Report.[53] NextEra stated in its application that its AMP is consistent with the GALL Report, with no exceptions.[54] Moreover, NextEra stated that it considered the technical information and guidance from the Sandia Report in its original and its revised AMP.[55]

---

[50] For this reason, we need not reach NextEra's alternative arguments that the Board erred in failing to identify the specific bases on which it admitted the contention, or that several of the bases had been rendered moot by NextEra's submittal of a revised AMP. *See* NextEra Appeal I at 10-11 (referring to LBP-11-2, 73 NRC at 56). We remind our boards, however, of the need to specify each basis relied upon for admitting a contention. *Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 553-54 (2009). Contrary to the Board's statement (LBP-11-2, 73 NRC at 56), an admitted contention is defined by its bases. *Id. See generally Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 309 & n.103 (2010) ("The reach of a contention necessarily hinges upon its terms *coupled with* its stated bases.") (emphasis in original; footnote and internal quotation marks omitted).

[51] Friends/NEC Petition at 12, 15-16 (citing and quoting Ogden Environmental and Energy Services Co., Inc., "Aging Management Guideline for Commercial Nuclear Power Plants — Electrical Cable and Terminations," SAND96-0344, at 6.4 (Sept. 1996) (ADAMS Accession No. ML031140264) (Sandia Report), and citing M. Villaran & R. Lofaro, Brookhaven National Laboratory, "Essential Elements of an Electrical Cable Condition Monitoring Program," NUREG/CR-7000 (Jan. 2010) (ADAMS Accession No. ML100540050) (Brookhaven Report)).

[52] NextEra Appeal I at 6-7 (citing 10 C.F.R. § 2.309(f)(1)); NextEra Answer to Friends/NEC Petition at 34. *See also Oconee,* CLI-99-11, 49 NRC at 336-38 (mere general references to the Staff's Requests for Additional Information do not provide the requisite reasonable specificity).

[53] *See* GALL Report, Vol. 2, § XI.E3, "Inaccessible Medium-Voltage Cables not Subject to 10 CFR 50.49 Environmental Qualification Requirements," at XI E-9.

[54] *See* NextEra Appeal I at 7 (referring to Application, Vol. III, App. B, "Aging Management Programs," § B.2.1.34, at B-182); NextEra Answer to Friends/NEC Petition at 33 (same).

[55] NextEra Appeal I at 7 (citing Application, Vol. III, App. B, § B.2.1.34, at B-181); NextEra Answer to Friends/NEC Petition at 33 (same). *See also* Application Supplement, Encl. 2, at 7 (citing the Sandia Report as a source of guidance and technical information for the AMP).

As for the Brookhaven Report, Friends/NEC have identified no provision that contradicts or is not already addressed in the Application's relevant AMP.[56] Mr. Blanch takes issue with reliance on in-service systems testing conducted under normal operating conditions, to which the Brookhaven Report refers.[57] But the AMP in the original Application provided for "a proven test for detecting deterioration of the insulation system due to wetting, such as power factor, partial discharge, or polarization index, as described in EPRI TR-103834-P1-2, 'Effects of Moisture on the Life of Power Plant Cables' [(Aug. 1994)] or other testing that is state-of-the-art at the time the test is performed."[58] This language is nearly identical to the referenced GALL AMP.[59] Friends/NEC dispute none of this. Neither Mr. Blanch nor Friends/NEC address the testing plan specified in the AMP, much less explain why it is inadequate. NextEra further points out, and our record review confirms, that its Application Supplement to bring this AMP "in line with GALL Rev. 2 did not modify this description of the tests . . . ."[60] In short, we find that Friends/NEC's arguments above do not present a genuine issue of material fact or law, and that the Board therefore erred in admitting Contention 1 on this basis.

Friends/NEC also assert that "[t]here are no testing methods available to adequately assure that submerged or previously submerged cables would perform their functions for the duration of [a] postulated accident."[61] NextEra points to

---

[56] *See* NextEra Answer to Friends/NEC Petition at 30 (citing Application, Vol. III, App. B, § B.2.1.34).

[57] *See* Blanch Declaration at 9-10 & n.3.

[58] Application, Vol. III, App. B, § B.2.1.34, at B-181. *See also* NextEra Appeal I at 7-8 n.8; NextEra Answer to Friends/NEC Petition at 31; Staff Answer to Petitions at 23.

[59] *See* GALL Report, Vol. 2, § XI.E3, at XI E-7. This section of the GALL Report was revised in 2010. The revision expanded the reference to "wetting" so that it now includes both "wetting" and "submergence," removed the cross-reference to EPRI TR-103834-P1-2, replaced it with a non-exclusive list of specific "proven test[s]," and explained the purpose of those tests. *See* GALL Report Rev. 2, § XI.E3, at XI E3-1. *See also* NextEra Appeal I at 7-8 n.8 (the AMP "does not rely on the in-service systems testing to which Mr. Blanch refers but instead requires a 'proven test' that will 'provide an indication of the condition of the conductor insulation'") (quoting Application, Vol. III, App. B, § B.2.1.34, at B-181, and citing GALL Report, Vol. 2, § XI.E3, at XI E-7).

[60] NextEra Appeal I at 8 (citing Application Supplement, Encl. 2, at 2, 5). The revision in the supplement did, however, increase testing frequency.

[61] Friends/NEC Petition at 14. *See also* Blanch Declaration at 9-11. In LBP-11-2, the Board described this basis (73 NRC at 54) but did not discuss it. NextEra correctly points out that the Board mischaracterized this basis in its decision. NextEra Appeal I at 7. *Compare* LBP-11-2, 73 NRC at 53-54 (stating that Friends/NEC assert that the AMP for non-environmentally qualified inaccessible cables and wiring, among other things, does not "identify testing methods that would adequately assure that submerged or previously submerged cables will perform their functions for the duration of a postulated accident").

the absence of support for this basis, even in the Blanch Declaration.[62] Our review of the Declaration and the Petition substantiates NextEra's assertion, which Friends/NEC do not challenge on appeal. Moreover, Basis 2 appears to be a variation on Friends/NEC's argument in Basis 1 regarding the Brookhaven Report. To the extent that it is, we reject it on the same grounds, specifically that such testing methods do exist and are referenced in both the GALL Report's model AMP and NextEra's AMP.[63] In short, we find that the Board erred in finding that this basis supports the admission of Contention 1.

Next, Friends/NEC argue that the Application fails to provide measures to detect cable degradation prior to failure, particularly techniques for measuring and trending the condition of cable insulation.[64] NextEra asserts on appeal that, on this point, Friends/NEC fail to address the relevant AMP in the Application.[65] We agree. The Application's relevant AMP provides the detection measures that Friends/NEC claim are missing.[66] Friends/NEC have an "ironclad obligation" to review the Application thoroughly and to base their challenges on its contents.[67] Friends/NEC did not satisfy this obligation here.

It bears mention that Friends/NEC take this basis from the NRC's Generic Letter 2007-01.[68] The generic letter informed licensees that inaccessible or underground cables susceptible to moisture-induced failures, particularly prior to the end of their qualified lives, could result in certain equipment failures. Such failures could either disable accident mitigation systems in operating power reactors or cause plant transients in those reactors. The GL states that licensees can assess the condition of cable insulation "with reasonable confidence" using one or more of several testing techniques: "partial discharge testing, time domain reflectometry, dissipation factor testing, and very low frequency AC testing."[69]

---

[62] NextEra Appeal I at 8; NextEra Answer to Friends/NEC Petition at 28.

[63] *See* text associated with notes 57-60, *supra.*

[64] Friends/NEC Petition at 16-17 (quoting NRC Generic Letter (GL) 2007-01, "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients" (Feb. 7, 2007) (GL 2007-01) (ADAMS Accession No. ML070360665)). In LBP-11-2, the Board described this basis (73 NRC at 54) but did not discuss it.

[65] NextEra Appeal I at 8 (citing both the original and revised AMP for non-environmentally-qualified inaccessible electrical cables).

[66] Basis 3 also appears to be a variant of Bases 1 and 2. If so, it fails on the same grounds (discussed *supra*).

[67] *See, e.g., Shaw AREVA MOX Services, LLC* (Mixed Oxide Fuel Fabrication Facility), CLI-09-2, 69 NRC 55, 65 n.47 (2009) (referring to intervenors' "ironclad obligation to . . . diligently search publicly available NRC or Applicant documents for information relevant to their [c]ontention" (internal quotation marks and citation omitted)).

[68] Petition at 16-17.

[69] GL 2007-01 at 4.

The Board appears to cite GL 2007-01 as support to litigate this issue in license renewal.[70] But GL 2007-01 provides no support for Friends/NEC's third basis. The GL sought information from operating license holders regarding the history of underground cable failures for cables within the scope of the maintenance rule, as well as information on inspection, testing, and monitoring programs to detect degradation in such cables.[71] The GL is not focused on license renewal and does not address aging management. It neither requests additional AMPs for cables nor recommends improvements to existing cable AMPs.[72] For these reasons, the Board erred in finding this basis to provide a justification for admitting Contention 1.

Friends/NEC next argue that the Application fails to identify the location and extent of Seabrook's non-environmentally qualified inaccessible cables.[73] In particular, Mr. Blanch challenged NextEra's explanation of its decision not to include "boundary drawings" in its Application, specifically taking issue with NextEra's conclusion in the Application that such drawings were unnecessary because "commodity grouping was used in the scoping process."[74] According to Mr. Blanch, "[c]haracterization of cables by commodity grouping is an acceptable practice *only* if the location where each cable type is used is also identified."[75] Mr. Blanch, however, offered no support for this assertion.

As NextEra argues on appeal,[76] the approach taken in the Application is consistent with the GALL Report, which provides that "[e]lectrical cables and their required terminations (i.e., connections) are typically reviewed as a single commodity."[77] Likewise, the Standard Review Plan provides that an applicant may group like structures into commodity groups, as long as the applicant pro-

---

[70] *See* LBP-11-2, 73 NRC at 54 n.149.

[71] GL 2007-01 at 4.

[72] *See id.* at 4-5 (requesting information from current operating licensees regarding the history of inaccessible or underground cable failures within the scope of the Maintenance Rule, and a description of inspection, testing, and monitoring programs for inaccessible or underground cables).

[73] Friends/NEC Petition at 12. In LBP-11-2, the Board described this basis but did not discuss it. *See* 73 NRC at 54.

[74] Blanch Declaration at 13 (quoting Application, Vol. I, § 2.1.2, at 2.1-7). A "boundary drawing" depicts mechanical piping and instrumentation diagrams. The Standard Review Plan for license renewal provides that a license renewal applicant may group like structures and components into "commodity groups." Standard Review Plan at 2.1-14 to 2.1-15, Table 2.1-2, "Specific Staff Guidance on Scoping." The basis for such a grouping "can be determined by such characteristics as similar function, similar design, similar materials of construction, similar aging management practices, or similar environments." *Id.* at 2.1-14, Table 2.1-2.

[75] Blanch Declaration at 13 (emphasis added).

[76] *See* NextEra Appeal I at 9.

[77] GALL Report, Vol. 2, § VI.A, "Equipment not Subject to 10 CFR 50.49 Environmental Qualification Requirements," at VI.A-1 (cited in NextEra Appeal I at 9). The identical language also appears in GALL Report Rev. 2, § VI.A, at VI.A-1.

vides the basis for the groups.[78] In its Application, NextEra offered the following explanation for its use of commodity grouping. As a general rule, NextEra focused upon the Seabrook plant's *systems and structures* when determining which ones meet "the requirements for inclusion in the scope of license renewal."[79] Once NextEra identified the relevant systems and structures (along with their intended functions), it identified the particular components that fell within the scope of license renewal.[80] However, it concluded that some components were more effectively evaluated "by component type, rather than by system or structure."[81] In those instances, NextEra instead employed an alternative approach — commodity grouping — to evaluate "[c]omponents constructed from similar materials, exposed to similar environments, and which perform similar intended functions."[82] Each commodity group was evaluated "as if it were a separate individual system," with the group's components "not associated with a specific system or structure during the component's evaluation" but rather "with their assigned commodity group."[83] NextEra evaluated all electrical components, including cables, using the "commodity grouping" approach.[84]

Neither Friends/NEC nor Mr. Blanch challenged this explanation, or explained why commodity grouping for cables in the Seabrook license renewal application was inappropriate, or offered a reason or other unmet need that would require us to mandate inclusion of the exact location of each cable in the Seabrook license renewal application. Consequently, we find that this basis does not justify the admission of Contention 1.

Finally, Friends/NEC make a general claim (or, more precisely, a request for relief) that the NRC should require NextEra to "preclude" moisture from

---

[78] Standard Review Plan at 2.1-14, Table 2.1-2, "Specific Staff Guidance on Scoping." Although the GALL Report and the Standard Review Plan are guidance documents, and therefore not binding, they do carry special weight. *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-05-15, 61 NRC 365, 375 n.26 (2005) ("We recognize, of course, that guidance documents do not have the force and effect of law. Nonetheless, guidance is at least implicitly endorsed by the Commission and therefore is entitled to correspondingly special weight") (citations and internal quotation marks omitted); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264 (2001) ("Where the NRC develops a guidance document to assist in compliance with applicable regulations, it is entitled to special weight"), *pet. for review held in abeyance, Ohngo Gaudadeh Devia v. NRC,* 492 F.3d 421 (D.C. Cir. 2007).

[79] Application, Vol. I, § 2.1.2, at 2.1-4.

[80] *Id.*

[81] *Id.*

[82] *Id. See also id.,* Vol. I, § 2.5, at 2.5-1 ("similar function, similar design or similar materials of construction").

[83] *Id.,* Vol. I, § 2.1.2, at 2.1-4 to 2.1-5. *See also id.,* Vol. 1, § 2.5, at 2.5-1.

[84] *Id.,* Vol. I, § 2.1.2, at 2.1-5, 2.1-22. *See also id.* at 2.1-22 to 2.1-23 (describing the sequence of screening steps used to identify electrical commodity groups requiring an aging management review), § 2.5.1, at 2.5-2 (listing "Electrical Cables and Connections" as a commodity group).

affecting non-environmentally qualified inaccessible cables.[85] NextEra argues that this requirement appears nowhere in our regulations and finds no support in the Blanch Declaration.[86] We agree. At bottom, Friends/NEC ask the agency to impose a burden greater than the requirement imposed by section 54.21(a)(3) to "adequately *manage*[ ]" aging effects.[87] Friends/NEC would have us elevate that burden to the point where NextEra would be required to "preclude," not just "manage," such effects. This proposition contravenes our longstanding practice of rejecting, as a collateral attack, any contention calling for requirements in excess of those imposed by our regulations.[88]

In sum, we have reviewed the administrative record, including the Board's brief ruling on Contention 1, and find no basis sufficient to support the Board's admission of this contention. We recently held that a license renewal applicant who commits to implement an AMP that is consistent with the corresponding AMP in the GALL Report has demonstrated reasonable assurance under 10 C.F.R. § 54.29(a) that the aging effects will be adequately managed during the period of extended operation.[89] While referencing an AMP in the GALL Report does not insulate that program from challenge in litigation, as discussed above, Friends/NEC have not submitted an adequately supported challenge here. We therefore conclude that the Board erred, and reverse the Board's ruling admitting Contention 1.

2. Friends/NEC Contention 2

> The [license renewal application] for Seabrook violates 10 C.F.R. §§ 54.21(a) and 54.29 because it fails to include an aging management plan for each electrical transformer whose proper function is important for plant safety.[90]

---

[85] Friends/NEC Petition at 20. *See also id.* at 18-19 (include additional preventive measures in the AMP). In LBP-11-2, the Board described this basis (73 NRC at 54) but did not discuss it.

[86] NextEra Appeal I at 9. Mr. Blanch does not assert a need to preclude wetting. *See* Blanch Declaration at 7-11.

[87] 10 C.F.R. § 54.21(a)(3) (emphasis added).

[88] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-4, 59 NRC 31, 39 (2004) (rejecting a contention that would exceed regulatory requirements), *pet. for review held in abeyance, Ohngo Gaudadeh Devia v. NRC,* 492 F.3d 421 (D.C. Cir. 2007); *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 206 (2000) (rejecting an "attempt[ ] to impose . . . a requirement more stringent tha[n] the one imposed by the regulations"); *Curators of the University of Missouri,* CLI-95-1, 41 NRC 71, 170 (1995) ("Intervenors are, in essence, contending that those regulatory provisions are themselves insufficient to protect the public health and safety. This assertion constitutes an improper collateral attack upon our regulations.") (footnote omitted). *See generally* 10 C.F.R. § 2.335(a).

[89] *Vermont Yankee,* CLI-10-17, 72 NRC at 36; *Oyster Creek,* CLI-08-23, 68 NRC at 467-68.

[90] Friends/NEC Petition at 20 (capitalization omitted).

a. Background

Simply stated, Friends/NEC argue in Contention 2 that an electrical transformer is a component that should be classified as "passive" and "long-lived," and therefore should be subject to an aging management review. The particular focus of the contention is on whether electrical transformers are appropriately characterized as having "passive" functions.

In the Statement of Considerations for the 1995 License Renewal Rule, the Commission determined that an aging management review is required for structures and components that fall within the scope of the rule and that perform "passive" intended functions. Our license renewal review focuses on so-called "passive" structures and components because structures and components performing "passive" functions generally do not have performance or condition characteristics that are as readily observable as those performing "active" functions.[91] Put another way, structures and components with "active" functions generally can be directly verified. As such, the existing regulatory process, existing licensee programs and activities, and the maintenance rule provide the basis for generically excluding from an aging management review those structures and components that perform "active" functions.[92] For this reason, the Commission generically excluded from license renewal aging management review structures and components associated only with "active" functions.[93] As reflected in the statements of consideration for the 1995 License Renewal Rule, "[f]unctional degradation resulting from the effects of aging on *active* functions is more readily determinable, and existing programs and requirements are expected to directly detect the effects of aging."[94]

The rule devoted significant discussion to defining a "passive" component. The Commission observed, as relevant here:

---

[91] Section 54.21(a)(1)(i) provides an illustrative list of structures and components that are subject to an aging management review, because they perform an intended function (as defined in 10 C.F.R. § 54.4) without moving parts or without a change in configuration or properties. Electrical transformers are not among the structures and components listed.

[92] *See* 1995 License Renewal Rule, 60 Fed. Reg. at 22,468-73 and, particularly, 22,471 ("Performance and condition monitoring for systems, structures and components typically involves functional verification, either directly or indirectly. Direct verification is practical for active functions such as pump flow, valve stroke time, or relay actuation where the parameter of concern (required function), including any design margins, can be directly measured or observed.").

[93] *See id.* at 22,472.

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

> [P]assive structures and components for which aging degradation is *not readily monitored* are those that perform an intended function without moving parts or *without a change in configuration or properties.*[95]

The Commission went on to observe that the phrase "'a change in configuration or properties' should be interpreted to include a 'change in state.'"[96]

Following implementation of the License Renewal Rule, the nuclear industry developed guidelines for use by applicants in developing license renewal applications that would comply with the rule.[97] During the initial development of those guidelines, questions arose as to whether certain electrical components were, in fact, subject to an aging management review under the rule. Transformers were among the components discussed. The Staff in 1997 provided additional guidance, which addressed specifically whether electrical transformers (among other electrical components) are subject to an aging management review.

In its guidance, the Staff observed that 10 C.F.R. § 54.21(a)(1)(i) expressly excludes a variety of electrical and instrumentation and control components from an aging management review for license renewal, and stated that the exclusion "is not limited to" only these components.[98] The Staff went on to state that it had considered aging management review requirements for transformers (among other components), and concluded that transformers are not subject to an aging management review. The Staff reasoned that transformers performed their intended function through a "change in state," by "stepping down voltage from a higher to a lower value, stepping up voltage to a higher value, or providing

---

[95] *Id.* at 22,477 (emphases added). The Statement of Considerations explains that "a pump or valve has moving parts, an electrical relay can change its configuration, and a battery changes its electrolyte properties when discharging. Therefore, the performance or condition of these components is readily monitored and would not be captured by this description." *Id.*

[96] *Id.* (offering the example of a transistor).

[97] *See generally* NEI 95-10 (Rev. 0 Mar. 1996), "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 — The License Renewal Rule" (ADAMS Accession No. ML031600708). The Staff reviewed this guidance (which has since been updated several times) and has indicated that licensees may use a later version of NEI 95-10 (currently Revision 6) to implement the License Renewal Rule. *See* Regulatory Guide 1.188, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses" (Rev. 1 Sept. 2005), at 4 (Regulatory Guide 1.188) (ADAMS Accession No. ML051920430).

[98] Letter from C. I. Grimes, Office of Nuclear Reactor Regulation, to D. J. Walters, NEI, "Determination of Aging Management Review for Electrical Components" (Sept. 19, 1997) (Grimes Letter), Attachment at 1. *See generally* 10 C.F.R. § 54.21(a)(1)(i). The Grimes Letter is included as App. C, Ref. 2, to NEI 95-10 (Rev. 6, June 2005), "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 — The License Renewal Rule" (NEI 95-10 (Rev. 6)) (ADAMS Accession No. ML051860406).

isolation to a load."[99] The Staff also observed that degradation of a transformer's ability to perform its intended function would be "readily monitorable by a change in the electrical performance of the transformer and the associated circuits."[100] Ultimately, the Staff recommended that NEI revise its guidance to indicate that transformers (among other components) do not require an aging management review.[101] NEI's current guidance reflects the Staff position on transformers.[102]

Friends/NEC argue in Contention 2 that NextEra's Application violates 10 C.F.R. §§ 54.21(a) and 54.29 because it fails to include an aging management program for each electrical transformer whose "proper function" is important for plant safety.[103] The crux of their argument is that electrical transformers perform "passive" functions, and therefore must be addressed in an AMP, but that NextEra's Application contains no such AMP. In support, Friends/NEC offered the expert opinion of Paul Blanch. Mr. Blanch asserted, without more, that "[t]ransformers function without moving parts or without a change in configuration or properties as defined in [10 C.F.R. § 54.21(a)]."[104] The Blanch Declaration went on to raise general concerns associated with the failure to properly manage aging of electrical transformers.[105]

The Staff and NextEra responded before the Board that electrical transformers are "active" and are therefore not subject to aging management review.[106] They relied primarily upon the guidance discussed above, and also upon the NRC's prior "issuance of other license renewals where transformers were treated as active components."[107] They also criticized Friends/NEC and the Blanch Declaration for referring to license renewal applications and supporting documents relevant only

---

[99] Grimes Letter, Attachment at 2. The Staff went on to state: "Transformers perform their intended function through a change in state similar to switchgear, power supplies, battery chargers, and power inverters, which have been excluded in [10 C.F.R.] § 54.21(a)(1)(i) from an aging management review." *Id.*

[100] *Id.* The Staff also cited other indications of transformer performance, including observing trending of certain electrical parameters, and advanced monitoring methods. *Id.*

[101] *Id.* at 4.

[102] The Grimes Letter is incorporated into NEI 95-10 (Rev. 6) in App. C, Ref. 2.

[103] Friends/NEC Petition at 20-22. *See also* Tr. at 100-25.

[104] Blanch Declaration at 11.

[105] *Id.* at 11-13.

[106] NextEra Answer to Friends/NEC Petition at 43-47; Staff Answer to Petitions at 26-30.

[107] Tr. at 120 (Mr. Fernandez).

to other nuclear facilities,[108] for presenting only conclusory arguments,[109] and for contradictorily stating, at different places, that electrical transformers are "active" *and* "passive."[110]

The Board's discussion of Contention 2 is brief. The Board found significant that the Staff guidance upon which the Staff and NextEra relied is nonbinding, and further that we had not addressed the issue whether electrical transformers are "active" or "passive" components.[111] The Board therefore concluded that "[i]n the absence of a definitive designation for transformers, this contention requires fact-based determinations best left to further adjudicatory proceedings."[112]

In admitting Contention 2, the Board rejected NextEra's and the Staff's arguments regarding the internal inconsistency of the Blanch Declaration. The Board concluded that the inconsistency stemmed merely from clerical errors, were clarified at oral argument, and therefore should not be strictly construed against Friends/NEC.[113]

b. Discussion

NextEra argues that Friends/NEC's contention is too thinly supported to merit admission.[114] We agree. Longstanding Staff guidance directly addresses the classification of electrical transformers for the purposes of license renewal, and has found them to be "active" components. At no time did Friends/NEC challenge the guidance documents in their filings before the Board. Instead, Friends/NEC rested on their initial cursory argument that "it is well known that many transformers . . . are passive devices in that they contain no moving parts and do not undergo

---

[108] *See, e.g.,* NextEra Answer to Friends/NEC Petition at 43 & n.32 (referring to Friends/NEC's near-verbatim paraphrase and use of a contention from the *Indian Point* license renewal proceeding, despite the fact that the Seabrook Application lacks the language challenged in the *Indian Point* contention); Blanch Declaration at 4 (asserting that he has "reviewed Vermont Yankee's License Renewal Application[,] . . . the subsequent submittals by Entergy to renew the operating licenses for Indian Point Unit 2 and Unit 3 . . . [and] the NRC's Safety Evaluation Report dated May 2008 (NUREG-1907).").

[109] NextEra Appeal I at 14; NextEra Answer to Friends/NEC Petition at 46-47; Staff Answer to Petitions at 30-35.

[110] NextEra Appeal I at 13; NextEra Answer to Friends/NEC Petition at 46; Staff Answer to Petitions at 25-26, 31. *See* Blanch Declaration at 12 (*compare* ¶ 35 *with* ¶ 36); Friends/NEC Petition at 22 (*compare* ¶ 8 *with* ¶ 9).

[111] LBP-11-2, 73 NRC at 58.

[112] *Id.*

[113] *Id.* On this point, we agree with the Board. In considering the matter on appeal, we construed the petition and the Blanch Declaration in favor of Friends/NEC. But we caution all parties to take care in the preparation of documents for litigation, given that unclear drafting renders decisionmaking challenging not only for the Board, but for us.

[114] NextEra Appeal I at 11-12.

a change of properties or state."[115] The Board is correct that the applicability of a guidance document may be challenged in an individual proceeding. However, we decline here to find Friends/NEC's conclusory statements sufficient to support an admissible contention.

As discussed above, the Grimes Letter sets forth the Staff's reasoning that transformers perform "active" functions:

> Transformers perform their intended function through a change in state by stepping down voltage from a higher to a lower value, stepping up voltage to a higher value, or providing isolation to a load. Transformers perform their intended function through a change in state similar to switchgear, power supplies, battery chargers, and power inverters, which have been excluded in § 54.21(a)(1)(i) from an aging management review. Any degradation of the transformer's ability to perform its intended function is readily monitorable by a change in the electrical performance of the transformer and the associated circuits. Trending electrical parameters measured during transformer surveillance and maintenance such as Doble test results, and advanced monitoring methods such as infrared thermography, and electrical circuit characterization and diagnosis provide a direct indication of the performance of the transformer. Therefore, transformers are not subject to an aging management review.[116]

Friends/NEC and Mr. Blanch disregard the Staff guidance. As a result, Mr. Blanch's conclusory statement that transformers are passive components is not adequate as a basis for the contention.[117] In order to raise a litigable challenge to the categorization of electrical transformers, Friends/NEC would have to provide sufficient factual information or expert opinion to merit further consideration of the matter. Here, in the absence of a supported challenge to the guidance, we do not find a genuine dispute with the applicant meriting litigation in this proceeding.

Instead, in support of this contention, Friends/NEC assert that the Staff "has determined that the plant system portion of the offsite power system that is used to connect the plant to the offsite power source should be included within the scope of" section 54.21, and that "[t]his path typically includes switchyard circuit breakers that connect to the offsite system power transformers (startup

---

[115] Friends/NEC Petition at 22; Blanch Declaration at 12.

[116] Grimes Letter, Attachment at 2. *See also* Standard Review Plan at 2.1-24, Table 2.1-5, item 104 (excluding transformers from the list of SSCs subject to an aging management review).

[117] *See USEC Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006) ("'[A]n expert opinion that merely states a conclusion (e.g., the application is 'deficient,' 'inadequate,' or 'wrong') without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion . . . .'") (quoting *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181, *reconsideration granted in part and denied in part on other grounds,* LBP-98-10, 47 NRC 288, *aff'd on other grounds,* CLI-98-13, 48 NRC 26 (1998)).

transformers), the transformers themselves . . . ."[118] Based on these two premises, Friends/NEC argue that "[e]nsuring that the appropriate offsite power system long-lived passive structures and components that are part of this circuit path are subject to an [aging management review] will assure that the bases underlying the [station blackout] requirements are maintained over the period of extended license."[119] The upshot of this argument appears to be that, because transformers are included in a portion of a plant system that is within the scope of license renewal, they are themselves subject to an aging management review.

However, considered in context, the Staff's statement upon which Friends/NEC rely does not support the assumption that transformers perform "passive" functions. The statement referenced by Friends/NEC appears to be a direct quotation from a Draft Request for Additional Information (Draft RAI) attached to a summary of a conference call regarding the Indian Point license renewal application.[120] The Draft RAI, in turn, quotes Staff guidance identifying equipment relied on to meet the requirements of the station blackout rule, as it affects scoping for license renewal.[121] The guidance states, in relevant part:

> For purposes of the license renewal rule, the staff has determined that the plant system portion of the offsite power system that is used to connect the plant to the offsite power source should be included within the scope of the rule. *This path typically includes* switchyard circuit breakers that connect to the offsite system *power transformers (startup transformers), the transformers themselves . . . .* Ensuring that *the appropriate offsite power system long-lived passive structures and components that are part of this circuit path are subject to an* [*aging management review*] will assure that the bases underlying the [station blackout] requirements are maintained over the period of extended license.[122]

Read in its proper context, we discern no support in the guidance for the argument that a transformer is a "passive component" and should be subject to

---

[118] Blanch Declaration at 12 (emphasis omitted). *Accord* Friends/NEC Petition at 22 (emphasis omitted).

[119] Blanch Declaration at 13. *Accord* Friends/NEC Petition at 22.

[120] *See* Staff Answer to Petitions at 31-32 & n.35 (citing Summary of Telephone Conference Call Held on September 21, 2007, between the U.S. Nuclear Regulatory Commission and Entergy Nuclear Operations, Inc., concerning Draft Requests for Additional Information Pertaining to the Indian Point Nuclear Generating Unit Nos. 2 & 3, License Renewal Application (Oct. 16, 2007), at 10 (ADAMS Accession No. ML072770605)).

[121] *See generally* 10 C.F.R. § 54.4(a)(3) (citing 10 C.F.R. § 50.63 (station blackout rule)).

[122] Draft RAI at 10 (emphases added) (quoting "NRC Staff Position on the License Renewal Rule (10 CFR 54.4) as It Relates to the Station Blackout Rule (10 CFR 50.63)," at 2, attached to letter dated April 1, 2002, "Staff Guidance on Scoping of Equipment Relied on to Meet the Requirements of the Station Blackout (SBO) Rule (10 CFR 50.63) for License Renewal (10 CFR 54.4(a)(3))" (ADAMS Accession No. ML020920464)).

an aging management review. The guidance simply delineates the portion of the offsite power system that is "inside the plant" for the purpose of identifying structures and components that are subject to an aging management review to confirm compliance with the station blackout rule for the period of extended operation. The Staff concluded that the portion of the offsite power system that is used to connect the plant to the offsite power source is included within the scope of the license renewal rule. That system includes several components, including transformers. But the guidance does not distinguish — or discuss at all — which of those components perform active or passive functions (or some combination thereof). For this reason, the document does not provide support for Friends/NEC's Contention 2.

In sum, the Board erred in admitting Contention 2, as it lacks the support required by 10 C.F.R. § 2.309(f)(1)(v).

3. Friends/NEC Contention 4

> The Environmental Report is inadequate because it underestimates the true cost of a severe accident at Seabrook Station in violation of 10 C.F.R. § 51.53(c)(3)(ii)(L) and further analysis is called for.[123]

a. Background

Friends/NEC Contention 4 challenges NextEra's severe accident mitigation alternatives (SAMA) analysis for Seabrook. Mitigation alternatives, or "SAMAs," refer to potential safety enhancements intended to reduce the risk of severe accidents. The NRC's current Generic Environmental Impact Statement for license renewal provides a generic and bounding analysis of potential severe accident impacts, encompassing all existing plants.[124] The SAMA analysis is a site-specific analysis focusing on potential additional mitigation measures that could be implemented to *further* reduce severe accident risk (probability or consequences). The analysis by practice has been a cost-benefit analysis, examining whether particular hardware or procedural changes may be cost-beneficial to implement, given the degree of risk reduction that reasonably could be expected from the change.

Under the NRC's environmental regulations for license renewal, applicants must provide a SAMA analysis if the Staff has not yet previously considered severe accident mitigation alternatives for the applicant's plant in an environmental impact statement (EIS) or related supplement, or in an environmental

---

[123] Friends/NEC Petition at 33-34.

[124] *See* License Renewal GEIS, Vol. 1, at 5-12 to 5-106, 5-113, 5-115.

assessment.[125] The SAMA analysis is an environmental mitigation analysis under NEPA, and is not part of the license renewal safety review. Whether additional accident mitigation measures may be warranted to assure public health and safety is addressed through the NRC's ongoing regulatory oversight of existing plants.[126] In regard to SAMAs, we have stressed that "[u]nless it looks genuinely plausible that inclusion of an additional factor or use of other assumptions and models may change the cost-benefit conclusions for the SAMA candidates evaluated, no purpose would be served to further refine the SAMA analysis."[127]

SAMA analysis involves extensive computer modeling, and therefore may involve issues not readily understood by those not familiar with the computer codes and methodologies that are used. We recognize that SAMA analysis issues can present difficult judgment calls at the contention admissibility stage, and we are reluctant as a general matter to second-guess Board rulings on contention admissibility.[128] Nonetheless, as NextEra highlights, where arguably large portions of contentions have been "cut and pasted" from one or more other NRC proceedings — which Friends/NEC's representative concedes was done for their intervention — it is especially important to "ensure the existence of a genuine material dispute with [the] *particular* application" at issue.[129]

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. We have long held that contentions admitted for litigation must point to a deficiency in the application, and not merely "suggestions" of other ways an analysis could have been done, or other details that could have been included.[130] 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

---

[125] *See* 10 C.F.R. § 51.53(c)(3)(ii)(L).

[126] *See, e.g.,* "Procedural and Submittal Guidance for the Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities," Final Report, NUREG-1407 (June 1991) (ADAMS Accession No. ML063550238).

[127] *Pilgrim,* CLI-10-11, 71 NRC at 317.

[128] *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 276-77 (2009).

[129] NextEra Appeal I at 4 & n.6, 20 (emphasis in original). *See also* Tr. at 68; Friends/NEC Answer to NextEra Appeal at 4.

[130] *See American Centrifuge,* CLI-06-10, 63 NRC at 477.

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. We turn now to the SAMA contention.

Contention 4 challenged the SAMA analysis based on six claimed deficiencies (labeled alphabetically "a" through "f"). The contention claims that the SAMA analysis "improperly minimized" the potential costs of a severe accident, and therefore made additional risk reduction measures "appear[ ] not to be justified."[131] The Board addressed the admissibility of each of the contention "subparts" separately, as essentially distinct contentions.[132] The Board admitted Friends/NEC Contentions 4B, 4D, and 4E, as limited by LBP-11-2.[133] NextEra appeals admission of the three SAMA contentions. We address each in turn.

b. Friends/NEC's Contention 4B — The SAMA Analysis Minimizes the Potential Amount of Radioactive Release in a Severe Accident[134]

In LBP-11-2, the Board admitted one portion of Friends/NEC 4B. The admitted issue challenges the use in the Seabrook SAMA analysis of source terms obtained with the Modular Accident Analysis Progression (MAAP) computer code. Specifically, Friends/NEC argue that the MAAP code "has not been validated by the NRC," and that the radionuclide release fractions generated by MAAP "are consistently smaller for key radionuclides than the release fractions specified in NUREG-1465 and its recent revision for high-burnup fuel."[135] They go on to claim that "the source term used [in the SAMA analysis] results in lower [accident] consequences than would be obtained from NUREG-1465 release fractions and release durations."[136] Friends/NEC further argue that it "has been previously observed" that "MAAP generates lower release fractions than those derived and used by NRC in studies such as NUREG-1150."[137] They argue that

---

[131] Friends/NEC Petition at 37.

[132] LBP-11-2, 73 NRC at 61.

[133] *Id.* at 68, 73-74, 79.

[134] Friends/NEC Petition at 41.

[135] *Id.* at 44. *See* "Accident Source Terms for Light-Water Nuclear Power Plants," Final Report, NUREG-1465 (Feb. 1995) (ADAMS Accession No. ML041040063).

[136] Friends/NEC Petition at 44.

[137] *Id.* NUREG-1150 assessed the risks from severe accidents at five commercial nuclear power plants of different design. *See* "Severe Accident Risks: An Assessment for Five U.S. Nuclear Plants," NUREG-1150 (Dec. 1990) (ADAMS Accession No. ML040140729). Seabrook was not one of the five plants specifically evaluated in the report.

the use of source terms generated by MAAP "appears to lead to anomalously low consequences when compared to source terms generated by NRC staff."[138]

In support, Friends/NEC cite to excerpts from two documents. One is a 1987 draft of the NUREG-1150 severe accident risk study that, in examining accident risk at the Zion Nuclear Station found that "the MAAP estimates for environmental release fractions were significantly smaller" than those obtained with "the Source Term Code Package" computer code.[139] The other is a 2002 Brookhaven National Laboratory (BNL) report examining ice condenser and Mark III containment plants, which compared the probabilistic risk assessment (PRA) results for the Catawba plant (obtained using the MAAP code) with a "typical NUREG-1150 release" for the Sequoyah plant (obtained using the Source Term Code Package and MELCOR).[140] The BNL study noted that the "NUREG-1150 release fractions for the important radionuclides are about a factor of 4 higher than the ones" in the Catawba PRA, and that the "differences in the release fractions . . . are primarily attributable to the use of the different codes in the two analyses."[141]

In LBP-11-2, the Board admitted Friends/NEC Contention 4B "to the limited extent that it relates to the selection of the source term release fractions."[142] On appeal, NextEra argues that the contention does not provide sufficient information to demonstrate the existence of a genuine dispute with the application. NextEra argues that the source term claims are taken from an expert report filed in the *Indian Point* proceeding, specifically, an accident consequence analysis that Dr. Edwin Lyman prepared, which substituted NUREG-1465 source terms for the MAAP-generated source terms the applicant used in the SAMA analysis for Indian Point Unit 2.[143] NextEra further stresses that the contention "only alleges that other models may produce a larger source term," and that there is no expert support provided to indicate that other source terms would be more accurate or more reasonable for the SAMA analysis.[144]

---

[138] Friends/NEC Petition at 45.

[139] "Reactor Risk Reference Document," Main Report, Draft for Comment, NUREG-1150, Vol. 1 (Feb. 1987), at 5-14 (ADAMS Accession No. ML063540601) (cited in Friends/NEC Petition n.16). The Source Term Code Package (STCP) and MELCOR computer codes were used in the NUREG-1150 reactor accident study.

[140] John R. Lehner et al., Benefit Cost Analysis of Enhancing Combustible Gas Control Availability at Ice Condenser and Mark III Containment Plants, Final Letter Report (Dec. 2002), at 17 (referenced in Friends/NEC Petition at 44-45).

[141] *Id.*

[142] LBP-11-2, 73 NRC at 65.

[143] NextEra Appeal I at 19-20 (citing to Edwin Lyman, A Critique of the Radiological Consequence Assessment Conducted in Support of the Indian Point Severe Accident Mitigation Alternatives Analysis (Nov. 2007), attached to Riverkeeper, Inc.'s Request for Hearing and Petition to Intervene in Indian Point License Renewal Proceeding (Nov. 30, 2007) (ADAMS Accession No. ML073410093)).

[144] *Id.* at 20.

In our view, the support for the contention is weak. To the extent that the contention suggests that NextEra simply should replace the Seabrook SAMA analysis release fractions with generic release fractions derived from NUREG-1465, Friends/NEC identify no factual or expert support. As NextEra describes, the portion of the contention discussing NUREG-1465 appears to be "copied almost verbatim" from a site-specific consequence analysis Dr. Lyman prepared for the *Indian Point* proceeding.[145] It is not apparent to us that the site-specific accident "consequence" conclusions of Dr. Lyman's report can, without more, simply be lifted and directly applied to the site-specific Seabrook SAMA analysis.

Essentially, the challenge to the MAAP-generated release fractions rests on a thin reed — the excerpts from the draft NUREG-1150 report and the BNL report. We do not read these excerpts to necessarily suggest that MAAP-generated source terms are inaccurate, only that under the specific comparisons noted, the MAAP-generated source terms were smaller than source terms obtained from the NUREG-1150 report. Further, it is not clear that these comparisons (one dating back 24 years) involved the same version of the MAAP code used in the Seabrook SAMA analysis. Contention 4B does not compare NUREG-1150 values to the Seabrook SAMA analysis release fractions, or otherwise discuss or even reference the Seabrook release fractions.[146] And while the contention suggests that generic source term values obtained from NUREG-1150 would be larger, it does not suggest why the generic values would be more accurate for a plant-specific SAMA analysis than the MAAP-generated plant-specific release fractions.

Yet the Board found the support from the two documents sufficient, concluding that the

> alleged fact that the source terms provided by MAAP are lower than those produced by the methodology used in NRC studies (resulting in consequence values that are lower by a factor of 3 and 4 according to the [BNL Report]) raises sufficient question concerning whether the calculated consequences and resulting cost-benefit analyses at Seabrook are adequate for rendering decisions on potential mitigation alternatives.[147]

Although we consider, as we said previously, that support for this contention is weak, because the Board is the appropriate arbiter of such fact-specific questions of contention admissibility, we will not second-guess the Board's evaluation of

---

[145] *Id.* at 19.

[146] We additionally note that MAAP-generated release fractions and durations apparently were not used for all of the ten accident categories analyzed in the Seabrook SAMA analysis. *See id.,* Attach. F at F-59, F-63.

[147] LBP-11-2, 73 NRC at 68.

factual support for the contention, absent an error of law or abuse of discretion.[148] Here, we additionally note that NextEra never addressed specifically the relevance of the cited comparisons to the Seabrook SAMA analysis. Because we cannot conclude that the Board's assessment of the documents amounts to legal error, we defer to the Board's judgment in admitting Contention 4B.[149]

c. Friends/NEC 4D — Use of an Inappropriate Air Dispersion Model, the Straight-Line Gaussian Plume, and Meteorological Data Inputs That Did Not Accurately Predict the Geographic Dispersion and Deposition and Radionuclides at Seabrook's Coastal Locations[150]

The straight-line Gaussian plume model is the atmospheric dispersion model in the MACCS2 computer code (a version of the MELCOR Accident Consequence Code System code), which was used for the Seabrook SAMA analysis. Friends/NEC argue that the straight-line Gaussian plume model is inappropriate for a coastal location because it "ignores the presence of sea breeze circulations which dramatically alter air flow patterns."[151] Friends/NEC further argue that the straight-line Gaussian plume model does not properly account for the impact of terrain effects, and that the terrain at the Seabrook site varies from "hilly to mountainous except along the coast."[152] They stress that there are other more "advanced [atmospheric dispersion] models" that can be applied in "complex terrain settings such as in mountainous or coastal areas."[153] Friends/NEC claim that use of the straight-line Gaussian plume model in the Seabrook SAMA analysis "underestimated the area likely to be affected in a severe accident and the dose likely to be received" in the affected area.[154]

In LBP-11-2, the Board admitted Friends/NEC 4D, concluding that "Friends/NEC sufficiently support their allegation that use of the [straight-line Gaussian plume] model might significantly distort the Seabrook SAMA analysis."[155] The Board found that Friends/NEC had provided "sufficient information to indicate that it is more than plausible that the use of an alternative model has the potential

---

[148] *See, e.g., AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 121 (2006).

[149] We note, however, that in the Board's assessment, we expect a thorough and thoughtful review of all facts offered in support of a contention, particularly where, as here, the contention and/or factual support was taken directly from a case involving a different facility.

[150] Friends/NEC Petition at 47.

[151] *Id.* at 49-50.

[152] *Id.* at 50-51 (quoting Environmental Report), 53-54.

[153] *Id.* at 59-60.

[154] *Id.* at 47.

[155] LBP-11-2, 73 NRC at 71.

to change the cost-benefit conclusions for the SAMA candidates evaluated by NextEra."[156]

On appeal, NextEra argues that Friends/NEC did not provide any expert opinion or document indicating that "use of an alternate dispersion model would predict *greater* offsite consequences."[157] NextEra goes on to assert that Friends/NEC and "by extension, the Board," merely "assume that certain modeling features in the ATMOS[158] model (such as the straight-line Gaussian plume, lack of modeling of terrain effects, and the use of a single year of meteorological data) ultimately might be significant."[159] NextEra states that "[c]ertainly the use of a different model *might* result in a prediction of greater offsite consequences," but that Friends/NEC "provides no support to suggest that this is actually the case."[160] NextEra further stresses that the Friends/NEC claims fail to challenge or otherwise address the "extensive sensitivity analyses" included in the SAMA analysis, which address atmospheric modeling uncertainty.[161]

We agree that Friends/NEC did not provide specific expert or factual support for its claim that use of the straight-line Gaussian plume model "underestimates" radiological doses. Rather, Friends/NEC offered factual support questioning the precision of the model. The Board rejected Staff and licensee arguments going to the sufficiency of Friends/NEC's plume modeling claims, finding these to be "reasonable counterarguments," but "merits-based."[162] NextEra insists that its arguments before the Board were not arguments on the merits, but arguments on whether Friends/NEC met the "threshold" contention requirement of showing materiality.[163]

---

[156] *Id.*

[157] NextEra Appeal I at 22 (emphasis added).

[158] ATMOS is the module in the MACCS2 computer code that performs the atmospheric dispersion modeling for the SAMA analysis.

[159] NextEra Appeal I at 22.

[160] *Id.* (emphasis in original).

[161] *Id.* at 22-23.

[162] LBP-11-2, 73 NRC at 73.

[163] NextEra Appeal I at 18. NextEra provides an example of a Friends/NEC argument that appears immaterial. While Friends/NEC challenge the use of a single year's worth of meteorological data, the SAMA analysis indicates that in fact 5 years of data were reviewed, and the year with the most conservative data, resulting in the "maximum dose and cost risk" was used in the analysis. *See id.* at 22 (citing Environmental Report). The Board did not specifically address this claim. Moreover, we note that one argument Friends/NEC provided appears to *undercut* their contention. Referencing (actually quoting verbatim, although quotation marks were not inserted) a 2004 MACCS2 code guidance document, Friends/NEC claim that because Gaussian models are "inherently flat-earth models," there is "inherent *conservatism* (and simplicity) if the environs" involve grade variations, significant nearby buildings, or tall vegetation that is "not taken into account in the dispersion parameterization." *See* Friends/NEC Petition at 59 (emphasis added) (citation omitted).

NextEra's arguments are not without force. Although petitioners need not "rerun the Applicant's own cost-benefit calculations"[164] at the contention admissibility stage, they can support SAMA contentions by providing the opinion of an expert with knowledge of SAMA code modeling issues, who has reviewed the SAMA analysis. In its reply before the Board, Friends/NEC suggested that they will, at a later "stage" in the proceeding, "present factual evidence that indeed the straight-line Gaussian plume model is NOT conservative."[165]

While we agree with NextEra that the SAMA analysis involves numerous considerations and properly ought to be considered in its "entirety,"[166] we also recognize that at the contention admissibility stage there may be close questions on the materiality of claims, particularly given the complexity of the SAMA code modeling issues and Board reluctance to delve into merits-related inquiries. As in any proceeding, the Board makes threshold decisions on materiality on a case-by-case basis, given the nature of the issue and the record presented before the Board.

Here, the Board held that "Friends/NEC have raised plausible limitations of air dispersion modeling at the [Seabrook] site," and that the asserted limitations of the atmospheric dispersion model plausibly could affect the SAMA cost-benefit conclusions.[167] Given the substantial deference we typically accord licensing boards on contention admissibility, we conclude that the Board did not abuse its discretion or commit legal error in finding adequate factual support for the contention, given the limited record before it on SAMA analysis computer modeling and the interrelationships between, and significance of, the different portions and levels of the SAMA analysis. We therefore decline to disturb the Board's admission of Contention 4D.

d. Friends/NEC 4E — Use of Inputs That Minimized and Inaccurately Reflected the Economic Consequences of a Severe Accident, Including Decontamination Costs, Cleanup Costs and Health Costs, and That Either Minimized or Ignored a Host of Other Costs[168]

From Contention 4E, the Board admitted the limited issues of "decontamination and cleanup costs" — specifically claims involving radionuclide "particle size" and "remediation difficulty in urban areas."[169] In the Board's description of the contention, "Friends/NEC allege that because [NextEra] 'uses the outdated and

[164] LBP-11-2, 73 NRC at 63.
[165] Friends/NEC Reply at 39 (emphasis in original).
[166] NextEra Appeal I at 18.
[167] LBP-11-2, 73 NRC at 71.
[168] Friends/NEC Petition at 61.
[169] LBP-11-2, 73 NRC at 74.

inaccurate MACCS2 code to calculate decontamination and clean up costs,' NextEra employs an inapplicable [radionuclide] particle size," and "ignores the difficulty of cleanup in an urban area."[170]

As to radionuclide particle size, Friends/NEC claim that "[n]uclear reactor releases range in size from a fraction of a micron to a couple of microns," but "nuclear bomb explosions fallout is much larger — particles that are ten to hundreds of microns."[171] They claim that the "small nuclear releases [from reactor accidents] can get wedged into small cracks and crevices of buildings making [cleanup] extremely difficult or impossible."[172] They therefore conclude that "cleanup after a nuclear bomb explosion is not comparable to cleanup after a nuclear reactor accident and assuming so will underestimate cost."[173]

Friends/NEC go on to argue that the MACCS2 code uses an "economic cost model" that improperly assumes inappropriately large radionuclide particles, such as those that would be released in a nuclear weapon explosion.[174] Friends/NEC claim that use of the MACCS2 code will result in underestimated decontamination costs because the smaller radionuclide particles that would be released in a reactor accident would be more difficult and more expensive to remove or "clean up" than the larger particles released in a nuclear weapon explosion.[175] As support, they cite to a 1996 Sandia National Laboratories study of the potential economic costs of a plutonium dispersal accident.[176] They argue that the Sandia Study recognized that earlier estimates of decontamination costs, "such as incorporated in [the 1975 NRC reactor accident risk study] WASH-1400 and up through and including MACCS2" are erroneous because "they examined fallout from [explosions] of nuclear weapons that produce large particles and high mass loadings."[177]

In LBP-11-2, the Board found adequate support for Friends/NEC's "assertion that smaller particles will create higher cleanup costs."[178] The Board concluded that Friends/NEC "dispute sufficiently important assumptions in the calculation of severe accident decontamination and cleanup costs to make it plausible that another SAMA candidate might be cost-effective."[179]

---

[170] *Id.* at 73-74 (quoting Friends/NEC Petition at 62).

[171] Friends/NEC Petition at 63.

[172] *Id.*

[173] *Id.* at 62.

[174] *Id.*

[175] *Id.* at 62-63, 66.

[176] *See id.* at 66-67 (citing David I. Chanin, Walter B. Murfin, SAND96-0957, Site Restoration: Estimation of Attributable Costs from Plutonium-Dispersal Accidents (May 1996) (Sandia Study)).

[177] Friends/NEC Petition at 66. *See also* "Reactor Safety Study: An Assessment of Accident Risks in U.S. Commercial Nuclear Power Plants (WASH-1400)," NUREG-75/014 (Oct. 1975) (WASH-1400).

[178] LBP-11-2, 73 NRC at 74, 75.

[179] *Id.* at 75.

On appeal, NextEra argues that Friends/NEC failed to provide the requisite factual support for their decontamination cost claim and point to no genuine dispute with the Seabrook SAMA analysis on a material issue of law or fact.[180] We agree.

First, it is not clear what exactly this decontamination costs contention is challenging. Friends/NEC refer without explanation or support to an unidentified MACCS2 code "cost formula" that "underestimates costs likely to be incurred as a result of a dispersion of radiation."[181] There is no discussion of any specific "cost formula used in the MACCS2 code."[182] The contention itself refers to the "use of inputs" that minimize or inaccurately reflect economic consequences, but Friends/NEC do not provide a supported and particularized argument regarding "inputs."

The Board apparently viewed the contention as claiming that the MACCS2 code, by definition, assumes or "employs an inapplicable particle size."[183] But we do not see even minimal factual or expert support presented for a claim that the MACCS2 code assumes "inapplicable" radionuclide particle sizes.

Friends/NEC rest their particle size claims largely on the 1996 Sandia Study that examined the potential economic costs of a plutonium dispersal accident. As Friends/NEC's argument goes, the MACCS2 code User's Guide indicates that the code has an "economic cost model" that is "based on WASH-1400."[184] In turn, Friends/NEC describe the WASH-1400 study as having been "based on [cleanup] after a nuclear explosion."[185] Friends/NEC then go on to describe that the 1996 Sandia Study of plutonium dispersal accidents criticized "earlier estimates" of decontamination costs, such as those in WASH-1400, because these earlier cost estimates were based upon explosions of nuclear weapons involving large — and therefore easier to remove — radionuclide particles.[186] Specifically, Friends/NEC claim that the Sandia Study "recognized that earlier estimates (such as incorporated in WASH-1400 and up through and including MACCS2) of decontamination costs are incorrect because they examined fallout from nuclear

---

[180] NextEra Appeal I at 25-27.

[181] Friends/NEC Petition at 62.

[182] *Id.*

[183] LBP-11-2, 73 NRC at 74. In their reply before the Board, Friends/NEC describe that they challenge "assumptions regarding cleanup . . . costs *embedded* in the code." Friends/NEC Reply at 36 (emphasis added).

[184] Friends/NEC Petition at 62 (citing "Code Manual for MACCS2: User's Guide," NUREG/CR-6613, Vol. 1 (May 1998) (ADAMS Accession No. ML063550020), at 7-10 (User's Guide)).

[185] *Id.* at 62.

[186] *See id.* at 66.

explosion [sic] of nuclear weapons that produce large particle sizes and high mass loadings."[187]

But again, the intervenors' claims are ill-defined and poorly supported. It is not clear what Friends/NEC mean by "incorrect" decontamination cost "estimates" that are "incorporated" in the MACCS2 code. Friends/NEC provide page citations to only three pages in the Sandia Study, none of which specifically refer to radionuclide particle sizes, the WASH-1400 reactor accident study, or the MACCS2 code.[188] The Sandia Study is a lengthy report focused on plutonium dispersal events, and neither we nor the Board should be expected to sift through it in search of asserted factual support that Friends/NEC has not specified.[189] We nonetheless reviewed portions of the Sandia Study but discerned no suggestion that the MACCS2 code assumes inapplicable radionuclide particle sizes. In fact, the 1996 Sandia Study predates issuance of the MACCS2 code User's Guide and does not appear to discuss the MACCS2 code at all.

NextEra points out on appeal, as it did before the Board, that the Sandia Study does criticize the WASH-1400 reactor study for underestimating the economic costs of severe reactor accidents. But as NextEra describes, this criticism was of *particular* assumptions made in WASH-1400 regarding decontamination costs — assumptions that the MACCS2 code does not "require or imply."[190] As NextEra points out, the Sandia Study criticizes assumptions regarding a variable input called a "decontamination factor,"[191] explained further below.

Like WASH-1400, the MACCS2 code uses inputs called "decontamination factors" to reflect different levels or strategies of decontamination to reduce radiological dose to an acceptable dose level or standard for long-term use. Logically, a less contaminated area will need less decontamination to reduce the radiological dose to the necessary standard. A decontamination factor of 20, for example, reflects an assumption "that contamination is reduced by a factor of 20 (i.e., 95% of the radioactive material is removed)" after a specified period of time.[192] Higher decontamination factors reflect a need for higher levels of decontamination activities, and are therefore associated with higher costs.

---

[187] *See id.*

[188] *See id.* at 66-67 (citing Sandia Study at 2-3 to 2-4, 6-5).

[189] *See, e.g., Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 194 (1999) (petitioner bears burden for setting forth clear argument for contention); *American Centrifuge,* CLI-06-10, 63 NRC at 457 (a "contention must make clear why cited references provide a basis").

[190] NextEra Appeal I at 26 (citing Sandia Study at p. 2-9). *See also* NextEra Answer to Friends/NEC Petition at 91-92.

[191] NextEra Appeal I at 26.

[192] *Id.* at 26 n.16 (citing Sandia Study at 2-9 n.8). As the MACCS2 code User's Guide explains, the decontamination "objective is to reduce doses to acceptable levels" in a "cost-effective manner."

(Continued)

The Sandia Study criticizes WASH-1400 and other reactor risk assessments for assuming that a decontamination factor of 20 — meaning radiological dose would be reduced by 95% — could be achieved "in urban areas at *minimal cost*":[193]

> *Prior to the 1986 Chernobyl accident,* reactor accident risk assessments in the U.S. and Europe relied heavily on the economic cost model of WASH-1400, in which the decontamination of residential property was modeled as achieving a DF [decontamination factor] of 20 in urban areas at minimal cost, that is, one tenth of the value of the affected property.
>
> The use of 20 in WASH-1400 was apparently based on contemporary guidance documents for anticipated recovery actions, following nuclear explosions of warfare. Nuclear weapons explosions produce fallout with large particles and high mass loadings. The DF of 20 was widely used in planning documents addressing such events.[194]

But as NextEra argues, "use of the MACCS2 code does not require or imply the use of a DF of 20" because the decontamination factor used is a *variable input* into the SAMA analysis, and the MACCS2 User's Guide in fact suggests the use of other decontamination factors, 3 and 15.[195] Up to three different decontamination factors can be defined.[196] And the SAMA analysis has user-defined economic parameters for determining the dollar cost of performing the decontamination to the specified decontamination levels. In any event, the contention does not explain how the Sandia Study criticism of WASH-1400 supports the claim that the MACCS2 code employs inapplicable radionuclide particle sizes.

At bottom, Friends/NEC simply do not tie the Sandia Study to a genuine material dispute with the Seabrook SAMA analysis. Their contention does not

---

See User's Guide at 7-9. In some cases, it may simply be more cost-effective to condemn a property. For example, if, even assuming a specified high level of decontamination a site would not become habitable, then the "property will be condemned and permanently withdrawn from use" and an economic cost assessed for condemning the property. *See id.* (cited in NextEra Appeal I at 26 n.16). Likewise, if the cost of decontamination "exceeds the property's value," then the code will assess an economic cost for condemning the property. *See id.* at 7-4. In other words, the SAMA economic cost analysis accounts for the costs of decontaminating property to particular user-defined decontamination levels, as well as the costs of condemning property that cannot sufficiently be decontaminated, or would be less expensive to condemn than to decontaminate.

[193] *See* Sandia Study at 2-9 to 2-10 (emphasis added); NextEra Appeal I at 26-27. The Sandia Study also criticized the WASH-1400 report's decontamination cost estimates because they were based on decontamination to a long-term radiological dose criterion of 25 rem (incurred over 30 years), noting that long-term radiological exposure standards "have been tightened considerably" since 1975. *See id.* at 2-9.

[194] Sandia Study at 2-9 (emphasis added).

[195] NextEra Appeal at 26 (citing User's Guide at 7-9 to 7-11).

[196] *See* User's Guide at 7-9.

discuss or even mention the issue of "decontamination factors" (or "decontamination levels," as they are called in the Seabrook SAMA analysis).[197] Moreover, there are other user-defined inputs in the MACCS2 code that also reflect underlying assumptions about how difficult — and how expensive — decontamination activities may need to be.

Here, for example, the Seabrook SAMA analysis expressly outlines various decontamination cost parameters used in the analysis. These include the estimated cost of farm decontamination (per hectare) for two levels of decontamination; the estimated cost of nonfarm decontamination (per resident person) for two levels of decontamination; the estimated labor cost for decontamination (per man-year); the estimated value of farm wealth (per hectare); the estimated average value of nonfarm wealth (per person); and the estimated population relocation costs per person.[198] Friends/NEC do not provide any factual or expert support challenging these specific economic cost parameters. Nor does their contention claim that the SAMA analysis lacks necessary information. In short, while the Sandia Study may criticize "earlier estimates" or studies of severe accident decontamination costs for inappropriately assuming achievement of high levels of decontamination at a low cost, Friends/NEC Contention 4E does not set forth a genuine material dispute with the *Seabrook* SAMA analysis, and therefore does not satisfy the contention admissibility requirements.[199]

Other arguments made as part of the Friends/NEC "decontamination costs" claims equally lack support or simply do not raise a genuine dispute with the

---

[197] Only in responding to NextEra's arguments before the Board did Friends/NEC refer to decontamination factors, inquiring if NextEra took "the User's Guide's suggestion" of using 3 and 15 for decontamination level inputs, and stating that "[t]hese are questions to answer as we go along." *See* Friends/NEC Reply at 41-42. But our contention rules precisely are intended to prevent admission of ill-defined contentions where petitioners at the outset have not set forth particularized concerns. *See, e.g., Oconee,* CLI-99-11, 49 NRC at 337-38; *see also Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 224-25 (2004) (improper to use reply brief to introduce new arguments to "reinvigorate thinly supported contentions"). Contention 4E nowhere suggests a view on the User's Guide suggested decontamination factors. Even in their reply brief, Friends/NEC did not argue that particular decontamination factors should (or should not) be used in the Seabrook analysis — again, no particularized argument on decontamination factors is raised. Before us, Friends/NEC had no further comment on either the relevance of the Sandia Study to the Seabrook analysis, or on decontamination factors. *See* Friends/NEC Opposition to NextEra Appeal at 5-6.

[198] Environmental Report, Attach. F at F-58.

[199] At best, Friends/NEC offer a generalized claim of a failure to consider remediation of "economic infrastructure that make[s] business, tourism and other economic activity possible." *See* Friends/NEC Petition at 67. Generalized "economic cost" arguments, unsupported by asserted facts or expert opinion, are insufficient to show a genuine dispute with the application. The Board did not address specifically the Friends/NEC "economic infrastructure" claim, but rejected other similarly unsupported "economic cost" claims. *See* LBP-11-2, 73 NRC at 77 (rejecting claims of overlooked "business value of property," "job retraining," "unemployment payments," and "inevitable litigation").

application. These include the unsupported argument that "[CERCLA], EPA, and local authorities would not allow use of" decontamination processes such as "firehosing" and "plowing." Friends/NEC claim that these methods "simply move[ ] the contamination from one place to another," and would result in a cleanup that would "take far longer, be more expensive and its success . . . unlikely."[200]

Friends/NEC quote a passage from the MACCS2 User's Guide, which acknowledges that "[m]any" decontamination processes, such as "plowing" and "firehosing," reduce direct exposure doses from groundshine and resuspension, but wash surface contamination down into the ground and therefore may not move contaminants "out of the root zone."[201] The passage goes on to explain that because contaminants may remain in root systems, the MACCS2 economic cost model (like the earlier WASH-1400 model) assumes that farmland decontamination reduces direct exposure doses to farmers, but "*does not reduce* the ingestion doses" from "consumption of crops that are contaminated by root uptake."[202] Friends/NEC neither point to any error regarding this aspect of the MACCS2 code, nor tie the passage to a specific and supported material dispute with the Seabrook SAMA analysis. Nor does either the MACCS2 User's Guide or WASH-1400 suggest that "plowing" and "firehosing" are the only decontamination methods available.[203] Friends/NEC's "firehosing" and "plowing" claims raise no genuine material dispute with the application.

The Board also admitted as part of Contention 4E a claim that "urban areas are more costly to clean up than rural areas."[204] But like the general argument that small radionuclide particles are more difficult to remove than large particles, we do not see how this claim — even assuming it is true — raises a genuine dispute with the Seabrook SAMA analysis. Friends/NEC do not suggest with any support that the SAMA analysis fails to encompass the decontamination of particular urban areas that should have been considered, or proffer any site-specific economic cost information or cost estimates for any relevant "urban areas." Friends/NEC provide no factual or expert support identifying error in the estimated costs of decontamination or identifying specific overlooked "urban" decontamination costs that may bear on the analysis's results.

Instead, as NextEra argues, Friends/NEC merely referenced excerpts of reports that "reflect the intuitive notions that cleanup of urban areas and cleanup to a higher standard can be more expensive than cleanup of rural areas or to a

---

[200] Friends/NEC Petition at 64.

[201] *Id.* at 62 (quoting User's Guide at 7-10).

[202] User's Guide at 7-10 (emphasis added).

[203] *See, e.g.,* WASH-1400, App. VI, App. K at K-2 (noting both wet and dry decontamination methods).

[204] LBP-11-2, 73 NRC at 75.

lower standard."[205] While not challenging any of the specific decontamination cost estimates or parameters provided in the Seabrook analysis, Friends/NEC refer to decontamination costs estimates in the 1996 Sandia Study of plutonium dispersal accidents, which estimated a cost of $309 million per square kilometer for areas with "heavy [plutonium] contamination."[206] With no expert or factual support describing why or how it would be appropriate to directly compare the decontamination cost estimates for plutonium dispersal accident scenarios studied in the Sandia Study with the *site-specific* Seabrook SAMA analysis, Friends/NEC argue that Boston, Manchester, Portsmouth, and Portland would have "much higher" decontamination costs than the costs outlined in the Sandia Study.[207]

Again without support or explanation, Friends/NEC claim that instead of the "outdated decontamination costs figure in the MACCS2 code" — and notably, the challenged "costs figure" is never identified — "the SAMA analysis for Seabrook should incorporate, for example, the analytical framework contained in the 1996 Sandia" Study, "as well as studies examining Chernobyl and [radioactive dispersal-type devices]."[208] The Seabrook SAMA analysis is a site-specific mitigation alternatives analysis considering reactor severe accident scenarios for the Seabrook site. The analysis takes into account the particular mix of radionuclides in the reactor core, reactor accident radiological contaminants and their half-lives; facility-specific characteristics and accident scenarios; economic data for the thirteen counties within 50 miles of the plant; site-specific meteorological data and atmospheric dispersion modeling; and other site-specific and reactor accident-specific factors. Friends/NEC's generalized suggestions that other cost estimates and studies involving significantly different accident scenarios and assumptions reflect more accurate approaches or values to use, or otherwise indicate errors in the Seabrook SAMA analysis, are unsupported and therefore speculative. Again,

---

[205] NextEra Appeal I at 27.

[206] Friends/NEC Petition at 66 (citing Sandia Study at 6-5).

[207] *Id.* at 66. Moreover, Friends/NEC go on to claim that the "economic losses stemming from the stigma effects of a severe accident are staggering." *See id.* at 66-67. Psychological fears or "stigma" effects, however, are not cognizable NEPA claims. *See generally Metropolitan Edison Co. v. People Against Nuclear Energy,* 460 U.S. 766 (1983).

Repeatedly, Friends/NEC make other assertions that are not linked to a specific dispute with the application. For example, they generally assert that the health consequences of a severe reactor accident could greatly exceed the consequences of a plutonium-dispersal accident because the quantities of a radioactive material in an operating reactor are greater. *See* Friends/NEC Petition at 67. Friends/NEC also generally refer to longstanding differences in "cleanup standards" between the NRC and the Environmental Protection Agency, as indicated in a cited 2004 General Accounting Office report. *See* Friends/NEC Petition at 65. This issue does not fall within the scope of this license renewal proceeding. Friends/NEC raise no claim that any particular NRC or EPA standard should have been used in the Seabrook SAMA analysis.

[208] Friends/NEC Petition at 66.

any number of alternative analyses may be reasonable under NEPA. The issue is not whether alternative approaches exist, alternative inputs may be substituted, or yet another factor could be considered. Petitioners must provide factual or expert support that proposed alternatives are warranted because the analysis that was done is insufficient to satisfy NEPA.

To conclude, we gave careful review to the Friends/NEC Contention 4E, but the contention is largely speculative, displays minimal understanding of the issues raised, and at bottom, fails to raise a supported genuine material dispute with the application. We do not disagree with the Board that Friends/NEC provided adequate support for general claims that "smaller particles will create higher cleanup costs, and that urban areas are more costly to clean up than rural areas."[209] But as we described, these assertions do not point to a genuine dispute with the application. The Board admitted the contention on the ground that Friends/NEC "dispute sufficiently important assumptions in the calculation of severe accident decontamination and cleanup costs" in the Seabrook SAMA analysis.[210] But the contention nowhere identifies with support the specific "assumptions in the calculation" that are challenged. We therefore find that the Board erred in admitting Friends/NEC Contention 4E.

4. Beyond Nuclear Contention

> The NextEra Environmental Report fails to evaluate the potential for renewable energy to offset the loss of energy production from the Seabrook nuclear power plant and to make the requested license renewal action for 2030 unnecessary. In violation of the requirements of 10 C.F.R. § 51.53(c)(3)(iii) and of the GEIS § 8.1, the NextEra Environmental Report (§ 7.2) treats all of the alternatives to license renewal except for natural gas and coal plants as unreasonable[,] and does not provide a substantial analysis of the potential for significant alternatives which are being aggressively planned and developed in the Region of Interest for the requested relicensing period of 2030-2050. The scope of the [Supplemental EIS] is improperly narrow, and the issue of the need for Seabrook as a means of satisfying demand forecasts for the relicensing period must be revisited due to dramatically-changing circumstances in the regional energy mix throughout the two decades preceding the relicensing period.[211]

The Board admitted this contention but restricted its scope. Concluding that all

[209] LBP-11-2, 73 NRC at 75.
[210] *Id.*
[211] Beyond Nuclear Petition at 6.

"supporting facts focus exclusively on wind power generation," the Board limited Beyond Nuclear's contention to just that form of renewable energy.[212]

a. Background

Our regulations implementing NEPA § 102 require Environmental Reports submitted by license renewal applicants to address the environmental impacts of the proposed action and also to compare them to impacts of alternative actions.[213] But NEPA requires consideration of "reasonable" alternatives, not all conceivable ones.[214]

Our License Renewal GEIS[215] provides guidance on the scope of the energy alternatives analysis for license renewal. In particular, the GEIS concluded "that a reasonable set of alternatives should be limited to analysis of single, discrete electric generation sources . . . that are technically feasible and commercially viable."[216] This is guidance currently in place on the subject; however, the Staff is preparing an update to the License Renewal GEIS — still under way — that proposes a somewhat broader analysis of alternative energy sources.[217] The proposed revised GEIS would provide for reviewing several individual energy alternatives, and also observes that "combinations of alternatives may be considered during plant-specific license reviews."[218] While the 1996 License Renewal GEIS carries special weight as a guidance document that has been approved by the Commission, in the end it is nonbinding guidance, and thus

---

[212] LBP-11-2, 73 NRC at 53.

[213] 10 C.F.R. § 51.53(c)(2). *See* NEPA § 102(2)(C)(i)-(iii), 42 U.S.C. § 4332(2)(C)(i)-(iii).

[214] *Natural Resources Defense Council, Inc. v. Morton,* 458 F.2d 827, 834, 837, 838 (D.C. Cir. 1972).

[215] *See generally* License Renewal GEIS.

[216] License Renewal GEIS, Vol. 1, § 8.1 at 8-1.

[217] *See generally* Proposed Rule: "Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses," 74 Fed. Reg. 38,117 (July 31, 2009).

[218] "Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Main Report, Draft Report for Comment," NUREG-1437, Rev. 1 (Vol. 1 July 2009) (ADAMS Accession No. ML091770049), at 2-18 (Draft Revised GEIS). As the Staff indicated earlier in this proceeding, the Staff has taken this approach in at least one supplemental EIS, associated with the Salem and Hope Creek license renewal applications. *See* Tr. at 113-14; "Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants: Regarding Hope Creek Generating Station and Salem Nuclear Generating Station, Units 1 and 2," NUREG-1437, Supplement 45 (Mar. 2011) (ADAMS Accession No. ML11089A021), §§ 8.1, 8.2. With respect to renewable alternatives in particular, the proposed revised GEIS states: "Combinations of energy renewable alternatives may be considered during plant-specific licensing reviews." Draft Revised GEIS at 2-20. The Seabrook Environmental Report provided a brief assessment of several renewable alternatives, but determined that none was a reasonable replacement for Seabrook. *See* Environmental Report § 7.2.1.5.

not unassailable. An application that complies with existing guidance may be challenged, provided that contention-admissibility requirements are met.[219]

We also have held that our Staff's EISs "need only discuss those alternatives that . . . 'will bring about the ends' of the proposed action"[220] — a principle equally applicable to Environmental Reports.[221] We give "substantial weight to the preferences of the applicant and/or sponsor."[222] NextEra's stated purpose for the Seabrook license renewal, as reflected in its application, is baseload power generation.[223] Thus, although NextEra in its Environmental Report briefly examined wind energy as a potential alternative to a license renewal, NextEra rejected that option on the ground that wind power, at least in its current state, is incapable of producing baseload power.[224]

The Board held that, despite the broad language of the contention, Beyond Nuclear's "supporting facts focus[ed] exclusively"[225] on the alternative of a "system of interconnected *offshore wind farms*" that, according to Beyond Nuclear, could provide baseload power for the "region of interest" currently served by Seabrook.[226] The Board therefore narrowed the contention to include only this issue, which it found to be supported by "sufficient minimal evidence" in Beyond

---

[219] *See, e.g., International Uranium (USA) Corp.* (Request for Materials License Amendment), CLI-00-1, 51 NRC 9, 19 (2000) (noting that the Commission is not bound by guidance documents, which do not carry the force of regulations and do not impose legal requirements upon licensees).

[220] *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 55 (2001) (quoting *Citizens Against Burlington v. Busey,* 938 F.2d 190, 195 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991)). *See also Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-93-3, 37 NRC 135, 144-45 (1993).

[221] *See generally 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).

[222] *City of Grapevine v. Department of Transportation,* 17 F.3d 1502, 1506 (D.C. Cir.) (quoting *Citizens Against Burlington,* 938 F.2d 197-98), *cert. denied,* 513 U.S. 1043 (1994); *Hydro Resources,* CLI-01-4, 53 NRC at 55 (internal quotation marks and citations omitted):

> When reviewing a discrete license application filed by a private applicant, a federal agency may appropriately accord substantial weight to the preferences of the applicant . . . in the siting and design of the project. . . . The agency thus may take into account the economic goals of the project's sponsor.

[223] NextEra Appeal II at 4 (quoting Environmental Report § 7.2.1, at 7-6), 4-5 (citing Environmental Report § 7.2.1, at 7-12). "Baseload power" generates "energy intended to continuously produce electricity at or near full capacity, with high availability." *Environmental Law and Policy Center v. NRC,* 470 F.3d 676, 679 (7th Cir. 2006).

[224] Environmental Report § 7.2.1.5, at 7-12 to 7-13.

[225] LBP-11-2, 73 NRC at 53.

[226] *Id.* at 48 (emphasis added). Seabrook's "region of interest" is Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. Environmental Report § 7.2.1, at 7-6.

Nuclear's exhibits.[227] The Board found that Beyond Nuclear had plausibly asserted that offshore wind farms may prove feasible in the near future.[228]

b. Discussion

As discussed below, we conclude that the Board erred in admitting this contention.[229]

(1) THE SCOPE OF THE ENERGY-ALTERNATIVES ANALYSIS

The Board disagreed with the Staff's position that "Beyond Nuclear . . . must show 'that wind is a feasible alternative *at the present time*.'"[230] Acknowledging that "'remote and speculative' alternatives need not be addressed in an applicant's environmental report,"[231] the Board nonetheless indicated that, for license renewal, "the relevant time frame is considerably broader than 'the present time.'"[232] Rather, the Board concluded that it was required "to consider alternatives 'as they exist and are likely to exist.'"[233] The Board construed some of Beyond Nuclear's supporting references to indicate that "an integrated system of offshore wind farms could be a viable source of baseload power in the region as early as 2015."[234]

---

[227] LBP-11-2, 73 NRC at 52 (internal quotation marks omitted). *See also id.* at 48-50 (describing various Beyond Nuclear exhibits); *id.* at 53 (limiting the scope of the contention). The Board also concluded that many of the Staff's and NextEra's arguments regarding the remaining admissibility standards "improperly address[ed] the merits of [Beyond Nuclear's] contention, rather than whether petitioners have provided a minimal showing that material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate." *Id.* at 50 (footnote and internal quotation marks omitted).

[228] *Id.* at 51-52 (citing Tr. at 24, 34). *Accord id.* at 53 (Beyond Nuclear has "demonstrated some possibility that wind power might be a reasonable alternative as early as 2015"). *See generally id.* at 48 (Beyond Nuclear supports its contention "with twenty exhibits purporting to demonstrate that, within the foreseeable future, an environmentally superior system of interconnected offshore wind farms might provide baseload power in the relevant region and thus should have been evaluated in greater detail in the Applicant's environmental report.").

[229] NextEra argues on appeal that the contention constitutes a prohibited collateral attack on 10 C.F.R. § 54.17(c) and, separately, that the Board improperly reformulated the contention. *See* NextEra Appeal II at 10 & 19, respectively. Because we reject this contention on other grounds, we need not address these arguments.

[230] LBP-11-2, 73 NRC at 51 (emphasis added) (quoting Staff Answer to Petitions at 102).

[231] *Id.* (citing *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.,* 435 U.S. 519, 551 (1978) (quoting, in turn, *Natural Resources Defense Council, Inc. v. Morton,* 458 F.2d 827, 837-38 (D.C. Cir. 1972))).

[232] *Id.* at 51.

[233] *Id.* (quoting *Carolina Environmental Study Group v. United States,* 510 F.2d 796, 801 (D.C. Cir. 1975)).

[234] *Id.* at 51-52 (citing Tr. at 24, 34).

Beyond Nuclear argued before the Board that in their NEPA analyses the NRC and NextEra should predict which technologies will be available by the beginning of the "requested relicensing period of 2030 to 2050"[235] rather than confine themselves to what is available either now or in the near future.[236] The Board found "sufficient 'minimal' evidence" regarding an integrated system of offshore wind farms "to warrant further inquiry as to whether such a system might be 'likely to exist' during the relevant time period."[237] NextEra challenges this aspect of the Board's decision as unsupported by the record[238] and as an improper requirement that NextEra consider a "remote and speculative" alternative.[239]

The Board is correct that the relevant period "is considerably broader than 'the present time.'"[240] As the Board observed, the standard established in *Carolina Environmental Study Group* is whether an alternative is "likely to exist." It is the future environmental effect of activities during the renewal period that must be considered, not current environmental effects.[241]

Pragmatically, however, near-term effects often are the best indicator of future ones. NEPA requires a "hard look" at the environmental effects of the planned action and reasonable alternatives to that action, using the best information available at the time the assessment is performed. An environmental impact statement is not "intended to be a 'research document,' reflecting the frontiers of scientific methodology, studies, and data."[242] Assessments of future energy alternatives necessarily are of a predictive nature, and the assessment therefore will include uncertainties associated with predicting advances in technology.

---

[235] Beyond Nuclear Petition at 13.

[236] *See, e.g., id.* at 13, 18 ("NEPA challenges the Applicant and the federal agency to 'reasonably foresee' beyond the present time in formulating its evaluation of alternatives in the Environmental Report for the projected federal relicensing action as proposed to begin in 2030"). Beyond Nuclear presents the same argument to us. *See, e.g.,* Beyond Nuclear Opposition to Appeal at 27 (criticizing NextEra for "tak[ing] the requested licensing action out of context for 2030 to 2050 and replac[ing] with its own interpretation of reasonableness for 'at this time,' 'in the near term,' and 'does not exist today'") (emphasis omitted).

[237] LBP-11-2, 73 NRC at 52. The Board explained that it was not deciding at the contention admissibility stage "the exact date by which an integrated system of offshore wind farms would have to be found 'likely to exist.'" *Id.* at 52 n.134.

[238] NextEra Appeal II at 11-15.

[239] *Id.* at 9-10.

[240] LBP-11-2, 73 NRC at 51.

[241] *See generally Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 11-13 (2001) (describing the Part 51 process for environmental review associated with license renewal, focusing upon the potential impacts of an additional 20 years of plant operation).

[242] *See Pilgrim,* CLI-10-11, 71 NRC at 315 (citing *Town of Winthrop v. Federal Aviation Administration,* 535 F.3d 1, 11-13 (1st Cir. 2008)).

In other words, in performing an alternatives analysis, the applicant — and the agency — are limited by the information that is reasonably available in preparing the environmental review documents. When considering energy alternatives, it is nearly always impossible to predict, decades in advance, the viability of technologies that are currently not operational and are many years from large-scale development. Except in rare cases where there is evidence of unusual predictive reliability, it is not workable to consider, for purposes of NEPA analysis, what are essentially hypothetical or speculative alternatives as a source of future baseload power generation.[243] For this reason, we find sensible the Staff's argument that in most cases a "reasonable" energy alternative is one that is currently commercially viable, or will become so in the relatively near term. Such an assessment generally will be sufficient to provide the requisite "hard look" under NEPA.

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.[244] 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. We therefore conclude that the Board erred in admitting the contention.[245]

(2) FAILURE TO PROPERLY TAKE INTO ACCOUNT NEXTERA'S PURPOSE IN SEEKING LICENSE RENEWAL

To demonstrate the admissibility of a NEPA contention that an applicant failed

---

[243] "NEPA does not require agencies to analyze impacts of alternatives that are speculative, remote, impractical, or not viable." *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-28, 62 NRC 721, 729 (2005) (citations omitted).

[244] *See Roosevelt Campobello International Park Commission v. Environmental Protection Agency,* 684 F.2d 1041, 1047 (1st Cir. 1982) (holding that, for siting alternatives, EPA's "duty under NEPA is to study all alternatives that appear reasonable and appropriate for study at the time of drafting the EIS" (internal quotations omitted)); *Seacoast Anti-Pollution League v. NRC,* 598 F.2d 1221, 1230 (1st Cir. 1979) (holding that, for siting alternatives, an agency must consider alternatives that appear reasonable "at the time" of the NEPA review). *Cf. Carolina Envtl. Study Grp.,* 510 F.2d at 800 (holding that NEPA was not meant to require detailed discussion of "remote and speculative" alternatives).

[245] To avoid any misunderstanding, however, we hasten to add that our ruling does not exclude the possibility that a contention could show a genuine dispute with respect to a technology that, 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. *See Carolina Envtl. Study Grp.,* 510 F.2d at 800.

to consider a viable alternative to its proposed action, a petitioner must show that its contention presents a "genuine dispute" under 10 C.F.R. § 2.309(f)(1)(vi). One element of that demonstration is a showing that the petitioner's proposed alternative would satisfy the purpose of the applicant's proposed action.[246] NextEra argues on appeal that the Board erred in finding that wind power might satisfy the purpose of NextEra's proposed action and that Beyond Nuclear had therefore presented a "genuine dispute."[247]

Neither this agency nor the applicant need consider any alternative that does not "'bring about the ends' of the proposed action."[248] As the D.C. Circuit stated in *Citizens Against Burlington,* "[w]hen the purpose is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved."[249] NextEra states that its purpose in seeking license renewal is to make available "baseload power" — a preference to which we accord substantial weight.[250] Beyond Nuclear has not articulated a genuine dispute with the Application as to the viability of offshore wind farms as a source of baseload power. For wind power to merit detailed consideration as an alternative to renewing the license for a nuclear power plant, that alternative should be capable of providing "technically feasible and commercially viable" baseload power during the renewal period. As we have discussed, in assessing energy-alternatives contentions, practicality requires us to consider chiefly, often exclusively, alternatives that can be shown to have viability today or in the near future.[251] Here, Beyond Nuclear has not provided support for its claim that offshore wind is technically feasible and commercially viable — either today or in the near future — and therefore has not submitted an admissible contention.[252] We rest this conclusion on the grounds discussed below.

(i) Energy Storage

As NextEra points out, Beyond Nuclear does not challenge the conclusion in NextEra's Environmental Report that the combination of wind-based generation

---

[246] *See* note 221, *supra.*

[247] Beyond Nuclear Petition at 15-18.

[248] *Hydro Resources,* CLI-01-4, 53 NRC at 55 (quoting *Citizens Against Burlington,* 938 F.2d at 195). *Accord Envtl. Law & Policy Center v. NRC,* 470 F.3d at 683-84.

[249] 938 F.2d at 195 (citation and internal quotation marks omitted).

[250] *See* note 223, *supra,* and associated text.

[251] *See* License Renewal GEIS, Vol. 1, § 8.1, at 8-1.

[252] In theory, a petitioner might show that an alternative technology, while not viable today or in the near future, is highly likely to come online during the period of extended operation. But such a showing is possible, as we noted above (at p. 342), only "in rare cases where there is evidence of unusual predictive reliability." Beyond Nuclear proffered no such evidence in support of its contention in this proceeding.

and compressed air energy storage would be too costly to be a reasonable alternative to nuclear energy as a source of baseload power.[253] NextEra argues on appeal that this omission is fatal to Beyond Nuclear's contention, and therefore also to the Board's admission of that contention.[254] We agree. Absent a challenge on this essential issue, there is no genuine dispute as required under section 2.309(f)(1)(vi).

(ii) Offshore Wind Technology

The Board ruled that Beyond Nuclear presented a genuine dispute regarding the feasibility of offshore wind technology. The Board concluded that although "[p]etitioners may face a difficult task in trying to demonstrate that such a system is . . . practical . . . [, s]uch disputed facts are not appropriately resolved . . . in connection with the Board's [admissibility] determination . . . ."[255] We disagree with the Board on this point. As we view the record, Beyond Nuclear's "offshore wind" contention is not sustainable on its face because it lacks a supporting basis. We reach this result without improperly resolving disputed facts.

NextEra stated in its Environmental Report that the technology for an ocean-based wind farm even approaching the generation capacity of Seabrook is only in its nascent stage.[256] Beyond Nuclear did not address this point (nor did the Board in LBP-11-2). Without some challenge to NextEra's Environmental Report on the nascent technology point, there is no genuine dispute of material fact as to whether offshore wind power is, or soon will be, a reasonable alternative to license renewal.

---

[253] *See* NextEra Appeal II at 18; Environmental Report § 7.2.1.5, at 7-12. *See also* Beyond Nuclear Petition at 20-21. Beyond Nuclear's Exhibit 3 addresses the potential of compressed air energy storage technology but does not address its cost, other than to observe generally that "additional work will be required to examine the feasibility of advanced wind/[compressed air energy storage] concepts." National Renewable Energy Laboratory, "Creating Baseload Wind Power Systems Using Advanced Compressed Air Energy Storage Concepts" (ADAMS Accession No. ML102930308). NextEra provides an explanation of why this approach is not financially feasible/commercially viable, which Beyond Nuclear does not challenge. *See* NextEra's Answer to Beyond Nuclear Petition at 19-23; Environmental Report § 7.2.1.5, at 7-12 to 7-13.

[254] NextEra Appeal II at 19. As an alternative to energy storage, Beyond Nuclear alludes to the use of high-voltage direct-current transmission lines to connect independent wind farms. *See* Beyond Nuclear Reply at 35-36. This alternative, however, supports electric power transmission, which is not NextEra's stated purpose. NextEra states that it does not currently "own or operate substantial transmission assets in the region." NextEra Answer to Beyond Nuclear Petition at 29. *See also* NextEra Appeal II at 21-22. Because Beyond Nuclear poses an alternative that would expand the purpose of the Application, it fails to proffer a "genuine dispute" as required under 10 C.F.R. § 2.309(f)(1)(vi).

[255] LBP-11-2, 73 NRC at 51.

[256] Environmental Report § 7.2.1.5, at 7-12.

NextEra takes issue with the following reasoning offered by the Board in partial support of its admission of Beyond Nuclear's contention:

> Allegedly, some of the Beyond Nuclear petitioners' supporting references show that an integrated system of offshore wind farms could be a viable source of baseload power in the region *as early as 2015.* Whether this is so remains to be seen. In the Board's view, however, petitioners have proffered sufficient "minimal" evidence to warrant further inquiry as to whether such a system might be "likely to exist" during the relevant time period.[257]

The Board cites the prehearing conference transcript, where Beyond Nuclear's representative discussed one of its exhibits, not cited by the Board.[258] NextEra argues that in actuality the "supporting references" do not support the Board's conclusion that Beyond Nuclear had "proffered sufficient 'minimal' evidence."[259] We agree with NextEra.

The Beyond Nuclear representative first stated that, according to a University of Maine document, the operators of offshore wind farms "are delivering baseload by 2015."[260] This statement appears to offer a prediction or statement of expectation that wind-derived baseload power *will* be delivered by 2015. This statement, however, is contradicted by the same representative later in oral argument, and also by Beyond Nuclear's Exhibit 17 (upon which the representative relied in making this statement).

In the representative's second statement, he described the University of Maine document as presenting only a "plan" for "25 megawatts [MW] of . . . deep water offshore wind . . . to come online by 2014."[261] Our review of Beyond Nuclear's referenced exhibit confirms that it refers to a plan only — not a statement of expectation that the project will be commercially viable as of 2014. Therefore, the two cited portions of the oral argument transcript, when read together and in light of the exhibits, do not support the Board's conclusion.

Indeed, the representative's first statement is contradicted by the cited exhibit, which sets forth a timeline for the "planned" offshore wind power in Maine. The timeline for the plan describes 2012-2014 as the period for accomplishing the design, construction, deployment, and testing of a 3- to 5-MW "floating wind

---

[257] LBP-11-2, 73 NRC at 51-52 (footnotes omitted; emphasis added).

[258] *Id.* (citing Tr. at 24, 34). *See generally* Beyond Nuclear Ex. 17, University of Maine, "Maine Offshore Wind Plan, Setting the Course for Energy Independence" (ADAMS Accession No. ML-102930375).

[259] NextEra Appeal II at 11-14.

[260] Tr. at 24, referring to Beyond Nuclear Ex. 17 (Phases 2-5).

[261] *Id.* at 34.

turbine prototype."[262] But because a single wind turbine cannot provide "continuous" production of electricity "at or near full capacity," it does not constitute a source of "baseload" power[263] — the term Beyond Nuclear's representative used, and on which the Board appeared to rely in its finding.[264]

In short, neither the transcript nor the referenced exhibit provides support for Beyond Nuclear's assertion that wind energy may provide baseload power by 2015. The Board therefore erred in relying on those portions of the record as support for its conclusion that Beyond Nuclear's Contention was admissible.[265]

Further, Beyond Nuclear's Exhibits 14 and 15 undermine its arguments regarding the technical feasibility that would be needed to show a genuine dispute regarding offshore wind power as a reasonable alternative. The "Final Report of the Maine Ocean Energy Task Force to Governor John E. Baldacci" (Exhibit 14) observes:

---

[262] Beyond Nuclear Ex. 17 (Phase 2). We also observe that this description does not match the 25-MW wind turbine to which Beyond Nuclear's representative referred in his second statement.

[263] *See Envtl. Law and Policy Ctr.,* 470 F.3d at 679 (defining baseload power). Beyond Nuclear's own exhibits confirm that the prototype does not satisfy this definition. *See* Beyond Nuclear Ex. 4, Cristina L. Archer and Mark Z. Jacobson, *Supplying Baseload Power and Reducing Transmission Requirements by Interconnecting Wind Farms,* 46 J. Appl. Meteorol. Climatol. 1701, 1716 ("an average of 33% and a maximum of 47% of yearly averaged wind power from interconnected farms can be used as reliable, baseload electric power") (Nov. 2007) (ADAMS Accession No. ML102930309); Beyond Nuclear Ex. 9, EnerNex Corp., "Eastern Wind Integration and Transmission Study" (Jan. 2010), at 54 & 217 (referring to wind turbine capacity factors between 24.1% and 32.8%); Beyond Nuclear Ex. 19, U.S. Department of Energy (DOE), "20% Wind Energy by 2030: Increasing Wind Energy's Contribution to U.S. Electricity Supply" (July 2008), at 26 (36% capacity factor in 2004 and 2005), 89 (Table 4.3: 30% capacity factor from June 2005 to May 2006), 183 (Table B-11: projecting 34-55% capacity factors for shallow-water offshore wind turbines between 2005 and 2030), 221 ("Most wind power plants operate at a capacity factor of 25% to 40%") (ADAMS Accession No. ML102930395); Beyond Nuclear Ex. 21, National Renewable Energy Laboratory, "Large-Scale Offshore Wind Power in the United States: Assessment of Opportunities and Barriers" (Sept. 2010) at 35 n.7 (assigns offshore wind a capacity factor of 37%), 59 (35% to 50% capacity factor), 117 nn.3-4 (assumes a 35% capacity factor to offshore wind plants in shallow water) (ADAMS Accession No. ML102930637).

[264] To the extent the Board may have relied on the two additional exhibits from the University of Maine, we find that they likewise do not support the Board's ruling. *See* Beyond Nuclear Ex. 16, University of Maine, "Deepwater Offshore Wind in Maine: the Plan, the Timeline" (June 18, 2009) (ML102930376) (pages 13 and 14 further describe portions of the planned schedule set forth in Ex. 17); Beyond Nuclear Ex. 18, University of Maine, "Deepwater Offshore Wind: A National Opportunity" (Aug. 17, 2010) (ML102930391) (page 30 contains the same chart that comprises Ex. 17, and pages 33, 36, and 37 further describe portions of the planned schedule set forth in Ex. 17).

[265] For a contention to be admissible, the sponsoring petitioner must, among other things, "[p]rovide a concise statement of the alleged facts or expert opinions which support [its] 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 [it] intends to rely to support its position on the issue." 10 C.F.R. § 2.309(f)(1)(v).

> [T]echnologies that would enable the placement of wind turbines on floating platforms or other structures in greater depths needed to tap the world-class deep-water resources in Maine's coastal waters or in adjoining federal waters are under development . . . . Lack of the requisite technology is an obvious barrier to establishment of the deep-water wind industry in Maine or elsewhere in the near term.[266]

Similarly, a preliminary draft report by the Department of Energy that is in the record (Exhibit 15) raises serious questions regarding the technical feasibility of offshore wind farms as a source of baseload power.[267] According to the DOE report, offshore wind power deployment still faces significant challenges regarding resource characterization, infrastructure, and grid interconnection and operation.[268] The DOE report states that offshore wind power needs to overcome significant uncertainties related to both potential project power production and the design of turbines and arrays.[269] The implications for adding large amounts of offshore wind generation to the power system are, says DOE, still not well understood and, as a consequence, reliable integration cannot be assured.[270] DOE concludes that, "with current technology, cost-effective installation of offshore wind turbines requires specialized turbine installation vessels, purpose-built portside infrastructure for installation, operations, and maintenance, and robust undersea electricity transmission lines and grid interconnections [none of which] . . . currently exist in the U.S. . . ."[271]

The DOE report further states that very little site-specific data are available on the external conditions that influence design requirements and energy production, and that the paucity of documentation regarding factors such as "wind resource[, . . .] wave action and seabed mechanics" currently precludes "accurate marine spatial planning [and] establishment of prioritized offshore wind

---

[266] Beyond Nuclear Ex. 14, "Final Report of the Maine Ocean Energy Task Force to Governor John E. Baldacci" (Dec. 2009), at 27 (ADAMS Accession No. ML102930365). *See also, e.g., id.* at iv ("the technology to economically harness off-shore winds in deep water (greater than 60 meters) does not exist today."), 28-29 (listing technological (and financial) hurdles facing wind power).

[267] Beyond Nuclear Ex. 15, "Creating an Offshore Wind Industry in the United States: A Strategic Work Plan for the United States Department of Energy, Fiscal Years 2011-2015" (Predecisional Draft) (Sept. 2, 2010), at 7-8 (ADAMS Accession No. ML102930374).

[268] *Id.* at 7.

[269] *Id.*

[270] *Id.*

[271] *Id.* at 7-8. *See also* Beyond Nuclear Ex. 19 at 57 ("Today's European shallow-water technology is still too expensive and too difficult to site in U.S. waters. . . . [N]ecessary technologies have yet to be developed . . . ."); Beyond Nuclear Ex. 21 at 4-6 (addressing current technological challenges), 72 (addressing technological immaturity).

zones . . . ."[272] Ultimately, the DOE Report concludes that "[l]ong-term gigawatt deployment of offshore wind energy in the United States cannot exist within the current [regulatory] landscape" and, further, that "key market, social and environmental risks are not well-understood; offshore wind resources are poorly characterized; and essential transmission, supply chain, installation and maintenance infrastructure does not yet exist."[273]

Beyond Nuclear's Exhibits 14 and 15 thus do not support its arguments regarding the technical feasibility that would be needed to show a genuine dispute regarding offshore wind power as a reasonable alternative to license renewal.

For all these reasons, we conclude that Beyond Nuclear's contention, and the record-at-large, provide insufficient support for the Board's statement that "[a]llegedly, some" of Beyond Nuclear's "supporting references show that an integrated system of offshore wind farms could be a viable source of baseload power in the region as early as 2015."[274] To the contrary, the record demonstrates that Beyond Nuclear has failed to raise a genuine dispute regarding whether offshore wind farms are a technically feasible source of baseload power today, or whether they will become so in the near future.

(3) NO DISPUTED QUESTION AS TO WHETHER WIND FARMS ARE "SINGLE, DISCRETE ELECTRIC GENERATION SOURCES" UNDER THE GEIS

Finally, NextEra argues on appeal that the Board erred in concluding that a disputed question of fact existed as to whether wind farms that combine with other wind farms to create an interconnected network would constitute a "*single, discrete* electric generation source" as specified in the GEIS.[275] As NextEra correctly points out, Beyond Nuclear does not make this argument.[276] The Board therefore committed legal error by supplying a basis not argued by Beyond Nuclear, although we consider that error to be harmless, given that the GEIS does not impose a requirement on the alternatives analysis.[277]

---

[272] Beyond Nuclear Ex. 15 at 14.

[273] *Id.* at 10.

[274] LBP-11-2, 73 NRC at 51-52 (footnote omitted).

[275] NextEra Appeal II at 8, 20-21 (emphasis added). *See also* LBP-11-2, 73 NRC at 52; License Renewal GEIS, Vol. 1, § 8.1, at 8-1.

[276] NextEra Appeal II at 5 n.8. Indeed, Beyond Nuclear's own Exhibit 17 would appear to undermine such an argument. *See, e.g.,* Beyond Nuclear Ex. 17, at Phase 5 (indicating that each of the University of Maine's planned wind farms would cover 64 square miles of ocean surface, and that there would be four to eight such farms).

[277] *See American Centrifuge,* CLI-06-10, 63 NRC at 457 ("it is not up to the boards to search through pleadings or other materials to uncover arguments and support never advanced by the petitioners themselves; boards may not simply infer unarticulated bases of contentions.") (footnote and internal

(Continued)

* * * *

One last matter bears mention. On April 18, 2011, Friends/NEC and Beyond Nuclear filed in this proceeding a petition requesting, among other things, that we suspend "all decisions" regarding the issuance of renewed licenses, pending completion of several actions associated with the recent nuclear events in Japan.[278] We granted the requests for relief in part, and denied them in part.[279] In particular, we declined to suspend this or any other adjudication, or any final licensing decisions, finding no imminent risk to public health and safety, or to common defense and security. The agency continues to evaluate the implications of the events in Japan for U.S. facilities, as well as to consider actions that may be taken as a result of lessons learned in light of those events. Particularly with regard to license renewal, we stated that "[t]he NRC's ongoing regulatory and oversight processes provide reasonable assurance that each facility complies with its 'current licensing basis,' which can be adjusted by future Commission order or by modification to the facility's operating license outside the renewal proceeding (perhaps even in parallel with the ongoing license renewal review)."[280]

IV. CONCLUSION

For the reasons discussed above, we *reverse* LBP-11-2 in part, and *affirm* it in part.

---

quotation marks omitted). *See generally Statement of Policy on Conduct of Adjudicatory Proceedings,* CLI-98-12, 48 NRC 18, 22 (1998) ("A contention's proponent, not the licensing board, is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for the admission of contentions . . . .").

[278] *See generally* 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 (dated Apr. 14-18, 2011; served and docketed Apr. 15, 2011; corrected petition filed Apr. 18, 2011); Declaration of Dr. Arjun Makhijani in Support of 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 (dated Apr. 19, 2011; filed Apr. 19, 2011; docketed Apr. 20, 2011).

[279] *See generally Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141 (2011).

[280] *Id.* at 164.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 8th day of March 2012.

Commissioners Svinicki and Apostolakis, Dissenting in Part

We respectfully dissent with regard to the admissibility of Friends/NEC Contention 4B. The majority itself acknowledges that this challenge by Friends/NEC to the use of the MAAP-generated release fractions in the Seabrook SAMA analysis "rests on a thin reed." Indeed, the majority's discussion renders it unnecessary for us to elaborate further on the deficiencies of the contention. In our view, Friends/NEC did not present the minimal factual or expert support necessary to demonstrate the existence of a genuine material dispute with the application. We do not expect our adjudicatory boards to arbitrate factual disputes at the contention admissibility stage, but admitting such an ill-defined and poorly support contention undermines the very purposes of our contention admissibility rules.[1] Contention 4B provides no basis on which a hearing would be meaningfully focused. Since the contention does not meet our rules on admissibility, we conclude that the Board erred in admitting Contention 4B.

[1] *See supra* p. 307.

Cite as 75 NRC 352 (2012) **CLI-12-6**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, 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) **March 8, 2012**

REVIEW, DISCRETIONARY

The Commission will grant a petition for review at its 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 which we may deem to be in the public interest.

STANDARD OF REVIEW: ADMISSIBILITY OF CONTENTIONS

For threshold issues like contention admissibility, the Commission gives substantial deference to a board's determinations. The Commission will affirm decisions on the admissibility of contentions where it finds no error of law or abuse of discretion.

APPEALS: STANDING

A litigant is not entitled to challenge a board ruling unless and until that ruling has worked a concrete injury to his personal interests.

MOTIONS TO REOPEN

The reopening standards expressly contemplate contentions that raise issues not previously litigated.

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

Federal courts leave to an agency's discretion the manner in which the agency determines whether information is new or significant to warrant supplementation of an environmental impact statement, including the application of its procedural rules.

WAIVER OF RULE

As a general matter, the Commission's regulations are not subject to challenge in adjudicatory proceedings. Section 2.335(b), however, provides an exception to this general rule.

WAIVER OF RULE

Section 2.335(b) permits a party to an adjudication to petition for a waiver of a rule or regulation upon a showing that special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation (or a provision of it) would not serve the purposes for which it was adopted. In order to meet this standard, the party seeking a waiver must attach an affidavit that, among other things, states with particularity the special circumstances claimed to justify the waiver or exception requested.

WAIVER OF RULE

The waiver petitioner must meet all four *Millstone* factors, demonstrating that: (i) the rule's strict application would not serve the purpose for which it was adopted; (ii) there are 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 rule is necessary to reach a significant safety problem.

MOTIONS TO REOPEN

Motions to reopen a closed record are governed by 10 C.F.R. § 2.326. The movant must show that: (1) the motion is timely; (2) the motion addresses a significant safety or environmental issue; and (3) a materially different result would be or would have been likely had the newly proffered evidence been considered initially. Each of the criteria must be separately addressed, with a specific explanation of why it has been met.

MOTIONS TO REOPEN

The level of support required to sustain a motion to reopen is greater than that required for a contention under the general admissibility requirements of 10 C.F.R. § 2.309(f)(1). The motion to reopen must be accompanied by affidavits that set forth the factual and/or technical bases for the movant's claim that the three criteria for reopening have been satisfied.

MOTIONS TO REOPEN

Evidence contained in the affidavits must meet the admissibility standards in 10 C.F.R. § 2.337. That is, it must be relevant, material, and reliable. Further, the affidavits must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised.

MOTIONS TO REOPEN

A litigant seeking to reopen a closed record necessarily faces a heavy burden. After a record has closed, finality attaches to the hearing process, and after that point, only timely, significant issues will be considered.

CONTENTIONS, NATIONAL ENVIRONMENTAL POLICY ACT

The Commission's adjudicatory proceedings are not Environmental Impact Statement (EIS) editing sessions. The burden is on the proponent of a contention to show that the Staff's analysis or methodology is unreasonable or insufficient.

NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act (NEPA) allows agencies to select their own methodology as long as that methodology is reasonable.

CONTENTIONS: SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS

Failure to challenge the existing severe accident mitigation alternatives (SAMA) analysis would be insufficient to establish a material dispute for the purposes of satisfying the general contention admissibility standards, let alone the reopening standards.

SUSPENSION OF PROCEEDING

The Commission considers suspension of licensing proceedings a drastic action that is not warranted absent compelling circumstances.

SUSPENSION OF PROCEEDING

In the *Private Fuel Storage* dry cask proceeding, the Commission articulated three criteria for determining whether to suspend an adjudication. The Commission balances whether moving forward with the adjudication will: (1) jeopardize the public health and safety; (2) prove an obstacle to fair and efficient decisionmaking; and (3) prevent appropriate implementation of any pertinent rule or policy changes that might emerge from the Commission's ongoing lessons-learned evaluation.

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

NEPA requires that the agency conduct its environmental review with the best information available now. It does not, however, require that the NRC wait until inchoate information matures into something that later might affect its review.

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

The Commission's rules enable the NRC to supplement a final supplemental EIS if, before a proposed action is taken, new and significant information comes to light that bears on the proposed action or its impacts, consistent with the Supreme Court's decision in *Marsh v. Oregon Natural Resources Council.*

MEMORANDUM AND ORDER

The Commonwealth of Massachusetts and Pilgrim Watch seek review of LBP-11-35, in which the Licensing Board denied Massachusetts' motion to admit

a new contention relating to the recent nuclear events in Japan, as well as other, related requests.[1] For the reasons set forth below, we deny the petitions for review. We also rule on a related suspension request.[2]

I. BACKGROUND

This adjudicatory proceeding commenced in 2006 with the publication in the *Federal Register* of a notice of opportunity for hearing.[3] Massachusetts and Pilgrim Watch each submitted hearing requests challenging Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.'s (together, Entergy) license renewal application for the Pilgrim Nuclear Power Station.[4] In addition to its hearing request, Massachusetts filed a petition for rulemaking to rescind the 10 C.F.R. Part 51 regulations that set forth the NRC's generic findings for certain environmental impacts during the license renewal term, namely, the regulations pertaining to the environmental impacts of spent fuel storage.[5] Massachusetts claimed that "new and significant information" invalidated the findings with respect to spent fuel pool environmental impacts.[6] The Board granted

---

[1] Commonwealth of Massachusetts' Notice of Appeal of LBP-11-35 (Dec. 8, 2011); Commonwealth of Massachusetts' Brief in Support of Appeal from LBP-11-35 (Dec. 8, 2011) (Massachusetts Petition for Review); Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Commonwealth of Massachusetts' Request for Stay, Motion for Waiver, and Request for Hearing on a New Contention Relating to the Fukushima Accident) Nov. 28, 2011 (Dec. 8, 2011) (Pilgrim Watch Petition for Review).

[2] *See* Commonwealth of Massachusetts' Conditional Motion to Suspend Pilgrim Nuclear Power Plant License Renewal Proceeding Pending Resolution of Petition for Rulemaking to Rescind Spent Fuel Pool Exclusion Regulations (June 2, 2011) (Conditional Motion to Suspend).

[3] 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).

[4] *See generally* Request for Hearing and Petition to Intervene by Pilgrim Watch (May 25, 2006); Massachusetts Attorney General's Request for a Hearing and Petition for Leave to Intervene with Respect to Entergy Nuclear Operations Inc.'s Application for Renewal of the Pilgrim Nuclear Power Plant Operating License and Petition for Backfit Order Requiring New Design Features to Protect Against Spent Fuel Pool Accidents (May 30, 2006).

[5] *See* Massachusetts Attorney General; Receipt of Petition for Rulemaking, 71 Fed. Reg. 64,169 (Nov. 1, 2006).

[6] *Id.* at 64,170.

Pilgrim Watch's hearing request and admitted two of its proposed contentions — Contentions 1 and 3.[7] The Board denied Massachusetts' hearing request.[8]

Massachusetts appealed the Board's ruling; we affirmed.[9] In doing so, we found that the Board properly rejected Massachusetts' contention — which raised concerns similar to those in its rulemaking petition — as an impermissible challenge to our regulations.[10] We explained that Massachusetts' generically applicable concerns were not appropriate for resolution in an adjudicatory proceeding, and acknowledged Massachusetts' rulemaking petition as the appropriate mechanism for raising those concerns.[11] We also denied, as premature, Massachusetts' request to suspend the adjudicatory proceeding pending the disposition of its rulemaking petition because at that time Massachusetts was not a party or an "interested governmental entity," and thus had no right under our rules to request such a stay.[12]

Massachusetts challenged these rulings in the U.S. Court of Appeals for the First Circuit. The court upheld our ruling on Massachusetts' hearing request.[13] With regard to the suspension request, the court ordered a brief stay of the close of this proceeding to allow Massachusetts an opportunity to request status as an interested governmental entity.[14] Shortly thereafter, Massachusetts filed a notice of intent to participate as an interested state.[15]

We later denied Massachusetts' rulemaking petition, which was consolidated with a similar petition filed by the State of California, finding that the information

---

[7] LBP-06-23, 64 NRC 257, 348-49 (2006). Contentions 1 and 3 challenged Entergy's aging management program for buried piping, and certain aspects of the severe accident mitigation alternatives (SAMA) analysis in Entergy's Environmental Report, respectively. *See id.* at 349.

[8] *Id.*

[9] *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 23 (2007). *See also Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-13, 65 NRC 211, 215 (2007) (denying motion for reconsideration of CLI-07-3). CLI-07-3 and CLI-07-13 addressed essentially identical appeals in both the *Vermont Yankee* and *Pilgrim* proceedings.

[10] *Vermont Yankee,* CLI-07-3, 65 NRC at 20-21.

[11] *Id.* at 20.

[12] *Id.* at 22 n.37; *Vermont Yankee,* CLI-07-13, 65 NRC at 214-15. *See generally* 10 C.F.R. § 2.802(d) (permitting a rulemaking petitioner to request that we "suspend all or any part of any licensing proceeding to which the petitioner is a party pending disposition of the petition for rulemaking").

[13] *Massachusetts v. United States,* 522 F.3d 115, 129-30 (1st Cir. 2008).

[14] *Id.* at 130.

[15] Commonwealth of Massachusetts' Notice of Intent to Participate as an Interested State (May 6, 2008). *See also* CLI-08-9, 67 NRC 353, 355-56 (2008) (addressing the effect of the court-ordered stay on the *Pilgrim* proceeding). *See generally* 10 C.F.R. § 2.315(c).

raised in the petitions was neither new nor significant.[16] We "further determined that [the] findings related to the [environmental impacts of] storage of spent nuclear fuel in pools . . . remain valid."[17] The U.S. Court of Appeals for the Second Circuit upheld our decision.[18]

Separate from the pendency and resolution of Massachusetts' appeals, litigation proceeded on Pilgrim Watch's admitted contentions. The Board granted summary disposition of Contention 3 in favor of Entergy.[19] And after holding an evidentiary hearing on Contention 1, the Board formally closed the record on June 4, 2008.[20] The Board then resolved Contention 1 in Entergy's favor and terminated the proceeding.[21]

Pilgrim Watch petitioned for review of the Board's rulings on Contentions 1 and 3, as well as earlier Board rulings.[22] We granted Pilgrim Watch's petition for review as to Contention 3, and reversed and remanded a portion of that contention to the Board for hearing.[23] We expressly stated that the remand was "limited by [that] ruling."[24] Later, we denied the balance of Pilgrim Watch's petition for review, including Pilgrim Watch's challenge to the Board's merits ruling on Contention 1.[25] The Board has since issued an initial decision on the remanded portion of Contention 3, resolving it in favor of Entergy.[26] We recently denied Pilgrim Watch's petition for review of that decision.[27]

At issue today is the Board's ruling on a new Massachusetts contention challenging the severe accident mitigation alternatives (SAMA) analysis in the Pilgrim final supplemental environmental impact statement (FSEIS) based on the recent nuclear events in Japan.[28] On March 11, 2011, Japan suffered a 9.0

---

[16] The Attorney General of Commonwealth of Massachusetts, The Attorney General of California; Denial of Petitions for Rulemaking, 73 Fed. Reg. 46,204, 46,208 (Aug. 8, 2008) (2008 Rulemaking Denial). Chairman Jaczko dissented. *Id.* at 46,212.

[17] *Id.* at 46,212.

[18] *See New York v. NRC,* 589 F.3d 551, 555 (2d Cir. 2009).

[19] LBP-07-13, 66 NRC 131, 154 (2007).

[20] 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). The Board closed the record on Contention 1 in accordance with our direction in CLI-08-9. *See* CLI-08-9, 67 NRC at 356.

[21] LBP-08-22, 68 NRC 590, 610 (2008).

[22] Pilgrim Watch's Petition for Review of LBP-06-848, LBP-07-13, LBP-06-23 and the Interlocutory Decisions in the Pilgrim Nuclear Power Station Proceeding (Nov. 12, 2008).

[23] CLI-10-11, 71 NRC 287, 290 (2010).

[24] *Id.*

[25] CLI-10-14, 71 NRC 449, 477 (2010).

[26] LBP-11-18, 74 NRC 29, 56-57 (2011).

[27] CLI-12-1, 75 NRC 39 (2012).

[28] *See* LBP-11-35, 74 NRC 701 (2011).

magnitude earthquake, followed by a devastating tsunami that severely damaged the Fukushima Dai-ichi Nuclear Power Station. Massachusetts argues that these events present "new and significant information" that must be considered in the Pilgrim FSEIS before a decision is made on Entergy's license renewal application.[29] Massachusetts included with its new contention a petition for waiver of 10 C.F.R. § 51.71(d) and 10 C.F.R. Part 51, Subpart A, Appendix B, which preclude the consideration of the environmental impacts of spent fuel pool storage in individual license renewal adjudications.[30] As an alternative, in the event the Board were to deny Massachusetts' waiver petition, Massachusetts contemporaneously requested that we consider its filing as a petition for rulemaking to rescind those regulations, similar to its earlier petition for rulemaking.[31] Massachusetts also included a "conditional motion" to suspend the proceeding pending resolution of its standby rulemaking petition, in the event of the rulemaking petition's activation.[32]

In LBP-11-35, the Board rejected Massachusetts' new contention and denied its waiver petition.[33] The Board found that Massachusetts' new contention failed

---

[29] *See* Commonwealth of Massachusetts' Motion to Admit Contention and, if Necessary, to Re-open Record Regarding New and Significant Information Revealed by Fukushima Accident (June 2, 2011) (Motion to Reopen); Commonwealth of Massachusetts' Contention Regarding New and Significant Information Revealed by the Fukushima Radiological Accident (June 2, 2011) (New Contention); Declaration of Dr. Gordon R. Thompson in Support of Commonwealth of Massachusetts' Contention and Related Petitions and Motions (June 1, 2011); New and Significant Information from the Fukushima Daiichi Accident in the Context of Future Operation of the Pilgrim Nuclear Power Plant (June 1, 2011) (Thompson Report). Two months later, Massachusetts filed a motion to supplement the basis for its contention, and attached a supplemental declaration for Dr. Thompson. Commonwealth of Massachusetts Motion to Supplement Bases to Commonwealth Contention to Address NRC Task Force Report on Lessons Learned from the Radiological Accident at Fukushima (Aug. 11, 2011) (Motion to Supplement Contention); Declaration of Gordon R. Thompson Addressing New and Significant Information Provided by the NRC's Near-Term Task Force Report on the Fukushima Accident (Aug. 11, 2011) (Supplemental Thompson Declaration). The Board granted Massachusetts' motion and considered Dr. Thompson's supplemental declaration. LBP-11-35, 74 NRC at 761.

[30] *See* Commonwealth of Massachusetts' Petition for Waiver of 10 C.F.R. Part 51 Subpart A, Appendix B or, in the Alternative, Petition for Rulemaking to Rescind Regulations Excluding Consideration of Spent Fuel Storage Impacts from License Renewal Environmental Review (June 2, 2011) (Waiver/Rulemaking Petition).

[31] *Id.* at 30.

[32] Conditional Motion to Suspend at 1-2.

[33] LBP-11-35, 74 NRC at 761. Judge Young concurred only in the result. *Id.* at 763-66. She would have rejected the contention as premature, and would not have addressed the reopening or contention admissibility standards, or the waiver petition. *See id.* at 763-64 (citing *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 166-67 (2011)).

The Board also denied a request that Massachusetts filed in May 2011, seeking to stay the Board's decision on the license renewal application pending our review of a separate Massachusetts request

(Continued)

to satisfy the criteria for reopening a closed record, and failed to satisfy the timeliness and general contention admissibility standards.[34] With regard to the waiver petition, the Board determined that a rule waiver was not warranted because Massachusetts had not shown that the spent fuel pool issues underlying its waiver request uniquely applied to Pilgrim, rather than generically to a class of nuclear power plants.[35]

Massachusetts then filed the instant appeal. As noted above, Pilgrim Watch also seeks review of the Board's ruling. Entergy and the Staff oppose both requests for review.[36] The Board's ruling also places before us Massachusetts' "conditional" request to suspend the proceeding. We consider each of these matters below.

---

to suspend the proceeding to consider lessons learned from the Fukushima events. LBP-11-35, 74 NRC at 761; Commonwealth of Massachusetts Motion to Hold Licensing Decision in Abeyance Pending Commission Decision Whether to Suspend the Pilgrim Proceeding to Review the Lessons of the Fukushima Accident (May 2, 2011) (citing Commonwealth of Massachusetts Response to Commission Order Regarding Lessons Learned from the Fukushima Daiichi Nuclear Power Station Accident, Joinder in Petition to Suspend License Renewal Proceeding for the Pilgrim Nuclear Plant, and Request for Additional Relief (May 2, 2011)). Massachusetts' stay request became moot when we issued our decision in CLI-11-5, which, among other things, denied its request to suspend this license renewal proceeding. *See Callaway,* CLI-11-5, 74 NRC at 171-72.

[34] LBP-11-35, 74 NRC at 761.

[35] *Id.* at 716-17.

[36] *See* Entergy's Answer Opposing the Commonwealth's Appeal of LBP-11-35 (Dec. 19, 2011) at 1-2; Entergy's Answer Opposing Pilgrim Watch's Petition for Review of LBP-11-35 (Dec. 19, 2011) at 3 (Entergy Answer to Pilgrim Watch); NRC Staff's Answer to the Commonwealth of Massachusetts' Brief in Support of Appeal from LBP-11-35 (Dec. 19, 2011) at 2; NRC Staff's Answer in Opposition to Pilgrim Watch's Petition for Review of LBP-11-35 (Dec. 19, 2011) at 2 (Staff Answer to Pilgrim Watch). Pilgrim Watch replied. Pilgrim Watch Reply to Entergy's and NRC Staff's Answers to Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Commonwealth of Massachusetts' Request for Stay, Motion for Waiver, and Request for Hearing on a New Contention Relating to the Fukushima Accident) Nov. 28, 2011 (Dec. 23, 2011) (Pilgrim Watch Reply).

Massachusetts filed a motion to reply. Commonwealth of Massachusetts' Motion to Reply to NRC Staff and Entergy Oppositions to Commonwealth Appeal of LBP-11-35 (Dec. 23, 2011); Commonwealth of Massachusetts' Brief in Reply to NRC Staff and Entergy Oppositions to the Commonwealth's Appeal of LBP-11-35 (Dec. 23, 2011). Entergy and the Staff oppose Massachusetts' motion. Entergy's Answer Opposing Commonwealth of Massachusetts' Motion to File a Reply to Entergy's and NRC Staff's Answers (Jan. 3, 2012); NRC Staff's Answer in Opposition to Commonwealth of Massachusetts' Motion to Reply to NRC Staff and Entergy Oppositions to Commonwealth Appeal of LBP-11-35 (Jan. 3, 2012). Massachusetts has filed its appeal pursuant to 10 C.F.R. § 2.311, which does not permit the filing of a reply. *See* 10 C.F.R. § 2.311(b). As discussed below, however, Massachusetts' appeal is properly considered a petition for review subject to the requirements of 10 C.F.R. § 2.341, which affords the petitioner a right to reply. We therefore consider Massachusetts' reply.

II. DISCUSSION

Pilgrim Watch and Massachusetts seek review under separate provisions of our rules. Massachusetts filed its appeal under section 2.311, which governs appeals of board rulings on hearing requests, petitions to intervene, and access to certain nonpublic information.[37] Section 2.341, on the other hand, governs review of the majority of presiding officer decisions.[38] Pilgrim Watch filed its request under section 2.341(b). Because the decision that Massachusetts challenges here is not a board ruling on a hearing request, petition to intervene, or access to nonpublic information, its appeal does not lie under section 2.311. Accordingly, we consider both requests under the same provision — section 2.341(b) — as petitions for review.

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 which we may deem to be in the public interest.[39]

For threshold issues like contention admissibility, we give substantial deference to a board's determinations.[40] We will affirm decisions on the admissibility of contentions where we find no error of law or abuse of discretion.[41] As discussed below, neither Pilgrim Watch nor Massachusetts has presented a substantial question warranting review.

---

[37] *See* 10 C.F.R. § 2.311(a).

[38] *See id.* § 2.341(a)(1). *Cf. South Texas Project Nuclear Operating Co.* (South Texas Project, Units 3 and 4), CLI-09-18, 70 NRC 859, 862 (2009) ("As a general matter, contentions filed after the initial petition are not subject to appeal pursuant to section 2.311.").

[39] 10 C.F.R. § 2.341(b)(4)(i)-(v).

[40] *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 119 (2009).

[41] *See Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 220 (2011); *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 260 (2009).

A. Pilgrim Watch's Petition for Review

Pilgrim Watch argues that although the Board's decision "is largely directed to requests and motions filed by . . . Massachusetts," portions of it "directly affect Pilgrim Watch."[42] According to Pilgrim Watch, the Board's statement that the record closed in June 2008, the statement that the record remains closed, the Board's application of the criteria for reopening a closed record, and the Board's passing reference to Pilgrim Watch's new contentions being "previously resolved or . . . resolved by this Order," directly affect its interests.[43] Pilgrim Watch asserts that the Board improperly uses its decision on Massachusetts' contention to "bolster" the Board's "previous incorrect" decisions on various new Pilgrim Watch contentions.[44] Repeating the same arguments that it has raised in its own petitions for review, Pilgrim Watch argues that the Board incorrectly applied the reopening standards because the proceeding has not closed, and because Massachusetts, like Pilgrim Watch, filed a contention that raises new issues.[45]

Entergy argues that we should reject Pilgrim Watch's petition because Pilgrim Watch has suffered no cognizable injury from the Board's rejection of Massachusetts' contention, and thus it has no standing to appeal.[46] The Staff asserts that we should deny the petition because Pilgrim Watch does not address issues of fact or law that are central to the Board's decision, but rather Pilgrim Watch "seeks only to bolster its arguments in . . . appeals now pending before the Commission."[47] Therefore, according to the Staff, Pilgrim Watch's petition is "outside the scope of the appealable issues contemplated by the regulations."[48]

We agree with Entergy's and the Staff's arguments. Although Pilgrim Watch insists that the Board's decision directly affects its interests, the portions of the Board's decision that Pilgrim Watch references are focused on the Board's resolution of Massachusetts' contention and do not concretely affect the admissibility

---

[42] Pilgrim Watch Petition for Review at 1.

[43] *Id.* at 1-2 (citing LBP-11-35, 74 NRC at 706, 756-57, 761); Pilgrim Watch Reply at 2-3.

[44] Pilgrim Watch Petition for Review at 3. Pilgrim Watch has sought review of those decisions. *See generally* Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Requests for Hearing on Certain New Contentions) ASLBP No. 06-848-02-LR, August 11, 2011 (Aug. 26, 2011) (Pilgrim Watch August 26 Petition); Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Requests for Hearing on New Contentions Relating to Fukushima Accident) Sept. 8, 2011 (Sept. 23, 2011) (Pilgrim Watch September 23 Petition). We denied the Pilgrim Watch September 23 Petition; the Pilgrim Watch August 26 Petition is pending. *See* CLI-12-3, 75 NRC 132 (2012).

[45] Pilgrim Watch Petition for Review at 4-8; Pilgrim Watch August 26 Petition at 3-6; Pilgrim Watch September 23 Petition at 7-9.

[46] Entergy Answer to Pilgrim Watch at 1-2.

[47] Staff Answer to Pilgrim Watch at 4.

[48] *Id.* at 3.

of Pilgrim Watch's new contentions.[49] At bottom, Pilgrim Watch reiterates its claim that the Board erred in applying the reopening standards to a contention raising new issues — an argument that we rejected in a recent decision in this proceeding.[50] As we stated then, "[c]ontrary to Pilgrim Watch's assertions, the reopening standards . . . expressly contemplate contentions that raise issues not previously litigated."[51] To the extent Pilgrim Watch seeks review of the Board's decision on Massachusetts' behalf, its petition fails for lack of standing. Pilgrim Watch "may act to vindicate its own rights," but "it has no standing . . . to assert the rights of others."[52] Accordingly, we deny its petition for review.

B. Massachusetts' Petition for Review

Massachusetts argues that the Board "ignored" its obligation to consider the "new and significant information" presented in its new contention and waiver petition, contrary to the requirements of the National Environmental Policy Act (NEPA).[53] Further, Massachusetts asserts that the Board improperly applied a "heightened standard" — what Massachusetts characterizes as essentially a merits review — in rejecting the new contention.[54] Massachusetts maintains that

---

[49] *See Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-631, 13 NRC 87, 89 (1981) (explaining that a litigant is not entitled to challenge a board ruling "unless and until that ruling has worked a concrete injury to his personal interests"). The Board's statement that it resolved five of Pilgrim Watch's new contentions in earlier decisions *or in LBP-11-35* is imprecise. *See* LBP-11-35, 74 NRC at 757 n.232. LBP-11-35 contains no legal analysis or conclusions directed to any Pilgrim Watch contention; we view the Board's statement here as a catch-all phrase with no independent legal significance.

[50] CLI-12-3, 75 NRC at 139-41. There, we reiterated our position that raising new issues related to the Fukushima events did not warrant new procedures or a separate timetable. *Id.* at 141 (citing *Callaway,* CLI-11-5, 74 NRC at 170). We noted the ongoing review of the Fukushima events and our confidence that the existing procedural rules can be applied effectively to address proposed new or amended contentions. *Id.* Our analyses, as well as the analyses of NRC's expert staff, have uncovered no new information that causes us to change our view.

[51] *Id.* at 140. Therefore, even were we to consider Pilgrim Watch's filing as an answer supporting Massachusetts' petition for review, we reject its argument that the reopening standards do not apply here. *See id.* at 139-41. *Cf. Tennessee Valley Authority* (Clinch River Breeder Reactor Plant), ALAB-345, 4 NRC 212, 213 (1976) (noting that even though a party who is not injured by a board's ruling has no right to appeal that ruling, it may file a supporting brief at the appropriate time).

[52] *Clinch River,* ALAB-345, 4 NRC at 213. *See also Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), ALAB-837, 23 NRC 525, 542-43 n.58 (1986).

[53] *See* Massachusetts Petition for Review at 14. Massachusetts also states that the Board rejected its alternative request for rulemaking. *See id.* at 1, 13. But the Board did not rule on Massachusetts' rulemaking petition, nor could it have, because that petition is now pending before us. We address the rulemaking petition and the related request to suspend the proceeding, below. (Massachusetts captioned its Waiver/Rulemaking Petition as before the Board *or* the Commission.)

[54] *See id.* at 12, 23.

it has "met its initial burden to present new and significant information,"[55] and argues that the requirements of NEPA supersede our procedural rules when new and significant information is presented.[56] We disagree. We find that the Board correctly applied our procedural rules for reopening the record and for the admission of contentions, and appropriately determined that Massachusetts failed to show that its new contention and the issues underlying its waiver petition should be considered in this adjudication.[57]

1. Massachusetts' Waiver Petition

Massachusetts' petition for review offers little in the way of argument against the Board's denial of its waiver petition. At most, Massachusetts references the Board's finding that Massachusetts had not demonstrated "uniqueness" of the spent fuel pool storage issues raised in the waiver request, and reiterates the spent-fuel-pool-related arguments in support of its contention.[58] Thus, it is unclear whether Massachusetts challenges the Board's ruling on the waiver petition. Nevertheless, we briefly address the Board's ruling.

As a general matter, our regulations are not subject to challenge in adjudicatory proceedings.[59] Section 2.335(b), however, provides an exception to this general rule. That provision permits a party to an adjudication to petition for a waiver of a rule or regulation upon a showing that "special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation (or a provision of it) would not serve the purposes for which [it] was adopted."[60] In order to meet this standard, the party seeking a waiver must attach an affidavit that, among other things, "state[s] with particularity the special circumstances [claimed] to justify the waiver or exception requested."[61]

In the *Millstone* license renewal proceeding, we established a four-factor test based on NRC case law interpreting section 2.335(b).[62] The waiver petitioner must

---

[55] *Id.* at 16.

[56] *See id.* at 24-27.

[57] Contrary to Massachusetts' assertion, NEPA does not supersede our procedural rules. Federal courts leave to an agency's discretion the manner in which the agency determines whether information is new or significant to warrant supplementation of an environmental impact statement, including the application of its procedural rules. *See Marsh v. Oregon Natural Resources Council,* 490 U.S. 360, 373-77 (1989); *Massachusetts,* 522 F.3d at 130; *Union of Concerned Scientists v. NRC,* 920 F.2d 50, 55-56 (D.C. Cir. 1990).

[58] *See* Massachusetts Petition for Review at 6-7, 11, 13, 29.

[59] 10 C.F.R. § 2.335(a).

[60] *Id.* § 2.335(b).

[61] *Id.*

[62] *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 559-60 (2005).

meet all four factors, demonstrating that: (i) the rule's strict application would not serve the purpose for which it was adopted; (ii) there are "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 rule is necessary to reach a "significant safety problem."[63]

The Board found that Massachusetts "plainly" had not met the third factor — a showing that the spent fuel pool issues raised in Massachusetts' waiver petition are "unique" to Pilgrim rather than "common to a large class of facilities."[64] The Board agreed with Entergy and the Staff that the spent fuel pool accident risks asserted in the waiver petition and supporting attachments are applicable to other plants.[65] The Board pointed out that onsite storage of spent fuel is being addressed as part of our comprehensive review of lessons learned from the Fukushima Dai-ichi events, indicating that Massachusetts' spent fuel pool concerns are more appropriately addressed "through more generic regulatory reform."[66]

We find the Board's reasoning sound, and we decline to disturb it here. Because the concerns that Massachusetts raises apply generically to "*all* spent fuel pools at all reactors," they are more appropriately addressed via rulemaking or other appropriate generic activity.[67] "It makes more sense for the NRC to study whether, as a technical matter, the agency should modify its requirements relating to spent fuel storage for all plants . . . than to litigate [the issue] in particular adjudications."[68] As discussed below, we now consider Massachusetts' waiver petition as an active rulemaking petition and we refer it to the Staff for further consideration.[69]

---

[63] *Id.* at 559-60. *See also Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 449 (2011).

[64] LBP-11-35, 74 NRC at 715-16.

[65] *See id.*

[66] *Id.* at 717. *See generally* "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 43-46 (transmitted to the Commission via "Near-Term Report and Recommendations for Agency Actions Following the Events in Japan," Commission Paper SECY-11-0093 (July 12, 2011) (ADAMS Accession No. ML11186A950 (package)) (Near-Term Report) (discussing recommendations regarding spent fuel pool safety).

[67] *Vermont Yankee,* CLI-07-3, 65 NRC at 20-21. *See also AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 133-34 (2007).

[68] *Vermont Yankee,* CLI-07-3, 65 NRC at 20. *See also Massachusetts,* 522 F.3d at 129-30.

[69] *See* Waiver/Rulemaking Petition at 30.

2. *Massachusetts' New Contention*

In its new contention, Massachusetts argued that the Staff must revise the FSEIS to account for new and significant information from the events at Fukushima Dai-ichi.[70] In support, Massachusetts attached a declaration and report from Dr. Gordon R. Thompson. Dr. Thompson outlined six main areas in which, he argued, the events at Fukushima Dai-ichi provide new and significant information.[71] According to Massachusetts, if these issues are considered in a revised Pilgrim SAMA analysis, "previously rejected or ignored" mitigation alternatives "may prove to be cost-effective."[72] In a supplemental filing, Massachusetts asserted that the July 2011 Near-Term Task Force Report presents new and significant information that further supports its new contention.[73] Massachusetts claimed that the Task Force proposed a number of safety improvements and regulatory changes that align with the issues identified in the Thompson Report.[74] Massachusetts also attached a supplemental declaration by Dr. Thompson further describing the areas where the Task Force's findings support his views.[75]

Although Massachusetts argued that the reopening standards do not apply, it nonetheless addressed them.[76] Massachusetts was right to have done so. The Board closed the evidentiary record in June 2008. Even after our later remand of a portion of Pilgrim Watch's Contention 3, the record remained closed on all issues except that single, remanded issue. Because Massachusetts filed its new contention after the Board already had closed the evidentiary record, it was obliged to address the reopening standards.[77] We therefore find that the Board appropriately applied the reopening standards here. Furthermore, as discussed

---

[70] New Contention at 1. The contentions reads:

> The Commonwealth contends that the environmental impact analysis and the SAMA analysis in [the FSEIS] are inadequate to satisfy NEPA because they fail to address new and significant information revealed by the Fukushima accident that is likely to affect the outcome of those analyses. The new and significant information shows that both core-melt accidents and spent fuel pool accidents are significantly more likely than estimated or assumed in [the FSEIS]. As a result, the environmental impacts of re-licensing the Pilgrim [Nuclear Power Station] have been underestimated. In addition, the SAMA analysis is deficient because it ignores or rejects mitigative measures that may now prove to be cost-effective in light of this new understanding of the risks of re-licensing Pilgrim.

New Contention at 5-6.

[71] Thompson Report at 3.

[72] *See* New Contention at 9.

[73] *See* Motion to Supplement Contention at 1-2.

[74] *See id.* at 6-7.

[75] *See* Supplemental Thompson Declaration at 1-7.

[76] *See* Motion to Reopen at 2.

[77] *See* CLI-12-3, 75 NRC at 139-41; *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 10 n.37 (2010).

below, we find no Board error or abuse of discretion in the manner in which the Board applied these standards to the issues identified in Massachusetts' new contention, the supplement to its new contention, and the supporting declarations and Thompson Report.

Motions to reopen a closed record are governed by 10 C.F.R. § 2.326. The movant must show that: (1) the motion is timely; (2) the motion addresses a "significant safety or environmental issue"; and (3) "a materially different result would be or would have been likely had the newly proffered evidence been considered initially."[78] "Each of the criteria must be separately addressed, with a specific explanation of why it has been met."[79]

The level of support required to sustain a motion to reopen is greater than that required for a contention under the general admissibility requirements of 10 C.F.R. § 2.309(f)(1).[80] The motion to reopen "must be accompanied by affidavits that set forth the factual and/or technical bases for the movant's claim that the . . . [three criteria for reopening] have been satisfied."[81] "Evidence contained in [the] affidavits must meet the admissibility standards [in 10 C.F.R. § 2.337]."[82] That is, it must be "relevant, material, and reliable."[83] Further, the "[a]ffidavits must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised."[84] A litigant seeking to reopen a closed record necessarily faces a "heavy" burden.[85] After a record has closed, finality attaches to the hearing process, and after that point, only timely, significant issues will be considered.[86] At bottom, Massachusetts has not shown that its contention should be litigated in this proceeding because it has failed to demonstrate a sufficiently supported link between the Fukushima Dai-ichi events and the Pilgrim environmental analysis.

Massachusetts now argues that the Board "ignored the [Near-Term Report] and [Massachusetts'] expert supported new and significant information."[87] We address each of these areas of purported new and significant information, which

---

[78] 10 C.F.R. § 2.326(a)(1)-(3).

[79] *Id.* § 2.326(b).

[80] *Compare id., with* 10 C.F.R. § 2.309(f)(1)(v).

[81] *Id.* § 2.326(b).

[82] *Id.*

[83] *Id.* § 2.337(a).

[84] *Id.* § 2.326(b).

[85] *Oyster Creek,* CLI-09-7, 69 NRC at 287.

[86] *See* Final Rule, Criteria for Reopening Records in Formal Licensing Proceedings, 51 Fed. Reg. 19,535, 19,539 (May 30, 1986) ("The purpose of this rule is not to foreclose the raising of important . . . issues, but to ensure that, once a record has been closed and all timely-raised issues have been resolved, finality will attach to the hearing process.").

[87] Massachusetts Petition for Review at 17.

are discussed in detail in the supporting material provided by Dr. Thompson, in turn.[88]

In its new contention, Massachusetts first argued that the SAMA analysis underestimates core damage frequency by an order of magnitude.[89] Rather than use the probabilistic risk assessment (PRA) techniques that are used in the Pilgrim SAMA analysis to estimate core damage frequency, Dr. Thompson employed what he termed a "direct experience" methodology.[90] Even though Dr. Thompson observed that the data set for his methodology "is comparatively sparse and therefore does not provide a statistical basis for a high-confidence estimate of [core damage frequency]," he nonetheless concluded that it provides a "reality check" for the Pilgrim SAMA analysis.[91]

The Board reasoned that Massachusetts did not show how Dr. Thompson's "direct experience" methodology called into question the scenario-specific core damage frequencies that were developed in the Pilgrim application for "the entire spectrum of core damaging events, ranging from those that do minimal damage to those that involve massive core melting," nor did it show how Dr. Thompson's methodology (with its limited data set) would be used to develop a separate spectrum of core damage frequencies.[92] The Board also determined that Massachusetts failed to explain the effect of Dr. Thompson's core damage frequency estimate on potential containment failure and subsequent offsite release.[93]

We find no error or abuse of discretion in the Board's ruling on this point. Although the Board made its observations while analyzing the timeliness of Massachusetts' motion to reopen under subsection 2.326(a)(1),[94] we find them more pertinent to subsection 2.326(a)(2). Massachusetts has not demonstrated the existence of a "significant environmental issue."[95] Although Massachusetts sug-

---

[88] Massachusetts' Motion to Supplement discusses the ways in which the Near-Term Report supports Dr. Thompson's views. *See* Motion to Supplement Contention at 1-2. The Supplemental Thompson Declaration discusses in further detail the purported supporting information in the Near-Term Report. *See* Supplemental Thompson Declaration at 1-7.

[89] *See* New Contention at 6; Thompson Report at 17.

[90] *See* Thompson Report at 15-16. Where the PRA methodology takes into account a variety of accident scenarios and the probability of their occurrence, Dr. Thompson's "direct experience" methodology focuses on five actual core damage accidents at commercial nuclear power plants, divided by approximately 14,500 reactor years of operating experience at commercial nuclear power plants worldwide (as of May 16, 2011), yielding a core damage frequency that is ten times higher than the baseline estimate in the Pilgrim SAMA analysis. *See id.* at 15-17.

[91] *Id.* at 16. *See also* Supplemental Thompson Declaration at 4 (arguing that the Task Force showed a "clear preference for direct experience as the primary basis for its recommendations").

[92] LBP-11-35, 74 NRC at 746-47 & n.203.

[93] *Id.*

[94] *See id.* at 745-50.

[95] *See* 10 C.F.R. § 2.326(a)(2).

gested a different methodology for performing the SAMA analysis, it ultimately failed to show how the PRA methodology that is currently used is inadequate to satisfy NEPA's "hard look" requirement.[96] As we have stated, our adjudicatory proceedings are not "EIS editing sessions."[97] The burden is on the proponent of a contention to show that the Staff's analysis or methodology is unreasonable or insufficient.[98] Other than the sweeping assertion that the "direct experience" methodology provides a "reality check" for the Pilgrim SAMA analysis, Massachusetts' contention and the Thompson Report do not challenge the Pilgrim site-specific spectrum of events making up the PRA core damage frequency in the FSEIS.[99]

Second, Massachusetts asserted that operators at Fukushima Dai-ichi were unable to perform mitigative actions to lessen or prevent an offsite radiation release due to the severity of damage at the site.[100] According to Massachusetts, the possibility of similar conditions limiting operator ability to effectively mitigate an accident should be considered in the Pilgrim SAMA analysis.[101] Relating to spent fuel storage, Dr. Thompson argued that the inability of operators to mitigate an accident "could affect the conditional probability of a spent-fuel-pool fire" if operators are unable to add water to the pools.[102] Based on reports of attempts to add water to the spent fuel pools at Fukushima Dai-ichi, Dr. Thompson questioned the efficacy of the measures in place at Pilgrim to mitigate or prevent a spent fuel pool fire.[103]

---

[96] *See* CLI-10-11, 71 NRC at 315-16 ("In short, NEPA allows agencies 'to select their own methodology as long as that methodology is reasonable.'" (quoting *Town of Winthrop v. Federal Aviation Administration,* 535 F.3d 1, 13 (1st Cir. 2008))).

[97] *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 431 (2003).

[98] *See id.*

[99] We also question the timeliness of Massachusetts' "direct experience" claim. *See* 10 C.F.R. § 2.326(a)(1). As the Board observed, in addition to the accident at Fukushima Dai-ichi, Dr. Thompson's "direct experience" methodology is based on the Three Mile Island and Chernobyl accidents — both of which occurred decades ago. *See* LBP-11-35, 74 NRC at 727, 747-48. The Board observed that a direct experience calculation using information from Three Mile Island and Chernobyl alone would have yielded a core damage frequency five times higher than that provided in the Pilgrim SAMA analysis. *Id.* at 747 & n.206). The information arising out of the Fukushima accident, when used in the direct experience analysis, provided a different value for the core damage frequency, but it did not change Massachusetts' underlying challenge to the method for calculating core damage frequency itself. The Board did not err in finding that Massachusetts' direct experience claim was late, since it could have been raised at the outset of this proceeding. *See id.* at 747-48.

[100] New Contention at 6; Thompson Report at 18; Supplemental Thompson Declaration at 4-5.

[101] New Contention at 6-7; Thompson Report at 20.

[102] Thompson Report at 18-19.

[103] *Id.* at 19-20; Supplemental Thompson Declaration at 4-5.

For Massachusetts' claims relating to operator actions and mitigation procedures not involving the spent fuel pool, the Board found them inadequate for failure to address the "actual consideration of those matters in the [license renewal application], and failure to "indicate how [they] would be affected by consideration of the proposed new information."[104] Based on this reasoning, we find no error in the Board's analysis. The Board appropriately found that Massachusetts had not demonstrated sufficiently that a materially different result would have been likely had this information been considered initially.[105] As for Massachusetts' remaining spent-fuel-pool-related claims, the Board found them to be outside the scope of the proceeding and did not consider them further.[106] We agree.

Massachusetts' third argument is closely tied with the second. Massachusetts asserted that "the NRC's excessive secrecy regarding accident mitigation measures and the phenomena associated with spent-fuel-pool fires degrades the licensee's capability to mitigate an accident."[107] Dr. Thompson elaborated that because certain measures to mitigate severe accidents were only recently disclosed to the public, there is a risk of their inadequacy due to their not having received the benefit of public input, as well as a risk that the entities involved in implementing the measures may not understand fully the details of the tasks they are expected to perform.[108]

The Board found Massachusetts' "secrecy" claims to be outside the scope of the proceeding.[109] The Board did not err in holding that these claims are out of scope. Massachusetts' concerns appear to be directed more generally at policy issues governing access and categorization of nonpublic information,[110] and it is not apparent how the claimed "excessive secrecy" could affect, or even be factored into, the SAMA analysis.

Massachusetts' fourth argument pertains to the prevention of hydrogen explosions during a reactor accident.[111] Massachusetts claimed that "[b]ased on the occurrence of hydrogen explosions at Fukushima [Dai-ichi] . . . it appears likely that hydrogen explosions similar to those experienced at Fukushima could occur at . . . Pilgrim."[112] In support, Dr. Thompson asserted that "containment venting and other hydrogen control systems at the Pilgrim plant should be upgraded,

---

[104] LBP-11-35, 74 NRC at 752.

[105] See *id.* at 752-53.

[106] *See id.* at 742, 746.

[107] New Contention at 7.

[108] *See* Thompson Report at 21-23. *See also* Supplemental Thompson Declaration at 5.

[109] LBP-11-35, 74 NRC at 757.

[110] *See* Thompson Report at 21-23.

[111] New Contention at 7; Thompson Report at 24.

[112] New Contention at 7.

and should use passive mechanisms as much as possible."[113] In his view, hydrogen control measures — both hardware and operating procedures — should be incorporated into Pilgrim's design basis.[114]

In rejecting Massachusetts' hydrogen control claims, the Board found that Massachusetts had failed to confront the existing SAMA analysis' extensive consideration of the potential for hydrogen explosions and measures to mitigate the buildup of hydrogen.[115] The Board thus concluded that Massachusetts had not shown the likelihood of a materially different result had Dr. Thompson's hydrogen control information been considered initially.[116] We decline to disturb the Board's sound reasoning on this issue. As Entergy asserted, Dr. Thompson "nowhere references or addresses the Pilgrim SAMA analysis's extensive consideration of hydrogen explosions, let alone provide[s] any explanation of how any of it is inadequate."[117] Failure to challenge the existing SAMA analysis would be insufficient to establish a material dispute for the purposes of satisfying the general contention admissibility standards, let alone the reopening standards.[118]

Fifth, Massachusetts focuses on the probability of a spent fuel pool fire and a resulting radioactive release.[119] Acknowledging that the state of knowledge about the Fukushima Dai-ichi accident continues to evolve, and "much of the relevant information is not available at this time," Dr. Thompson hypothesized that there is evidence of fuel damage in at least one of the Fukushima Dai-ichi spent fuel pools.[120] He argued that this supports his view of a "substantial conditional probability of a pool fire during a reactor accident at . . . Pilgrim."[121] In addition, he referenced reports that he prepared in support of Massachusetts' 2006 rulemaking petition, and asserted that "no evidence has emerged from Fukushima"

---

[113] Thompson Report at 25. *See also* Supplemental Thompson Declaration at 5.

[114] Thompson Report at 26.

[115] LBP-11-35, 74 NRC at 752, 754-55. *See also id.* at 734-36 (citing Entergy's Answer Opposing Commonwealth Contention and Petition for Waiver Regarding New and Significant Information Based on Fukushima (June 27, 2011) at 41-43 (Entergy Answer to New Contention)).

[116] LBP-11-35, 74 NRC at 752.

[117] Entergy Answer to New Contention at 41.

[118] *See* 10 C.F.R. §§ 2.309(f)(1)(vi), 2.326(a)(3). The Board also found the hydrogen control claims to be outside the scope of the proceeding. *See* LBP-11-35, 74 NRC at 757. The Board's reasoning on this point is thin, but to the extent the Board excludes hydrogen control related to spent fuel pools, we agree that this would be outside the scope of this adjudication, in light of the Board's denial of the waiver petition.

[119] *See* New Contention at 7 (arguing that after Fukushima, "the NRC's previous rejection [(presumably in the 2008 Rulemaking Denial)] of [Massachusetts'] concerns regarding the environmental impacts of high-density pool storage of spent fuel has been refuted").

[120] Thompson Report at 26.

[121] *Id.* at 27. *See also* Supplemental Thompson Declaration at 5-6.

to contradict the conclusions in those reports.[122] He further argued that the "Pilgrim pool should be re-equipped with low-density, open-frame racks."[123] Because the Board denied Massachusetts' waiver petition, it found this issue to be outside the scope of the proceeding.[124] We find no error in the Board's ruling on this point.

The final issue raised in Massachusetts' new contention pertains to filtered venting of reactor containment.[125] Dr. Thompson speculated that some of the radioactive material released at Fukushima might have traveled through vents designed to relieve containment pressure. To reduce the radiological impact of a severe accident, Dr. Thompson argued that filters should be added to the vents to remove radioactive material.[126] He asserted that the Pilgrim SAMA analysis should be revised to consider filtered vents, and that a filtered vent system that uses passive mechanisms should be installed at Pilgrim.[127]

The Board rejected the claims concerning filtered vents, finding that Massachusetts failed to demonstrate the likelihood of a materially different result because Massachusetts had not discussed the relative costs and benefits of adding filters.[128] Additionally, the Board found the issue to be outside the scope of the proceeding to the extent Massachusetts would require installation of the filters.[129] We find no error in the Board's analysis here. We also note that Massachusetts' filtered vent claims fail to satisfy the "materially different result" prong for an independent reason. As Entergy pointed out, filtered vents already were considered as a SAMA candidate in the Pilgrim FSEIS, and Massachusetts' contention and its supporting material do not acknowledge, let alone challenge, the existing analysis.[130] Therefore, the Board did not err in holding that Massachusetts failed to show the likelihood of a materially different result, given that the SAMA analysis already considered filtered vents.[131]

3. Massachusetts' Rulemaking Petition and Suspension Request

As discussed above, Massachusetts included with its waiver petition a "standby" petition for rulemaking and conditional motion to suspend the proceeding pending the disposition of the rulemaking request. With the Board's denial of its

---

[122] Thompson Report at 27.
[123] *Id.* at 28.
[124] *See* LBP-11-35, 74 NRC at 742, 746.
[125] New Contention at 7; Thompson Report at 28.
[126] Thompson Report at 28-29.
[127] *See id.* at 29; Supplemental Thompson Declaration at 6.
[128] LBP-11-35, 74 NRC at 752-53.
[129] *See id.* at 757.
[130] *See* Entergy Answer to New Contention at 43-44.
[131] *See* 10 C.F.R. § 2.326(a)(3); CLI-12-3, 75 NRC at 148-49.

waiver petition, the question arises whether the rulemaking petition is now active. In pleadings submitted to the Board, the Staff and Massachusetts requested that the Board refer the rulemaking petition to the Staff for consideration upon the Board's denial of the waiver petition.[132] The Board did not refer the rulemaking petition expressly; therefore, we will today. We refer Massachusetts' rulemaking petition to the Staff for appropriate resolution in accordance with 10 C.F.R. Part 2, Subpart H.[133]

However, we decline to suspend the proceeding pending the disposition of the rulemaking petition. We consider suspension of licensing proceedings a "drastic" action that is not warranted absent compelling circumstances.[134] In the *Private Fuel Storage* dry cask proceeding, we articulated three criteria for determining whether to suspend an adjudication.[135] We balance whether moving forward with the adjudication will: (1) "jeopardize the public health and safety"; (2) "prove an obstacle to fair and efficient decision[-]making"; and (3) "prevent appropriate implementation of any pertinent rule or policy changes that might emerge from our . . . ongoing [lessons-learned] evaluation."[136] Massachusetts argues that "it is necessary to suspend the . . . proceeding to allow sufficient time for the Commission to consider [the rulemaking petition] . . . to rescind the spent fuel pool . . . regulations on a generic basis, and ensure that the concerns raised [in its] . . . contention will be considered before the [Board] makes a final decision" on Entergy's license renewal application.[137] In other words, Massachusetts asserts that we must suspend the proceeding to "protect its position," which eventually

---

[132] *See* NRC Staff's Response to the Commonwealth of Massachusetts' Petition for Waiver of 10 C.F.R. Part 51 Subpart A, Appendix B or, in the Alternative, Petition for Rulemaking (June 27, 2011) at 2 ("Because Massachusetts filed the request with the Board, it is not yet before the portion of the agency tasked with processing petitions for rulemaking . . . . Consequently, should the Board dismiss the Waiver Petition, the Staff asks that the Board forward the request to the NRC Staff for consideration as a formal petition for rulemaking under 10 C.F.R. §§ 2.802 [and] 2.803."); Commonwealth of Massachusetts Reply to the Responses of the NRC Staff and Entergy to Commonwealth Waiver Petition and Motion to Admit Contention or in the Alternative for Rulemaking (July 5, 2011) at 3 & n.7.

[133] *See generally* Waiver/Rulemaking Petition; Thompson Declaration; Thompson Report; Commonwealth of Massachusetts Supplemental Attachment to the Declaration of Dr. Gordon R. Thompson (June 13, 2011); Motion to Supplement Contention; Supplemental Thompson Declaration.

[134] *E.g., AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 484 (2008).

[135] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-26, 54 NRC 376, 380 (2001). *See also Callaway,* CLI-11-5, 74 NRC at 158-59.

[136] *Private Fuel Storage,* CLI-01-26, 54 NRC at 380.

[137] Conditional Motion to Suspend at 2 (emphasis omitted).

will enable it to litigate, in this adjudicatory proceeding, its challenges to the Pilgrim FSEIS.[138]

With regard to the first factor, Massachusetts has not shown that continuing with the *Pilgrim* adjudication presents an immediate threat to public health and safety. Massachusetts' desire to protect its litigating position does not invoke a public health and safety threat. Moreover, the issues it raises in its contention and rulemaking petition concern a number of generic issues that may be addressed as part of our ongoing regulatory processes. When addressing similar suspension petitions that were submitted in response to the events at Fukushima Dai-ichi, we observed, particularly with respect to license renewal, that our current regulatory and oversight processes provide reasonable assurance that each plant continues to comply with its "'current licensing basis,' which can be adjusted by future Commission order or by modification to the facility's operating license outside the renewal proceeding."[139]

Massachusetts' arguments in support of its rulemaking petition are more relevant to the second and third factors, in that they focus on the potential unfairness of continuing the adjudicatory proceeding while Massachusetts awaits the outcome of its rulemaking petition, and the ability of the NRC to consider Massachusetts' claims before a decision is made on Entergy's license renewal application. But any unfairness to Massachusetts equally applies to Entergy in this case, as Entergy argues that "*suspension* of this proceeding . . . would undermine

---

[138] *Id.* at 2, 4, 7-8. Entergy and the Staff oppose Massachusetts' suspension motion. Entergy Answer Opposing Commonwealth of Massachusetts Conditional Motion to Suspend License Renewal Proceeding (June 13, 2011) (Entergy Answer to Conditional Motion to Suspend); NRC Staff's Answer in Opposition to Commonwealth of Massachusetts' Conditional Motion to Suspend Pilgrim Nuclear Power Plant License Renewal Proceeding Pending Resolution of Petition for Rulemaking to Rescind Spent Fuel Pool Exclusion Regulations (June 13, 2011). Massachusetts seeks leave to reply to Entergy and the NRC Staff, arguing that it could not have anticipated the arguments in Entergy's and the Staff's answers. Commonwealth of Massachusetts Motion to Reply to NRC Staff and Entergy Oppositions to the Commonwealth of Massachusetts Motion to Suspend the License Renewal Proceeding for the Pilgrim Nuclear Power Plant (June 16, 2011) at 1. Entergy opposes Massachusetts' motion to reply. Entergy Answer Opposing Commonwealth of Massachusetts Motion to Permit Unauthorized Reply to Entergy and NRC Staff Answers Opposing Conditional Motion for Suspension (June 24, 2011). We deny the motion to reply, finding no compelling circumstances presented here. *See* 10 C.F.R. § 2.323(c). We find that Massachusetts should have anticipated the arguments in the Staff's and Entergy's answers, which, in our view, were logical responses to Massachusetts' suspension motion. *Cf. Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-11-14, 74 NRC 801, 807-08 (2011).

[139] *Callaway,* CLI-11-5, 74 NRC at 164 (citing Final Rule: "Nuclear Power Plant License Renewal," 56 Fed. Reg. 64,943, 64,949, 64,953-54 (Dec. 13, 1991)). *See also* Near-Term Report at vii (concluding that "continued operation and continued licensing activities do not pose an imminent risk to public health and safety").

fair and efficient decisionmaking."[140] Moreover, we already have considered and rejected the notion that our Fukushima lessons-learned review needs to be completed prior to a decision on any pending license renewal application. Any rule or policy changes we may make as a result of our post-Fukushima review may be made irrespective of whether a license renewal application is pending, or whether final action on an application has been taken.[141] Therefore, on balance, we do not find that suspension of this adjudicatory proceeding pending the disposition of Massachusetts' rulemaking petition is warranted in the circumstances presented here.

Our denial of Massachusetts' suspension petition should not be interpreted to mean that we take its claims lightly. Our review of the events at Fukushima Daiichi is ongoing. We have directed the Staff to strive to complete and implement lessons learned within 5 years — by 2016.[142] The NRC continues to analyze the Fukushima events, to engage stakeholders, and to develop further recommendations.[143] We have in place well-established regulatory processes by which to

---

[140] Entergy Answer to Conditional Motion to Suspend at 3 (emphasis in original). *See generally* 5 U.S.C. § 558(c) (requiring that an agency set and complete proceedings on license applications "with due regard for the rights and privileges of all the interested parties or adversely affected persons and within a reasonable time"). *See also Vermont Yankee,* CLI-07-3, 65 NRC at 22 ("[W]hatever the ultimate fate of [Massachusetts'] 'new information' claim, admitting [Massachusetts'] contention for an adjudicatory hearing is not necessary to ensure that the claim receives a full and fair airing.").

[141] *See Callaway,* CLI-11-5, 74 NRC at 164.

[142] Staff Requirements — SECY-11-0124 — Recommended Actions to Be Taken Without Delay from the Near-Term Task Force Report (Oct. 18, 2011) at 1 (ADAMS Accession No. ML112911571). *See generally* "Recommended Actions to Be Taken Without Delay from the Near-Term Task Force Report," Commission Paper SECY-11-0124 (Sept. 9, 2011) (ADAMS Accession Nos. ML11245A127, ML11245A144) (paper and attachment); Staff Requirements — SECY-11-0137 — Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned (Dec. 15, 2011) (ADAMS Accession No. ML113490055) (Prioritization of Recommended Actions, SRM); "Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned," Commission Paper SECY-11-0137 (Oct. 3, 2011) (ADAMS Accession No. ML11272A111) (package) (Prioritization of Recommended Actions, SECY-11-0137).

[143] These efforts include the engagement of internal and external stakeholders. *See* Staff Requirements — COMWDM-11-0001/COMWCO-11-0001 — Engagement of Stakeholders Regarding the Events in Japan (Aug. 22, 2011) (ADAMS Accession No. ML112340693). For example, the Staff's prioritization of Near-Term Task Force recommended actions included a discussion of additional recommendations for "further consideration and potential prioritization" that stakeholders, as well as the Staff, have identified. *See* Prioritization of Recommended Actions, SECY-11-0137, at 4-5. *See also* Prioritization of Recommended Actions, SRM, at 2. (Although the Staff included "[f]iltration of containment vents" — an issue raised in Massachusetts' contention — as an item for further consideration and potential prioritization, the Staff noted that its "assessment of these issues is incomplete at this time." Prioritization of Recommended Actions, SECY-11-0137, at 5. We acted on the Staff's recommendation and provided direction regarding "the analysis and interaction with stakeholders needed to inform a decision" on the filtered vents issue. Prioritization of Recommended Actions, SRM, at 2.)

impose any new requirements or other enhancements that may be needed following completion of regulatory actions associated with the Fukushima events.[144] All affected nuclear plants ultimately will be required to comply with NRC direction resulting from lessons learned from the Fukushima accident, regardless of the timing of issuance of the affected licenses.[145] Although our Fukushima lessons-learned review continues, we do not have sufficient information at this time to make a significant difference in the *Pilgrim* environmental review. NEPA requires that we conduct our environmental review with the best information available now.[146] It does not, however, require that we wait until inchoate information matures into something that later might affect our review.[147]

III. CONCLUSION

For the reasons set forth above, we *deny* Massachusetts' and Pilgrim Watch's petitions for review. We *refer* Massachusetts' rulemaking petition to the Staff for appropriate resolution. We *deny* Massachusetts' request to suspend the adjudicatory proceeding pending the disposition of its rulemaking petition.

---

[144] *See Callaway,* CLI-11-5, 74 NRC at 162-63, 166.

[145] Most recently, the Staff transmitted to us recommendations to issue proposed orders in response to lessons learned from the events in Japan. *See generally* "Proposed Orders and Requests for Information in Response to Lessons Learned from Japan's March 11, 2011, Great Tohoku Earthquake and Tsunami," Commission Paper SECY-12-0025 (Feb. 17, 2012) (ADAMS Accession No. ML12039A103) (package).

[146] *See Village of Bensenville v. Federal Aviation Administration,* 457 F.3d 52, 71-72 (D.C. Cir. 2006) (reasoning that the review method chosen by the agency in "creating its models with the best information available when it began its analysis and then checking the assumptions of those models as new information became available, was a reasonable means of balancing . . . competing considerations, particularly given the many months required to conduct full modeling with new data"); *Town of Winthrop,* 535 F.3d at 9-13 (upholding agency decision not to supplement an EIS with information in an area of research that was "still developing"). *Accord Marsh,* 490 U.S. at 373 ("[A]n agency need not supplement an EIS every time new information comes to light after the EIS is finalized. To require otherwise would render agency decisionmaking intractable, always awaiting updated information only to find the new information outdated by the time a decision is made.").

[147] *See Marsh,* 490 U.S. at 373-74. Our rules enable us to supplement an FSEIS if, before a proposed action is taken, new and significant information comes to light that bears on the proposed action or its impacts, consistent with the Supreme Court's decision in *Marsh v. Oregon Natural Resources Council. See* 10 C.F.R. § 51.92(a); *Marsh,* 490 U.S. at 373-74. *See also* LBP-11-35, 74 NRC at 758 n.234 (noting that "[i]f and when Fukushima-derived information sheds new light on the Pilgrim SAMA analysis, the NRC has adequate mechanisms for addressing its regulatory impact").

IT IS SO ORDERED.[148]

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 8th day of March 2012.

[148] Commissioner Apostolakis did not participate in this matter.

Chairman Gregory B. Jaczko, Concurring in Part, and Dissenting in Part

I concur with the majority decision to the extent it denies Massachusetts' waiver petition and request for suspension of the proceeding in the event that its rulemaking petition is activated. I dissent from the decision to the extent that it applies the standard reserved for reopening a closed hearing record, in 10 C.F.R. § 2.326(a), to Massachusetts' new Fukushima contention. Fundamentally, I believe that the reopening standard is not appropriate for Fukushima-related contentions. Therefore, I believe the admissibility of this contention should have been considered solely under the criteria applicable to nontimely filings in 10 C.F.R. § 2.309(c).

The higher threshold for contention admissibility imposed for reopening a record places a heavy burden on a litigant seeking the admission of new contentions. In my view, this more stringent contention admissibility standard is not appropriate for contentions arising from the unprecedented and catastrophic accident at Fukushima. We are in the process of conducting a comprehensive review of the Fukushima events from which we have learned, and will continue to learn, new information and gain new insights on the safety of our nuclear fleet. Given the significance of that accident and the potential implications for the safety of our nuclear reactors, we should allow members of the public to obtain hearings on new contentions on emerging information if they satisfy our ordinary contention standards. Applying more stringent admissibility standards to Fukushima contentions because a Board has taken the administrative action of closing the record on an unrelated hearing will lead to inconsistent outcomes and, more importantly, unfairly limit public participation in these important safety matters. When we considered whether our modifications to our adjudicatory processes should be modified for Fukushima-related contentions, we said we would monitor our proceedings and issue additional guidance as appropriate.[1] I believe that we should do so now and direct that the reopening criteria should not be applied.

[1] *Callaway,* CLI-11-5, 74 NRC at 171.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matters of

LUMINANT GENERATION COMPANY, LLC (Comanche Peak Nuclear Power Plant, Units 3 and 4)	**Docket Nos. 52-034-COL 52-035-COL**
ENERGY NORTHWEST (Columbia Generating Station)	**Docket No. 50-397-LR**
SOUTHERN NUCLEAR OPERATING COMPANY (Vogtle Electric Generating Plant, Units 3 and 4)	**Docket Nos. 52-025-COL 52-026-COL**
DUKE ENERGY CAROLINAS, LLC (William States Lee III Nuclear Station, Units 1 and 2)	**Docket Nos. 52-018-COL 52-019-COL March 16, 2012**

REVIEW, DISCRETIONARY

The Commission will grant a petition for review at its 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 which we may deem to be in the public interest.

RULES OF PRACTICE: APPEALS

Instead of section 2.311, which permits an appeal as of right on the question of whether an initial intervention petition should have been wholly denied, or alternatively, was granted improperly, in instances where an appeal involves a late-filed contention, 10 C.F.R. § 2.341 is routinely applied.

ADMISSIBILITY OF CONTENTIONS: STANDARD OF REVIEW

The standard for review of contention admissibility determinations is the same, whether an appeal lies under section 2.311 or 2.341 — the Commission will disturb a licensing board's contention admissibility ruling only if there has been an error of law or an abuse of discretion.

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

If new and significant information comes to light that requires consideration as part of the ongoing preparation of application-specific National Environmental Policy Act (NEPA) documents, the agency will assess the significance of that information as appropriate.

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

NEPA imposes a continuing obligation on federal agencies to supplement an existing environmental impact statement (EIS), if the proposed action has not been taken, in response to significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

The Commission will supplement an EIS if there are: (1) substantial changes in the proposed action relevant to environmental concerns, or (2) new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

To constitute a basis for supplementing an EIS, the new information must present a seriously different picture of the environmental impact of the proposed project from what was previously envisioned.

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

As a general matter, "new" information that may be assessed for its relevance to an ongoing licensing matter may be derived in a wide variety of ways; such information is assessed for significance regardless of whether it has been acted upon in some way by the Commission, or by the NRC Staff.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY

The Commission expects the Boards in individual licensing proceedings to assess contentions against applicable procedural standards.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY

The contention admissibility rules require a proposed contention to be supported by alleged fact or expert opinion.

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

An application-specific NEPA review represents a "snapshot" in time. NEPA requires that we conduct our environmental review with the best information available today. It does not require that we wait until inchoate information matures into something that later might affect our review.

MEMORANDUM AND ORDER

Today we address four identical petitions for review of the Atomic Safety and Licensing Board's decision in LBP-11-27, which declined to admit a new contention proposed in the captioned matters. As discussed below, we deny the petitions for review.[1]

---

[1] We authorized issuance of the combined licenses in the *Vogtle* matter on February 9, 2012; the Office of New Reactors issued the licenses the next day. *See Southern Nuclear Operating Co.* (Vogtle

(Continued)

I. BACKGROUND

A. The New Contention

This matter stems from the filing of motions to reopen the *Vogtle, Comanche Peak,* and *Bell Bend* combined license (COL) proceedings, a motion to admit a new contention in the *Lee* COL proceeding, and a request for hearing and petition for leave to intervene associated with the *Columbia Generating Station* license renewal application, all of which sought to admit a substantively identical contention under the National Environmental Policy Act (NEPA).[2] The motions were referred to the Atomic Safety and Licensing Board Panel for resolution.[3]

Electric Generating Plant, Units 3 and 4), CLI-12-2, 75 NRC 63 (2012); Matthews, David B., Office of New Reactors, NRC, letter to Joseph A. "Buzz" Miller, Southern Nuclear Operating Co., "Issuance of Combined Licenses and Limited Work Authorizations for Vogtle Electric Generating Plant (VEGP) Units 3 and 4)" (Feb. 10, 2012) (ADAMS Accession No. ML113360395). Issuance of these licenses does not render the *Vogtle* petition for review moot; reopening was sought prior to license issuance.

[2] *See* Motion to Reopen the Record and Admit Contention Regarding the Safety and Environmental Implications of the Nuclear Regulatory Commission Task Force Report on the Fukushima Dai-ichi Accident (filed in the *Vogtle* docket on Aug. 11, 2011, by Center for a Sustainable Coast, Georgia Women's Action for New Directions f/k/a Atlanta Women's Action for New Directions (Georgia WAND), and Southern Alliance for Clean Energy (SACE)); Motion to Reopen the Record and Admit Contention Regarding the Safety and Environmental Implications of the Nuclear Regulatory Commission Task Force Report on the Fukushima Dai-ichi Accident and a separately paginated Contention Regarding NEPA Requirement to Address Safety and Environmental Implications of the Fukushima Task Force Report (filed in the *Vogtle* docket on Aug. 11, 2011, by Blue Ridge Environmental Defense League (BREDL)) (BREDL Motion and BREDL Contention, respectively); Contention Regarding NEPA Requirement to Address Safety and Environmental Implications of the Fukushima Task Force Report (Aug. 11, 2011), and Motion to Reopen the Record and Admit Contention Regarding the Safety and Environmental Implications of the Nuclear Regulatory Commission Task Force Report on the Fukushima Dai-ichi Accident (Aug. 11, 2011) (both filed by Texas State Representative Lon Burnam, Sustainable Energy and Economic Development (SEED) Coalition, and True Cost of Nukes in the *Comanche Peak* docket); 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 (filed in the *Lee* docket on Aug. 11, 2011, by BREDL); Motion to Reopen the Record and Admit Contention Regarding the Safety and Environmental Implications of the Nuclear Regulatory Commission Task Force Report on the Fukushima Dai-ichi Accident (filed in the *Bell Bend* docket on Aug. 10, 2011, by Gene Stilp); Petition for Hearing and Leave to Intervene in Operating License Renewal for Energy Northwest's Columbia Generating Station (filed in the *Columbia Generating Station* docket on Aug. 22, 2011, by Northwest Environmental Advocates).

[3] Order (Aug. 18, 2011) (referral to the Atomic Safety and Licensing Board) (unpublished); Order (Aug. 30, 2011) (referral to the Atomic Safety and Licensing Board) (unpublished); Memorandum from Vietti-Cook, Annette, Secretary of the Commission, to Chief Administrative Judge E. Roy Hawkens, "Request for Hearing with Respect to Notice of Opportunity of Hearing Regarding Renewal of Facility Operating License for Additional 20-Year Period for Energy Northwest Columbia Generating Station, Docket No. 50-397-LR" (Aug. 31, 2011). *See* Energy Northwest; Establishment

(Continued)

The common contention arises from the report of the agency's Near-Term Task Force regarding the Fukushima Dai-ichi accident, discussed further below. The contention was founded, as a general matter, on the Task Force's recommendation that the NRC "increase the level of safety associated with adequate protection of the public health and safety."[4] The common contention asserted that the environmental review documents in each of the captioned matters fail to satisfy NEPA because they do not account for the new and significant environmental implications stemming from the findings and recommendations included in the Near-Term Report.[5]

In a single, consolidated decision, the Board denied the motions and intervention petition.[6] The Board reasoned that the rationale in our recent decision in CLI-11-5 resolving multiple requests for relief was controlling, and denied

---

of Atomic Safety and Licensing Board, 76 Fed. Reg. 56,242 (Sept. 12, 2011); Duke Energy Carolinas, LLC; Southern Nuclear Operating Company; Establishment of Atomic Safety and Licensing Board, 76 Fed. Reg. 56,242 (Sept. 12, 2011); Southern Nuclear Operating Co., PPL Bell Bend, L.L.C., Luminant Generation Company LLC; Establishment of Atomic Safety and Licensing Board, 76 Fed. Reg. 56,243 (Sept. 12, 2011). Each of these boards was composed of the same three administrative judges; in the context of this decision, we refer to them as a single Board.

[4] *See generally* "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) (transmitted to the Commission via "Near-Term Report and Recommendations for Agency Actions Following the Events in Japan," Commission Paper SECY-11-0093 (July 12, 2011), at 18 (ADAMS Accession No. ML11186A950) (package) (Near-Term Report)).

[5] BREDL Contention at 5. The NEPA documents challenged for the *Lee, Columbia Generating Station,* and *Bell Bend* applications were the environmental reports; the *Vogtle* petitioners challenged the final supplemental EIS; and the *Comanche Peak* petitioners challenged the final supplemental EIS. LBP-11-27, 74 NRC 591, 596 n.17 (Oct. 18, 2011, as corrected Oct. 20, 2011). BREDL's proposed contention in the *Vogtle* matter differs slightly, in that the text of the contention references "seismic-flood and environmental justice issues." BREDL Contention at 4. The Board concluded that this slight difference in wording, and the fact that the contentions challenge various NEPA documents, were not significant for the purposes of its ruling. LBP-11-27, 74 NRC at 596 n.17. As the Board observed, since the new contention was filed, the Staff has issued a draft supplemental EIS associated with the *Columbia Generating Station* license renewal application, and a draft EIS associated with the *Lee* COL application. "Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 47 Regarding Columbia Generating Station, Draft Report for Comment," NUREG-1437 (Aug. 2011) (ADAMS Accession No. ML11227A007); "Draft Environmental Impact Statement for Combined Licenses (COLs) for William States Lee III Nuclear Station Units 1 and 2, Draft Report for Comment," NUREG-2111 (Dec. 2011) (ADAMS Accession No. ML113430094) (package).

[6] LBP-11-27, 74 NRC at 603.

the motions and petition as premature.[7] These four timely petitions for review followed.[8] The applicants and the Staff oppose the petitions.[9]

B. Events at the Fukushima Dai-ichi Nuclear Power Plant

A summary of the events that occurred at Fukushima Dai-ichi following the March 11, 2011 earthquake and tsunami, as well as actions taken by the NRC subsequent to the accident, is provided in our recent decision in CLI-11-5.[10] As relevant here, soon after the events in Japan we established a Near-Term Task Force to conduct a review of the agency's processes and regulations to determine if we should make additional improvements to our regulatory system.[11] In July, the Task Force provided to us a report transmitting its recommendations. The Near-Term Report included twelve overarching recommendations for improving the safety of both new and operating nuclear reactors.[12] Also relevant here, we recently approved the Staff's recommended actions to be taken without delay from the Near-Term Report.[13]

---

[7] *Id.* at 601-02. *See generally Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141 (2011).

[8] Petition for Review of LBP-11-27 (Nov. 2, 2011) (Petition). Representative Lon Burnam, SEED Coalition, Public Citizen, and True Cost of Nukes filed a petition in the *Comanche Peak* COL proceeding; BREDL filed a single petition in both the *Vogtle* and *Lee* dockets; Center for a Sustainable Coast and SACE also filed a petition in the *Vogtle* docket; and Northwest Environmental Advocates filed a petition for review associated with the *Columbia Generating Station* license renewal application. Collectively, we refer to these entities as "Petitioners." The petitions themselves are substantively identical. For convenience, page references in today's decision correspond to the petition filed by BREDL in the *Vogtle* and *Lee* matters. Mr. Stilp did not seek review in the *Bell Bend* case.

[9] Duke Energy's Answer to Petition for Review of LBP-11-27 (Nov. 14, 2011) (*Lee*); Southern Nuclear Operating Company's Answer Opposing Petitions for Review of LBP-11-27 (Nov. 14, 2011) (*Vogtle*); Luminant's Answer in Opposition to Petition for Review of LBP-11-27 (Nov. 14, 2011) (*Comanche Peak*); Energy Northwest's Answer in Opposition to Petition for Review of LBP-11-27 (Nov. 14, 2011) (*Columbia Generating Station*) (Energy Northwest Answer); NRC Staff's Answer to Petition for Review of LBP-11-27 (Nov. 14, 2011). The Staff filed two identically titled answers, one in the *Columbia Generating Station* matter and one in the COL proceedings.

[10] *Callaway,* CLI-11-5, 74 NRC at 146.

[11] Tasking Memorandum — COMGBJ-11-0002 — NRC Actions Following the Events in Japan, (Mar. 23, 2011) (ADAMS Accession No. ML110800456). *See generally* "Charter for the Nuclear Regulatory Commission Task Force to Conduct a Near-Term Evaluation of the Need for Agency Actions Following the Events in Japan" (Apr. 1, 2011) (ADAMS Accession No. ML11089A045).

[12] *See generally* Near-Term Report.

[13] Staff Requirements — SECY-11-0124 — Recommended Actions to Be Taken Without Delay from the Near-Term Task Force Report (Oct. 18, 2011) (ADAMS Accession No. ML112911571). *See generally* "Recommended Actions to Be Taken Without Delay from the Near-Term Task Force Report," Commission Paper SECY-11-0124 (Sept. 9, 2011) (ADAMS Accession Nos. ML11245A127,

(Continued)

II. DISCUSSION

A. Standards of Review

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 which we may deem to be in the public interest.[14]

Petitioners in the *Comanche Peak, Vogtle,* and *Lee* matters properly raise this appeal under 10 C.F.R. § 2.341, which applies to new contentions filed after initial intervention petitions.[15] Instead of section 2.311, which permits an appeal as of right on the question of whether an initial intervention petition should have been wholly denied, or alternatively, was granted improperly,[16] in instances where an appeal involves a late-filed contention, 10 C.F.R. § 2.341 is routinely applied.[17]

ML11245A144) (paper and attachment); Staff Requirements — SECY-11-0137 — Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned (Dec. 15, 2011) (ADAMS Accession No. ML113490055); "Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned," Commission Paper SECY-11-0137 (Oct. 3, 2011) (ADAMS Accession No. ML11272A111) (package).

[14] 10 C.F.R. § 2.341(b)(4)(i)-(v).

[15] *Cf. South Texas Project Nuclear Operating Co.* (South Texas Project, Units 3 and 4), CLI-09-18, 70 NRC 859, 862 (2009) ("As a general matter, contentions filed after the initial petition are not subject to appeal pursuant to section 2.311."). In the *Comanche Peak, Vogtle,* and *Lee* matters, Petitioners timely filed initial intervention petitions.

[16] *See Statement of Policy on Conduct of Adjudicatory Proceedings,* CLI-98-12, 48 NRC 18, 23 (1998) (stating that 10 C.F.R. § 2.714a (now 10 C.F.R. § 2.311) allows an appeal of a ruling on contentions, "only if (a) the order wholly denies a petition for leave to intervene (i.e., the order denies the petitioner's standing or the admission of a petitioner's contentions) or (b) a party other than the petitioner alleges that a petition for leave to intervene or a request for hearing should have been wholly denied"). *See also AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 125 (2006).

[17] *See South Texas Project,* CLI-09-18, 70 NRC at 862 (clarifying that "challenges to Board rulings on late-filed contentions normally fall under our rules for interlocutory review"). *See also*

(Continued)

With respect to the *Columbia Generating Station* matter, no timely initial intervention petition was submitted in response to the notice of opportunity for hearing published in the *Federal Register,* and as a consequence, no adjudicatory proceeding commenced.[18] Accordingly, our rules required — and Northwest Environmental Advocates filed — an intervention petition and request for hearing to advance the common contention in the *Columbia Generating Station* matter. Energy Northwest therefore argues that Northwest Environmental Advocates' appeal should have been filed pursuant to 10 C.F.R. § 2.311, and, as a result, also claims that the appeal was filed out of time — 5 days beyond the 10-day deadline set forth in section 2.311.[19] While we agree with Energy Northwest that Northwest Environmental Advocates' appeal lies under section 2.311,[20] as a matter of discretion we consider the petition for review. In any event, the standard for review of contention admissibility determinations is the same, whether an appeal lies under section 2.311 or 2.341 — we will disturb a licensing board's contention admissibility ruling only if there has been an error of law or an abuse of discretion.[21]

Petitioners argue that the Board's decision is reviewable because a "necessary legal conclusion is without governing precedent or is a departure from or contrary to established law," and also because a "substantial and important question of law, policy or discretion has been raised."[22] As discussed below, Petitioners have not raised a substantial question warranting review.[23]

Oyster Creek, CLI-06-24, 64 NRC 111; *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-1, 53 NRC 1 (2001); *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235 (2009).

[18] Energy Northwest submitted the license renewal application for Columbia Generating Station on January 19, 2010. The notice of opportunity for hearing was published in the *Federal Register* on March 11, 2010; an intervention petition would have been due by May 10, 2010. *See* Notice of Acceptance for Docketing of the Application, Notice of Opportunity for Hearing Regarding Renewal of Facility Operating License No. NPF-21 for an Additional 20-Year Period [,] Energy Northwest; Columbia Generating Station, 75 Fed. Reg. 11,572 (Mar. 11, 2010). Northwest Environmental Advocates filed its intervention petition on August 22, 2011, over 1 year later.

[19] Energy Northwest Answer at 6.

[20] *See South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Unit 1), ALAB-642, 13 NRC 881 (1981) (applying the predecessor regulation to section 2.311, 10 C.F.R. § 2.714a, to its review of an initial intervention petition filed over 4 years after the deadline).

[21] *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 29 (2010). *See also AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 260 (2009); *Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-11-9, 74 NRC 233, 237 (2011).

[22] Petition at 5-6.

[23] *Id.* at 2. Petitioners in all four proceedings filed motions to reinstate and supplement the basis for the rejected contention prior to filing their appeals of LBP-11-27. *See* Motion to Reinstate and

(Continued)

B. Analysis

Petitioners first argue that the Board erred in concluding that the proffered contention was premature because it interpreted our holding in CLI-11-5 too broadly.[24] In CLI-11-5, we held that a request for a generic NEPA review arising out of the Near-Term Report was premature. According to Petitioners, however, the Board misconstrued that holding as applicable to individual licensing proceedings as well. Petitioners instead assert that CLI-11-5 determined that the Commission would consider the NEPA issue in individual licensing proceedings.[25] As explained below, we disagree with Petitioners' characterization of the Board's ruling.

A host of petitions were filed after the Fukushima Dai-ichi accident requesting the suspension of adjudicatory, licensing, and rulemaking activities associated with several power plants.[26] As part of a laundry list of requested relief, those petitions requested that the NRC conduct a generic NEPA analysis on the grounds that the Fukushima accident constituted "new and significant" information that must be analyzed as part of the environmental review for new reactor and license renewal decisions.[27] In resolving those petitions we noted that, although the Task Force had issued its report, the evaluation of the Fukushima Dai-ichi accident was still ongoing and the implications for U.S. reactors were not yet known.[28] In short, we declined to conduct a generic NEPA analysis at that time.[29]

Here, Petitioners argue that application-specific NEPA analyses must consider "new and significant" information arising from the Fukushima accident. They

---

Supplement the Basis for Fukushima Task Force Report Contention (filed in the *Comanche Peak* docket on Oct. 28, 2011 by Representative Burnam, SEED Coalition, Public Citizen, and True Cost of Nukes); Motion to Reinstate and Supplement the Basis for Fukushima Task Force Report Contention (filed in the *Vogtle* docket by Center for a Sustainable Coast, Georgia WAND, and SACE on Oct. 28, 2011); Motion to Reinstate and Supplement the Basis for Fukushima Task Force Report Contention (filed in the *Vogtle* docket by BREDL on Oct. 28, 2011); Motion to Reinstate and Supplement the Basis for Fukushima Task Force Report Contention (filed in the *Lee* proceeding by BREDL on Oct. 28, 2011); Motion to Reinstate and Supplement the Basis for Fukushima Task Force Report Contention (filed in the *Columbia Generating Station* docket by Northwest Environmental Advocates on Oct. 28, 2011). Petitioners requested on appeal that we hold the petitions for review in abeyance pending issuance of the Board's ruling on their motions to reinstate and supplement the contention. *See* Petition at 2. The Board has now ruled on their motions to supplement; Petitioners' request is moot. *See* LBP-11-36, 74 NRC 768 (2011).

[24] Petition at 6.

[25] *Id.* at 6-7.

[26] *See generally Callaway,* CLI-11-5, 74 NRC 141.

[27] *Id.* at 151. *See also, e.g.,* 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 (Apr. 18, 2011) at 2 (ADAMS Accession No. ML111080869).

[28] *Callaway,* CLI-11-5, 74 NRC at 166-68.

[29] *Id.* at 168.

attempt to distinguish CLI-11-5 by claiming that our holding there rested on a finding that sufficient information was not yet available to conduct a *generic* analysis.[30] In support of its conclusion in LBP-11-27, however, the Board did not assume that we had ruled prospectively on application-specific NEPA contentions. 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 we declared premature in CLI-11-5.[31]

While it is true that the precise relief sought is slightly different — site-specific analyses versus a generic one — we decline to find that the Board erred in relying on the reasoning underlying our decision. Although some time has passed, and regulatory initiatives are well under way, we continue to gain information on the Fukushima Dai-ichi events. As we stated in CLI-11-5, "[if] 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."[32]

Petitioners have not identified environmental effects from the Fukushima Dai-ichi events that can be concretely evaluated at this time, or identified specific new information challenging the site-specific environmental assessments in the captioned matters. We therefore decline to disturb the Board's conclusion that nothing in Petitioners' contention overcomes the prematurity concerns we outlined in CLI-11-5.

The contention also fails on an independent ground. Petitioners argue that the Near-Term Report constitutes new and significant information because it stems from the Fukushima Dai-ichi accident and "because it raises an extraordinary level of concern regarding the manner in which the proposed operation of the [facilities in the captioned matters] 'impacts public health and safety.'"[33]

NEPA imposes a continuing obligation on federal agencies to supplement an existing environmental impact statement (EIS), if the proposed action has not been taken, "in response to 'significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.'"[34] Our rules provide that we will supplement an EIS if there are: (1) substantial changes in the proposed action relevant to environmental concerns, or (2) new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.[35] To constitute a basis for supplementing an EIS, Petitioners are correct that the new information must

---

[30] Petition at 6.

[31] LBP-11-27, 74 NRC at 601-02.

[32] *Callaway,* CLI-11-5, 74 NRC at 167.

[33] *See* BREDL Contention at 12.

[34] *Idaho Sporting Congress Inc. v. Alexander,* 222 F.3d 562, 566 n.2 (9th Cir. 2000).

[35] 10 C.F.R. §§ 51.72(a), 51.92(a).

present a "seriously different picture of the environmental impact of the proposed project from what was previously envisioned."[36] As discussed above, although our Fukushima lessons-learned review continues, Petitioners have not pointed to concrete information that "is material to the findings the NRC must make to support" the captioned proposed actions.[37]

Petitioners further assert that the Board engaged in circular logic to conclude that information is "new and significant" only when it compels agency action and that, instead, the Board should assess whether "Petitioners have raised a litigable claim."[38] We disagree. As a general matter, "new" information that may be assessed for its relevance to an ongoing licensing matter may be derived in a wide variety of ways; such information is assessed for significance regardless of whether it has been acted upon in some way by us, or by the NRC Staff. In any event, however, a careful reading of the Board's decision makes clear that, while the Board expressed doubt as to the weight the Near-Term Report should be accorded prior to our action on the recommendations, the fact that we had not yet acted on the Report was not the basis for its decision. Rather, the Board fundamentally relied on the reasoning in CLI-11-5:

> Although the Task Force completed its review and provided its recommendations to us, the agency continues to evaluate the accident and its implications for U.S. facilities and the full picture of what happened at Fukushima is still far from clear. In short, we do not know today the full implications of the Japan events for U.S. facilities. Therefore, any generic NEPA duty — if one were appropriate at all — does not accrue now.[39]

We find the Board's determination reasonable, and decline to disturb it. As 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. Furthermore, although the question before the Commission in CLI-11-5 was a request for a generic analysis (rather than a particular contention), we expect the Boards in individual licensing proceedings to assess contentions against applicable procedural standards.

Here, the Board addressed — albeit briefly — Petitioners' failure to point to

---

[36] *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). *See also Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-06-3, 63 NRC 19, 28 (2006).

[37] 10 C.F.R. § 2.309(f)(1)(iv).

[38] Petition at 8.

[39] LBP-11-27, 74 NRC at 600-01 (citing *Callaway,* CLI-11-5, 74 NRC at 167).

"any unique characteristics of the site of the particular reactor that might make the content," of the Near-Term Report "of greater environmental significance to that reactor than to United States reactors in general."[40] The contention presumes, without support, that the Near-Term Report raised "new and significant" environmental implications that have not been addressed in previous environmental reports (or Staff environmental reviews) prepared for the referenced applications. Petitioners make only broad claims that the Near-Term Report constitute s new and significant information "because it raises an extraordinary level of concern regarding the manner in which the proposed operation of the [facilities in the captioned matters] impacts health and safety."[41] Petitioners also assert, without more, that

> the Task Force's recommendation to completely overhaul the NRC regulatory structure, including redefining what level of protection of public health and safety should be regarded as adequate, easily surpasses the objective "new and significant" test because it [ ]paints a "seriously different picture of the environmental impact" of the licensing and [license renewal] of nuclear reactors than before the release of the Task Force Report.[42]

But our contention admissibility rules require a proposed contention to be supported by "alleged fact or expert opinion."[43] As the Board correctly observed, 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.[44] We expect Petitioners to identify information that was not considered in the environmental review for the application at issue and explain, with asserted facts or expert opinion, how it presents a "seriously different picture of the environmental impact of the proposed project from what was previously

---

[40] LBP-11-27, 74 NRC at 601-02. Neither the declaration provided by Dr. Arjun Makhijani nor that provided by Dr. Ross McCluney referenced any conditions relevant to any of the sites — or applications — at issue here. *See* BREDL Motion (attaching Declaration of Dr. Arjun Makhijani Regarding Safety and Environmental Significance of NRC Task Force Report Regarding Lessons Learned from Fukushima Daiichi Nuclear Power Station Accident (Aug. 8, 2011) and Declaration of Dr. Ross McCluney Regarding Environmental and Safety Issues at Nuclear Power Plants Based on Events at Fukushima and the Findings of the NRC Interim Task Force (Aug. 11, 2011). Dr. Makhijani's declaration was filed with each request; Dr. McCluney's declaration was filed in support of BREDL's motions in the *Vogtle* and *Lee* matters.

[41] BREDL Contention at 12.

[42] Petition at 9.

[43] 10 C.F.R. § 2.309(f)(1)(v) & (vi). *See also Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 808 (2005).

[44] LBP-11-27, 74 NRC at 601-02.

envisioned."[45] Applying this standard, we see no error or abuse of discretion in the Board's finding that Petitioners failed to include facts sufficient to demonstrate a genuine dispute with respect to a particular captioned application.[46] While this may be because information available to, and relied upon by, Petitioners was not sufficient to support an admissible contention, the contention nonetheless is too vague to be appropriate for litigation in an individual proceeding.[47]

As discussed above, the NRC's continuing efforts to implement regulatory actions arising from post-Fukushima lessons learned may require, under NEPA, new or supplemental environmental analyses. However, as particularly relevant to the *Vogtle* matter, where COLs now have issued, we observe that an application-specific NEPA review represents a "snapshot" in time. NEPA requires that we

---

[45] *Callaway,* CLI-11-5, 74 NRC at 167-68 (citing *Hydro Resources,* CLI-99-22, 50 NRC at 14 (citing, in turn, *Marsh,* 490 U.S. at 373; *Sierra Club,* 816 F.2d at 210)).

[46] In the *Vogtle* matter, BREDL also raised an environmental justice claim, supported by the Declaration of Rev. Charles Utley. With respect to the *Vogtle* COL application, Rev. Utley challenges the conclusions in the final supplemental EIS regarding environmental justice, asserting that the applicant and the Staff "disregarded" particular new information. Dr. Utley also asserts that the NRC should require Southern to provide shelter, evacuation assistance, and other protections to residents of several communities, and that potassium iodide should be made available to all residents of Burke County. *See* BREDL Contention at 2, 6; Declaration of Rev. Charles N. Utley Regarding Environmental Justice and Emergency Response Issues at Plant Vogtle Electric Generating Plant Based on Events at Fukushima and the Findings of the NRC Interim Task Force (Aug. 11, 2011) at 3-6 (appended to the BREDL Motion). The Board found that BREDL's claims are rooted in "longstanding generic concerns" about the NRC's implementation of environmental justice and its policy on the distribution of potassium iodide, and noted that both of these concerns appropriately could have been raised much earlier in the proceeding — particularly, at the time the Staff issued the draft supplemental EIS associated with the *Vogtle* application in September 2010. LBP-11-27, 74 NRC at 602 n.54. BREDL did not expressly challenge the Board's decision on its environmental justice claims, and, thus appears to have abandoned the claim. In any event, however, we find no error in the Board's decision on that point.

[47] The Board in this case did not rely on the NRC's standards for reopening a closed record. LBP-11-27, 74 NRC at 595. Those standards require, among other things, a fully supported showing of "significance" and a likelihood of a "materially different result." *See* 10 C.F.R. § 2.326. As we recently found in *Pilgrim,* where we also considered (and rejected) Fukushima-related contentions, "[t]he level of support required for a motion to reopen is greater than that required for a contention under the general admissibility requirements." *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-3, 75 NRC 132, 138 (2012). Given our holding (explained above) that Petitioners' contention lacked sufficient specificity and support to satisfy our ordinary contention-admissibility rule, it necessarily follows that the contention also failed our more stringent reopening rule. And, even were we to assume contention admissibility, Petitioners have not shown that their various claims, which are quite general, have the kind of "significance" and potential for a "different result" that under our reopening rule would justify restarting already-closed hearings.

conduct our environmental review with the best information available today.[48] It does not require that we wait until inchoate information matures into something that later might affect our review.[49]

III. CONCLUSION

For the foregoing reasons, we *deny* the petitions for review.
IT IS SO ORDERED.[50]

For the Commission

ANDREW L. BATES
Acting Secretary of the Commission

Dated at Rockville, Maryland,
this 16th day of March 2012.

---

[48] *See Village of Bensenville v. Federal Aviation Administration,* 457 F3d 52, 71-72 (D.C. Cir. 2006) (reasoning that the review method chosen by the agency in "creating its models with the best information available when it began its analysis and then checking the assumptions of those models as new information became available, was a reasonable means of balancing . . . competing considerations, particularly given the many months required to conduct full modeling with new data"); *Town of Winthrop v. Federal Aviation Administration,* 535 F.3d 1, 9-13 (1st Cir. 2008) (upholding agency decision not to supplement an EIS with information in an area of research that was "still developing"). *Accord Marsh,* 490 U.S. at 374 ("[A]n agency need not supplement an EIS every time new information comes to light after the EIS is finalized. To require otherwise would render agency decisionmaking intractable, always awaiting updated information only to find the new information outdated by the time a decision is made.").

[49] *See Marsh,* 490 U.S. at 374. As noted above, our rules enable us to supplement an EIS if, before a proposed action is taken, new and significant information comes to light that bears on the proposed action or its impacts, consistent with the Supreme Court's decision in *Marsh. See id.* at 373-74.

[50] Commissioner Magwood's approval does not pertain to the *Comanche Peak* COL proceeding, in which he is not participating.

Cite as 75 NRC 393 (2012) **CLI-12-8**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of **Docket No. 50-346-LR**

FIRSTENERGY NUCLEAR OPERATING COMPANY
(Davis-Besse Nuclear Power Station, Unit 1) **March 27, 2012**

NATIONAL ENVIRONMENTAL POLICY ACT: ALTERNATIVES TO PROPOSED ACTION

For an alternative energy source to be considered reasonable for purpose of this proceeding, the alternative should be commercially viable and technically capable of producing an equal amount of baseload power now or in the near future, but no later than the expiration date of the current operating license.

NATIONAL ENVIRONMENTAL POLICY ACT: SEVERE ACCIDENT MITIGATION ALTERNATIVES (SAMAs)

The Severe Accident Mitigation Alternatives (SAMA) analysis is a site-specific analysis under NEPA. It looks for potential additional mitigation measures that could be implemented at a particular plant to further reduce severe accident risk (the probability or consequences of a severe accident). The SAMA analysis for license renewal has been a cost-benefit analysis, weighing a particular mitigation measure's estimated degree of risk reduction against its estimated cost of implementation.

NATIONAL ENVIRONMENTAL POLICY ACT: SEVERE ACCIDENT MITIGATION ALTERNATIVES (SAMAs)

To challenge an application, a petitioner must show that the SAMA analysis is "unreasonable" under NEPA. 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). 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 with the application.

MEMORANDUM AND ORDER

This proceeding stems from the application of FirstEnergy Nuclear Operating Company (FirstEnergy) to renew its operating license for the Davis-Besse Nuclear Power Station, Unit 1 (Davis-Besse) for an additional 20 years.[1] Beyond Nuclear, Citizens Environment Alliance of Southwestern Ontario, Don't Waste Michigan, and the Green Party of Ohio (collectively, Petitioners) filed a joint intervention petition in opposition to FirstEnergy's application.[2] In LBP-11-13, the Board granted a hearing, admitting two contentions and finding that all four Petitioners had demonstrated standing.[3] FirstEnergy has now appealed LBP-11-13.[4] As discussed below, we affirm in part, and reverse in part, the Board's decision.

---

[1] *See generally* Letter from B.S. Allen, FirstEnergy, to NRC Document Control Desk, "License Renewal Application and Ohio Coastal Zone Management Program Consistency Certification" (ADAMS Accession No. ML102450572 (package)).

[2] *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) (Petition) (Errata filed Jan. 5, 2011). Petitioners also submitted an accompanying expert Declaration and curriculum vitae of Dr. Alvin Compaan. Declaration and Curriculum Vitae of Alvin Compaan, Intervenors' Expert Witness on Contention #2 (dated Dec. 27, 2010, filed Dec. 28, 2010) (Compaan Declaration). The Petition also attached or referenced supporting information. Some, but not all, of these references were identified by Petitioners and the Board as numbered exhibits. Where applicable, we use the same designations.

[3] LBP-11-13, 73 NRC 534 (2011).

[4] *See* FirstEnergy's Notice of Appeal of LBP-11-13 (May 6, 2011); FirstEnergy's Brief in Support of the Appeal of LBP-11-13 (May 6, 2011) at 3 (Appeal). FirstEnergy does not challenge the Board's rulings on standing.

I. PROCEDURAL BACKGROUND

Petitioners submitted four environmental contentions. The first three concern the adequacy of FirstEnergy's analysis of alternatives to license renewal — specifically wind energy, photovoltaic solar energy, and the combination of compressed air energy storage with wind and/or solar energy. The fourth contention challenges FirstEnergy's analysis of severe accident mitigation alternatives (SAMAs) at Davis-Besse. Both FirstEnergy and the NRC Staff submitted Answers in which they argued that all four contentions were inadmissible.[5] Petitioners replied to those answers.[6] In early March, the Board held a prehearing conference on the intervention petition.[7]

The Board subsequently issued LBP-11-13, finding that all four Petitioners had demonstrated standing, admitting all three "alternative energy" contentions (as reformulated and combined into one contention by the Board), and also admitting the SAMA contention (as limited by the Board). FirstEnergy now appeals LBP-11-13 under 10 C.F.R. § 2.311(d)(1).[8] Petitioners oppose FirstEnergy's appeal.[9]

II. DISCUSSION

A. Applicable Procedural Standards

A request for hearing and petition for leave to intervene must set forth with particularity the contentions sought to be raised. For each contention, the request and petition must satisfy all six of the following requirements:

---

[5] *See* FirstEnergy's Answer Opposing Request for Public Hearing and Petition for Leave to Intervene (Jan. 21, 2011) (FirstEnergy Answer); NRC Staff's Answer to Joint Petitioners' Request for a Hearing and Petition for Leave to Intervene (Jan. 21, 2011) (Staff Answer).

[6] *See* Joint Intervenors' Combined Reply in Support of Petition for Leave to Intervene (Jan. 28, 2011). Petitioners filed Errata to this pleading on February 9, a "Corrected Version" on February 23, and a "2nd, Final Corrected Version" on February 24, 2011. We reference here the February 24 filing. *See* Joint Intervenors' Combined Reply in Support of Petition for Leave to Intervene (2nd, Final Corrected Version) (Feb. 24, 2011) (Reply).

[7] *See* Transcript of Hearing for Oral Argument (Mar. 1, 2011) (Tr.).

[8] Appeal at 3.

[9] *See* Joint Intervenors' Brief in Opposition to FENOC's Notice of Appeal and Brief (May 16, 2011) (Petitioners' Opposition). Subsequent to the appeal, FirstEnergy filed a motion asking the Board to dismiss the consolidated Contention 1 on grounds of mootness. FirstEnergy Nuclear Operating Company's Motion to Dismiss Contention 1 (Dec. 19, 2011). The Board denied FirstEnergy's motion. Memorandum and Order (Denying Motion to Dismiss Contention 1) (Jan. 10, 2012) (unpublished), *reconsideration denied,* Order (Denying Motion for Leave to File a Motion for Reconsideration (Jan. 30, 2012) (unpublished).

> (i) Provide a specific statement of the issue of law or fact to be raised or controverted . . . ;
>
> (ii) Provide a brief explanation of the basis for the contention;
>
> (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
>
> (iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
>
> (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue . . . together with references to the specific sources and documents on which the requestor/petitioner intends to rely . . . ; [and]
>
> (vi) . . . [P]rovide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact.[10]

As we have outlined in earlier decisions and most recently in the *Seabrook* decision,[11] the NRC in 1989 revised its rules to prevent the admission of "poorly defined or supported contentions,"[12] or those "based on little more than speculation."[13] The agency deliberately raised the contention-admissibility standards to relieve the hearing delays that such contentions had caused in the past.[14] Prior to our 1989 rule revision, intervenors were able to trigger hearings after merely "copying contentions from another proceeding involving another reactor," even though many of these intervenors often had "negligible knowledge" of the issues "and, in fact, no direct case to present."[15] Although under our current rules, intervenors of course may use the discovery process to develop a case once contentions are admitted, "contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by some alleged fact or facts demonstrating a genuine material dispute" with the applicant.[16] We properly "reserve our hearing process for genuine, material controversies between knowledgeable litigants."[17]

Our rules of practice provide for an automatic right to appeal a licensing board decision deciding standing and contention admissibility, on the question

---

[10] 10 C.F.R. § 2.309(f)(1).

[11] *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 307 (2012).

[12] *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999).

[13] *Id. See also Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 14 (2001).

[14] *Oconee,* CLI-99-11, 49 NRC at 334.

[15] *Id. See also Turkey Point,* CLI-01-17, 54 NRC at 19.

[16] *Oconee,* CLI-99-11, 49 NRC at 335 (citation omitted).

[17] *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 219 (2003).

whether a petition to intervene and request for hearing should have been granted, or denied in its entirety.[18] Here, FirstEnergy argues that the Board should have denied Petitioners' hearing request because Petitioners submitted no admissible contentions. In examining contention admissibility, we generally defer to the Board unless we find either an error of law or abuse of discretion.[19] With these standards in mind, we turn to FirstEnergy's appeal.

B. Analysis of the Board's Rulings on Contention Admissibility

1. Alternative Energy Sources

a. Background

Our regulations implementing section 102 of the National Environmental Policy Act (NEPA)[20] require the Environmental Reports submitted by license renewal applicants to address the environmental impacts of the proposed action and also to compare them to impacts of alternative actions.[21] NEPA requires the consideration of "reasonable" alternatives.[22] We discussed the scope of the energy-alternatives analysis in our recent *Seabrook* decision, and do not repeat that discussion here.[23]

To challenge such an analysis, 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 a commercially viable alternate technology (or combination of technologies) is available now, or will become so in the near future, to supply baseload power.[24] As we noted in *Seabrook,* we necessarily consider energy alternatives in a pragmatic fashion, based on the information that is available today. 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.[25] In this case, the time period for consideration of energy alternatives is not at issue. The Board found that "any reasonable alternative to

---

[18] 10 C.F.R. § 2.311(c), (d)(1). *See, e.g., Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-09-22, 70 NRC 932, 933 (2009).

[19] *See, e.g., South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-21, 72 NRC 197, 200 (2010) (citing *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 336 (2009)).

[20] National Environmental Policy Act of 1969, Pub. L. No. 91-190, § 102(2)(C)(ii), (iii), 83 Stat. 852, 853-54 (1970), 42 U.S.C. § 4332(2)(C)(ii), (iii).

[21] *See* 10 C.F.R. § 51.53(c)(2).

[22] *Natural Resources Defense Council, Inc. v. Morton,* 458 F.2d 827, 834, 837 (D.C. Cir. 1972).

[23] *See Seabrook,* CLI-12-5, 75 NRC at 340-42.

[24] *Id.* at 342.

[25] *Id.*

be evaluated in depth must be an alternative that is available now or in the near future and in any event no later than April 22, 2017, the expiration date of the current license."[26] No party disputes this determination.[27]

In its Environmental Report, FirstEnergy briefly examined wind energy and solar energy as potential alternatives to a license renewal, but rejected those two options as unreasonable on the ground that, at least in their current state, they are incapable of producing baseload power.[28]

In their "energy alternatives" contentions, Petitioners object that FirstEnergy's Environmental Report should have considered more comprehensively wind and/or solar energy.[29] Petitioners argue that wind, solar, and storage (either individually or in some combination) qualified as "baseload power" sources that would render the renewal of the Davis-Besse license "unnecessary."[30] Petitioners' Contention 1, in relevant part, states as follows:

> FirstEnergy['s] Environmental Report fails to adequately evaluate the full potential for renewable energy sources, such as wind power, to offset the loss of energy production from Davis-Besse, and to make the requested license renewal action from 2017 to 2037 unnecessary. In violation of the requirements of 10 C.F.R. [§ 51.53(c)(3)(iii)] and of the GEIS § 8.1, [FirstEnergy's] Environmental Report (§ 7.2) treats all of the alternatives to license renewal except for natural gas and coal plants as unreasonable and does not provide a substantial analysis of the potential for significant alternatives, such as wind power, in the Region of Interest [ROI[31]] for the requested relicensing period of 2017 to 2037.[32]

---

[26] LBP-11-13, 73 NRC at 556.

[27] The Board observes that Joint Petitioners conceded that this was the relevant time period for evaluation of alternatives. *Id.* (citing Tr. at 69). Nor does FirstEnergy challenge this determination. *See* Appeal at 8. In our *Seabrook* decision, we did not exclude the possibility of a contention with respect to a technology that is likely to be available during the period of extended operation. *Seabrook,* CLI-12-5, 75 NRC at 342 n.245. Petitioners here, however, have not made such a challenge.

[28] Application, Vol. 3, App. E, Environmental Report § 7.2, at 7.2-1 (generally), 7.2-9 (wind), 7.2-9 to 7.2-10 (solar), 7.2-12 to 7.2-13 (combination of wind, solar and/or other alternatives) (Environmental Report).

[29] Petition at 10 (wind), 28 (wind and storage), 68-69 (solar), 71 (solar and storage), 93 (wind and solar in combination).

[30] Petition at 10, 65, 68-69.

[31] FirstEnergy defines the region of interest for Davis-Besse as "Ohio and the wholesale power market there." Appeal at 10. *Accord* Tr. at 83. Petitioners define the region of interest as "Ohio, Pennsylvania, West Virginia, [and] New Jersey." Petition at 38. *See also id.* at 20-21, 31-32, 43, 51; Tr. at 55. FirstEnergy takes issue with the inclusion of New Jersey. Tr. at 83. We need not address their disagreement here.

[32] Petition at 10. Petitioners acknowledge that they "restated in this case a wind power contention which [one of them, Beyond Nuclear, had] prepared and filed as an . . . intervenor in the Seabrook [license renewal] proceeding." Petitioners' Opposition at 7.

Petitioners' Contention 2 makes a substantively identical challenge with respect to solar power (including solar electric power or photovoltaics).[33] Contention 3 argues that the combination of wind and solar power should be considered as a single, "combined-source" alternative to license renewal.[34]

The Board combined the three contentions into one, excluding certain issues raised by Petitioners,[35] and admitting the resulting consolidated, narrowed Contention 1:

> [FirstEnergy's] Environmental Report fails to adequately evaluate the full potential for renewable energy sources, specifically wind power in the form of interconnected wind farms and/or solar photovoltaic power, in combination with compressed air energy storage, to offset the loss of energy production from Davis-Besse, and to make the requested license renewal action unnecessary.[[36]] [FirstEnergy's] Environmental Report (§ 7.2) treats all of the alternatives to license renewal except for natural gas and coal plants as unreasonable and does not provide a substantial analysis of the potential for significant alternatives in the Region of Interest.[37]

FirstEnergy, on appeal, argues that the admitted contention is unclear as reformulated, and interprets the contention to include the alternative of wind

---

[33] Petition at 68-69. Both contentions go on to state, in virtually identical language, that:

> The scope of the SEIS is improperly narrow, and the issue of the need for Davis-Besse as a means of satisfying demand forecasts for the relicensing period must be revisited due to dramatically-changing circumstances in the regional energy mix that are currently [under way] already during this decade of Davis-Besse's remaining operating license (2010 to 2017), and can especially be expected to accelerate and materialize over two decades to come covering [FirstEnergy's] requested license extension period (2017 to 2037).

Id. at 10-11 (Contention 1), 69 (Contention 2).

[34] *Id.* at 93.

[35] LBP-11-13, 73 NRC at 556 (finding, as discussed above, that Petitioners' references to what may happen between 2017 and 2037 are immaterial and that Petitioners' "need for power" argument is outside the scope of the proceeding); 557 (excluding Petitioners' arguments that the GEIS is both outdated and legally void under NEPA).

[36] FirstEnergy argues on appeal that the Board imposed the "wrong legal standard" in reformulating the contention to say that the renewable alternatives would make renewing the Davis-Besse license "unnecessary." *See* Appeal at 17 (citing LBP-11-13, 73 NRC at 565). In particular, FirstEnergy cites 10 C.F.R. § 51.95(c)(4), which sets forth the requirement that Staff will make a recommendation of the "environmental acceptability" of the license renewal action, and the Commission shall determine "whether or not the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable." FirstEnergy correctly reflects the findings the agency must make in conducting its environmental review for license renewal. However, we interpret the Board's inclusion of the language not to apply a different standard, but simply to restate Petitioners' fundamental argument that baseload power could be supplied by Petitioners' proposed alternatives, as opposed to the Davis-Besse facility.

[37] LBP-11-13, 73 NRC at 588.

farms without compressed air energy storage.[38] However, the bases of the original Contention 1 discussed both the use of compressed air energy storage and alternative technologies to compensate for the intermittency of wind.[39] Given that the Board expressly set forth those matters excluded from the contention, we interpret the admitted contention to include the alternative of wind farms without compressed air energy storage.[40]

b. Discussion

FirstEnergy asserts that the reformulated contention improperly would require FirstEnergy to evaluate Petitioners' proposed alternatives, which it claims are "remote and speculative."[41] For an alternative energy source to be considered reasonable for purpose of this proceeding, the alternative should be commercially viable and technically capable of producing 908 MWe of baseload power now or in the near future — in this case, no later than 2017, the expiration date of the current Davis-Besse operating license. To proffer an admissible "energy-alternatives" contention, therefore, Petitioners must provide factual support or expert opinion sufficient to demonstrate a genuine dispute as to whether an alternative energy source — or combination of sources — can meet that standard. As discussed below, we find that Petitioners have provided insufficient support for the consolidated contention and that, therefore, the Board erred in admitting it.

Petitioners have provided support for the propositions that (i) wind power and solar power are both capable of producing a great deal of energy in ideal locations,[42] (ii) wind power could produce significant gross (installed) capacity

---

[38] Appeal at 6-7 & n.35.

[39] *See* Petition at 28, 40.

[40] *See* LBP-11-13, 73 NRC at 556-57. At least arguably, Petitioners have abandoned their Contentions 1 and 2 (wind without storage and solar without storage, respectively). At oral argument, Petitioners' representative agreed with Judge Kastenberg's statement that they were not "contending that one could build a wind site and maybe a solar site, and that that, *in and of itself,* would be sufficient to replace the generation of electricity at Davis-Besse." Tr. at 58 (emphasis added). *Cf.* Tr. at 104 (Mr. Lodge, agreeing that original Contention 2 "implies [that] you need solar with storage of some sort"), 109-10. However, we decline to exclude Contentions 1 and 2 based solely on these statements, given the absence of an explicit statement by Petitioners either that they have withdrawn those claims or that the Board's consolidated contention should be read to exclude the alternatives of solar without storage and wind without storage.

[41] Appeal at 7-14.

[42] *See* Petitioners' Ex. 33, Marc Schwartz et al., Assessment of Offshore Wind Energy Resources for the United States (June 2010) (publication of the National Renewable Energy Laboratory (NREL)). NREL is the United States Department of Energy's laboratory for renewable energy and energy efficiency research and development.

in the region of interest,[43] and (iii) technological alternatives such as storage and integration may eventually become available to compensate for the intermittency of wind and solar, such that the combination could become sufficiently reliable to constitute "baseload" power.[44] All in all, however, we agree with FirstEnergy that the Petitioners have failed to lay a foundation for their claim that wind, solar, and energy storage — in any combination — could satisfy the baseload demand in the region of interest by 2017. We therefore find that the Board erred in admitting the contention.

(1) INTERCONNECTED WIND FARMS

FirstEnergy challenges the Board's conclusion that Petitioners have presented "sufficient 'minimal' evidence" to merit adjudication of whether "large-scale interconnected wind farms are currently, or could be by 2017, a viable option" for baseload power.[45]

Petitioners' claim in this regard is based on the idea that several disparately located wind farms could be connected in such a way that they provide a constant source of power (because when the wind stops blowing in one location it usually picks up in another). FirstEnergy argues, however, that Petitioners do not claim, and none of their exhibits show, that interconnected wind farms have been used, to date, to provide baseload power anywhere in the world.

Petitioners rely on an article by two Stanford University engineers (Exhibit 21 in the record of this proceeding).[46] According to FirstEnergy, Petitioners' Exhibit 21 acknowledges that interconnected wind power is merely an "idea" (rather than a current or impending reality) and points to no location where the idea has been implemented, even as a demonstration project.[47] This, FirstEnergy argues, does not provide sufficient support for admission of a contention claiming the commercial viability of wind energy in Ohio by 2017.[48] We agree that Exhibit 21's theoretical model for interconnecting several utility-scale wind facilities is insufficient to support an argument that wind power will be commercially viable on the required scale by 2017.

---

[43] *Id.*

[44] *See, e.g.,* Petitioners' Ex. 20, NREL, Creating Baseload Wind Power Systems Using Advanced Compressed Air Energy Storage Concepts (Oct. 3, 2006); Petitioners' Ex. 21, Cristina L. Archer & Mark Z. Jacobson, *Supplying Baseload Power and Reducing Transmission Requirements by Interconnecting Wind Farms,* 46 J. Appl. Meteorol. Climatol. 1701 (Feb. 2007).

[45] Appeal at 13 (citing LBP-11-13, 73 NRC at 560, 564-65).

[46] Ex. 21, *supra* note 44.

[47] Appeal at 13-14 (citing LBP-11-13, 73 NRC at 560 (in turn citing Petitioners' Ex. 21 at 1702, 1716)).

[48] Appeal at 14.

Next, FirstEnergy challenges the Board's reliance upon two other exhibits. The first, Petitioners' Exhibit 33, is an NREL study of the offshore wind resource within the United States, which attempts to gauge the potential for developing wind power by measuring, among other things, average wind speeds (at 90 meters above the water) and square kilometers of offshore area available for development.[49] The Board observed that the exhibit indicates that, within FirstEnergy's region of interest, "there is a total resource of 155.5 gigawatts (GW) of offshore and deepwater wind alone."[50] The second exhibit, Exhibit 42, is a predecisional draft "strategic work plan" prepared by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy "outlin[ing] the actions that it will pursue to support" this country's offshore wind industry.[51] The document itself indicates that key barriers to offshore wind development still exist, including relatively high costs, technical challenges, and untested permitting processes.[52] These documents, FirstEnergy argues, focus on wind as a natural resource, but do not discuss wind as a source of baseload power.[53]

We agree that the exhibits are insufficient to support Petitioners' wind alternatives claim. The mere potential for, or theoretical capacity of, wind generation facilities is insufficient to show their commercial viability as a source of baseload power in the ROI by 2017. Likewise, Petitioners' Exhibit 42 makes clear that commercially viable and technologically feasible offshore baseload wind energy is not yet a reality. In sum, Petitioners' exhibits fall short of providing the requisite support for the proposition that wind, alone or in combination with solar and storage, could produce sufficient baseload power by 2017 as to be considered a reasonable alternative to extending the Davis-Besse license.

(2) COMPRESSED AIR ENERGY STORAGE CAPACITY

FirstEnergy next disputes Petitioners' claim that compressed air energy storage (CAES) could be combined with wind or solar power to produce reliable baseload power in the ROI. FirstEnergy argues that Petitioners did not show that sufficient CAES capacity to equal Davis-Besse's 908-MWe facility could be developed in the ROI by 2017.[54] FirstEnergy claims that the documents on which the Board based its admissibility ruling — "an expert's declaration and a number of alleged facts from scholarly sources"[55] — fall short of showing that a combination of

[49] Ex. 33, *supra* note 42.
[50] *See* LBP-11-13, 73 NRC at 560 (citing Petitioners' Ex. 33 at 3, Table 1).
[51] Ex. 42, at ii.
[52] Ex. 33, at 5.
[53] Appeal at 10.
[54] *See id.* at 9.
[55] LBP-11-13, 73 NRC at 564-65. *See also id.* at 559-63.

wind, solar, and storage could provide baseload power by the time it would be required.

Specifically, FirstEnergy questions the Board's reliance upon Petitioners' Exhibit 20, a one-page summary of the concept of "baseload wind" produced by NREL.[56] This document describes a proposed method for creating baseload wind power by combining it with CAES. The exhibit itself states that "additional work will be required to examine the feasibility" of the proposed advanced wind/energy storage.[57]

By its own terms, Exhibit 20 addresses only the *hypothetical* combination of wind energy and compressed air energy storage, and acknowledges that this combination has not been put into practice:

> While the current penetration of wind energy is far too low to require energy storage, projected growth in the installed base of wind generation motivates thinking about scenarios of extremely large use of wind energy. Development of the "baseload" wind concept will require a greater understanding of the local geologic compatibility of air storage, and additional work will be required to examine the feasibility of advanced wind/CAES concepts described here.[58]

Significantly, the exhibit states that it would require a combination of 900 MWe of CAES and 2000 MWe wind power to effectively arrive at 900 MWe of "baseload power."[59]

FirstEnergy also questions the Board's reliance upon Petitioners' Exhibit 49/54, a press release announcing FirstEnergy's purchase of rights to the Norton Energy Storage Project, a proposed CAES facility in Norton, Ohio.[60] FirstEnergy argues, among other things, that the Norton Project would provide only 268 MWe of capacity today — nowhere near the 908 MWe needed to replace Davis-Besse's capacity.[61] Moreover, the press release makes clear that this project is still in the early stages of development.[62] The mere possibility of a 268-MWe CAES facility provides scant support for the claim that a facility of this type is a reasonable alternative to Davis-Besse.

---

[56] Appeal at 10 (citing LBP-11-13, 73 NRC at 560 (in turn citing Petitioners' Ex. 20, *supra* note 44)).

[57] Appeal at 10 (quoting Ex. 20).

[58] Ex. 20.

[59] *Id.*

[60] Appeal at 10-11. Petitioners' Ex. 54, FirstEnergy Acquires Rights to Norton Energy Storage Project (Nov. 23, 2009), is a screenshot version of the press release available at http://www.hvllc.com/en/rel/94. Petitioners' Exhibit 49 is a paper copy of the same press release.

[61] Appeal at 11.

[62] Ex. 54 at 2 ("The company is evaluating its options related to the project, but has not yet committed to development scope or timing.").

Next, FirstEnergy challenges the relevance of Petitioners' Exhibit 48/66, a *Scientific American* magazine article evaluating solar energy's potential to end our country's dependence on foreign oil by 2050.[63] We observe that the year 2050 falls well beyond the expiration date of the proposed renewed license, and the article provides little discussion of solar energy's potential in the relative near term, that is, by 2017. Moreover, the article does not suggest that a solar facility would be sited in the region of interest.[64]

In addition, FirstEnergy challenges the Board's reliance upon Petitioners' Exhibit 11 — a book by Dr. Arjun Makhijani, in which the author purportedly observes that, based on the advances in compressed air energy storage, the NREL now recognizes the existence of "baseload wind."[65] Although Dr. Makhijani discusses various energy storage strategies for overcoming the intermittency of wind and solar resources, he also indicates that currently storage is not considered "necessary" because these technologies provide such a small percentage of the market that "reserve capacity can be supplied in other ways" (i.e., through natural gas).[66] Thus, while the book discusses possible solutions to the intermittency problem that may one day be put into practice, we find nothing to indicate that these would be ready in time to support generation of baseload power at Davis-Besse.[67]

We therefore conclude that Exhibits 11, 20, 48/66, and 49/54, considered individually and together, do not provide the requisite factual support for the claim in the consolidated contention that renewable alternatives could supply baseload power in the ROI by 2017, as required under 10 C.F.R. § 2.309(f)(1)(v). Because Petitioners have not supported that claim, they also have failed to show a genuine dispute with the application as required under 10 C.F.R. § 2.309(f)(1)(vi).

---

[63] LBP-11-13, 73 NRC at 559 (citing Petitioners' Ex. 48, Ken Zweibel et al., *By 2050 Solar Power Could End U.S. Dependence on Foreign Oil and Slash Greenhouse Gas Emissions,* Sci. Am. 64 (Jan. 2008)). Dr. Compaan refers to the identical article as Exhibit 66. *See* Petition at 87.

[64] The article presents a plan for linking proposed solar power plants to be built in the desert southwest through a proposed transmission system throughout the country.

[65] Ex. 11, Arjun Makhijani, Carbon-Free and Nuclear-Free: A Roadmap for U.S. Energy Policy (Aug. 2007).

[66] *Id.* at 62.

[67] Although both the Board and Petitioners refer to Dr. Makhijani's reference, neither one provides a citation to the relevant page in his book. *See* Petition at 28; LBP-11-13, 73 NRC at 559. As we have stated before, neither we nor the Board is obliged to look through lengthy documents for information on which a litigant relies. *See, e.g., Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-09-11, 69 NRC 529, 534 (2009) ("The Commission should not be expected to sift unaided through earlier briefs or other documents filed before the Board to piece together and discern a party's argument and the grounds for its claims. . . . References to such affidavits and other exhibits should include page citations.") (citation and internal quotation marks omitted).

We conclude that the Board erred in admitting the contention, to the extent that it relied on these exhibits.

This leaves for our consideration the Compaan Declaration,[68] which addresses the Petitioners' "solar" and "solar plus storage" alternatives. The Board supported its admissibility ruling by citing the following conclusions by Dr. Compaan:

> Dr. Compaan . . . notes that "[s]olar power has a CO2 footprint that is much smaller than the full fuel chain of nuclear." According to Dr. Compaan, "[e]conomical sources of energy storage and back-up power are available to provide good base-load power, in conjunction with solar." Dr. Compaan further concludes that "wide-scale installation of solar power combined with a storage facility . . . is a very viable alternative" to the . . . Davis-Besse license extension.[69]

Dr. Compaan acknowledges that solar power by itself is not *baseload* power.[70] Moreover, only five pages of the Petition address the issue of potential solar power supplemented by energy storage to create baseload.[71] In reviewing his declaration, it appears that Dr. Compaan has not identified a "solar plus storage" combination that can, as a *practical* matter, produce baseload power either now, or in time to constitute a reasonable alternative to relicensing Davis-Besse. Although his Declaration may support the *eventual* development of baseload solar power generation, we agree with FirstEnergy that Dr. Compaan has failed to provide the Board the necessary support for the proposition that wind or solar facilities constitute a reasonable alternative to the renewal of the Davis-Besse operating license.

We therefore conclude that Dr. Compaan's Declaration, and the portion of the Petition to which it refers, do not provide for Petitioners' consolidated contention either the expert or factual support required under 10 C.F.R. § 2.309(f)(1)(v), or, consequently, the showing of a genuine dispute as required under 10 C.F.R. § 2.309(f)(1)(vi). Given the absence of such support, we conclude that the Board's reliance on the Compaan Declaration was misplaced.[72]

---

[68] Dr. Compaan represents in his Declaration that he authored part of the Petition relevant to solar power (original Contention 2). Dr. Compaan did not include in his Declaration a substantive analysis to support Contention 2, but instead stated that he had written all of the Petition's factual arguments supporting the original Contention 2 (the "solar alternative" contention) and that all scientific conclusions in that contention were his own. Compaan Declaration at 1-2 (citing Petition at 68-90).

[69] LBP-11-13, 73 NRC at 559 (footnotes omitted) (quoting Petition at 71 and citing Compaan Declaration at 1-2.) The Board's third quotation actually is found on page 89 of the Petition.

[70] Petition at 85 ("Solar power naturally is an intermittent resource").

[71] *See* Petition at 71-72 and 87-89.

[72] One additional matter merits brief mention. FirstEnergy asserts that the Board impermissibly

(Continued)

For all of these reasons, the Board erred in admitting the consolidated contention.

2. Severe Accident Mitigation Alternatives

Petitioners' Contention 4 states as follows:

> The Environmental Report 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, [FirstEnergy], is called for.

Contention 4 challenges FirstEnergy's SAMA analysis for Davis-Besse. The SAMA analysis is a site-specific mitigation alternatives analysis under NEPA. The analysis looks for potential additional mitigation measures — e.g., hardware or procedures — that could be implemented at a particular plant to further reduce severe accident risk (the probability or consequences of a severe accident). By practice, the SAMA analysis for license renewal has been a cost-benefit analysis, weighing a particular mitigation measure's estimated degree of risk reduction against its estimated cost of implementation. We outlined in greater detail the nature and purposes of the SAMA analysis in the *Pilgrim* proceeding, and do not repeat that full description here.[73]

It bears reemphasizing, however, that because 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 is reasonable under NEPA."[74] To challenge an application, a petitioner must point with support to an

---

converted a contention of omission — that "Commercial Wind and Solar Photovoltaic Baseload Power Should Be Considered" — into a contention challenging the adequacy of the ER. Appeal at 16 (emphasis in original). *See also id.* at 14. This question is not material to today's decision, given that we reverse admission of the contention regardless of its label. But we nonetheless observe that Petitioners challenge the adequacy of FirstEnergy's existing analysis of solar and wind as alternative energy sources (*see* Environmental Report § 7.2, at 7.2-1 (generally), 7.2-9 (wind), 7.2-9 to 7.2-10 (solar), 7.2-12 to 7.2-13 (combination of wind, solar, and/or other alternatives)). Such a challenge is not a contention of omission. *See Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 382-84 (2002).

[73] *See Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 290-91, 316-17; *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC 202, 207-08 (2010).

[74] *See Seabrook,* CLI-12-5, 75 NRC at 323.

asserted deficiency that renders the SAMA analysis unreasonable under NEPA. In other words, "[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)."[75] 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.

Petitioners' Contention 4 is essentially identical to the SAMA contention submitted in the *Seabrook* license renewal proceeding.[76] As in *Seabrook,* the submitted contention set forth six categories of asserted deficiencies, labeled "a" through "f."[77] Contention 4 claimed that each of the asserted deficiencies, either individually or "together with one or more of the others, improperly minimized costs likely to result in a severe accident."[78] At bottom, the contention claimed that inputs, assumptions, computer models, or methodology used in the SAMA analysis "minimized costs likely to be incurred in a severe accident," and that "this appears not to be justified."[79]

The Board in LBP-11-13 rejected numerous issues raised in the contention, on grounds that they (1) fell outside the scope of a license renewal proceeding; (2) failed to raise a material issue; (3) lacked support by asserted fact or expert opinion; or (4) failed to show a genuine dispute with the renewal application.[80] The Board admitted Contention 4, "narrowed . . . down" to what the Board called the contention's "admissible core."[81] In particular, the Board found admissible Petitioners' challenges to the SAMA analysis's source terms, decontamination costs estimate, and plume dispersion modeling.[82] The Board recast Contention 4 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 . . . is called for because of:
>
> (1) Minimization of the potential amount of radioactive material released in a

[75] *Id.* at 323-24.

[76] *Compare* Petition at 100-151 to Friends of the Coast and New England Coalition Petition for Leave to Intervene, Request for Hearing, and Admission of Contentions (Oct. 20, 2010) at 34-77 (ADAMS Accession No. ML102940558).

[77] Petition at 104.

[78] *Id.* at 103.

[79] *Id.*

[80] LBP-11-13, 73 NRC at 568-76.

[81] *Id.* at 568.

[82] *Id.* at 577-86.

severe accident by using a source term . . . based on radionuclide release fractions . . . which are smaller for key radionuclides specified 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 of the fact that winds for a given time 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 clean-up costs for urban areas.[83]

FirstEntergy appeals the admission of Contention 4. FirstEnergy argues that the Board erred by admitting claims that merely amount to calls for "alternative analysis," with no showing that the "the original analysis failed to meet applicable requirements."[84] FirstEnergy particularly claims that Petitioners did not provide the necessary factual or expert support for their challenges to the Davis-Besse SAMA analysis.[85] Finally, FirstEnergy argues that the Board drew unwarranted and impermissible factual inferences — unsupported by the documents Petitioners cited — to admit the contention.[86] We agree that the Board erred in admitting portions of the SAMA contention. Below we address each of the three issues that the Board admitted as part of Contention 4.

a. Source Terms

Petitioners challenge the computer code used to determine source terms in the SAMA analysis, the Modular Accident Analysis Progression (MAAP) code. Petitioners argue that the SAMA analysis minimizes the potential amount of radioactive release in a severe accident because source terms used in the analysis were generated by the MAAP code. More specifically, Petitioners claim that the MAAP code is an industry code that "has not been validated by the NRC," and that it generates radioactive release fractions that are "consistently smaller for key radionuclides than the release fractions specified in NUREG-1465 and

[83] *Id.* at 577 (quotations and citations to Petition omitted).

[84] Appeal at 20 (quoting *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 187 (2008)).

[85] *Id.* at 21-30.

[86] *Id.*

its recent revision for high-burnup irradiated nuclear fuel."[87] Petitioners go on to state that the source term used in the analysis "results in lower consequences than would be obtained from NUREG-1465 release fractions and release durations."[88] They additionally claim that "MAAP generates lower release fractions than those derived and used by NRC in [severe accident] studies such as NUREG-1150."[89]

Petitioners' challenge to the use of the MAAP code is substantively identical to the source term challenge raised in *Seabrook.* For the reasons outlined in our *Seabrook* decision, Petitioners' source term claims are weak, but because the Board is the appropriate arbiter of such fact-specific questions of contention admissibility, we defer to the Board on admission of this limited aspect of the SAMA contention.[90]

b. Atmospheric Dispersion Modeling

Petitioners challenge the use in the SAMA analysis of a straight-line Gaussian plume atmospheric dispersion model to depict the dispersion and transport of a radioactive plume in a severe accident. A straight-line Gaussian model is embedded in the MACCS2 computer code, used to perform the SAMA analysis.

Petitioners claim that the plume model was not "appropriate for Davis-Besse's Great Lakes shoreline site."[91] They argue that the "straight-line, steady-state Gaussian plume model does not allow consideration of the fact that the winds for a given time period may be spatially varying [e.g., may change wind direction], and . . . ignores the presences of Great Lakes 'sea breeze' circulations which dramatically alter air flow patterns."[92] Petitioners also argue that a one-dimensional plume model would not be able to accurately depict the effects of terrain variability, and that meteorological data collected from only the Davis-Besse site was insufficient for the SAMA analysis.[93]

Petitioners further claim that FirstEnergy should have used a "variable plume model such as AERMOD or CALPUFF," models that the Environmental Protection Agency uses to enforce compliance with the Clean Air Act.[94] They claim that a variable wind trajectory model would show a radiological "dose [that would] be more concentrated . . . and extend over a larger area" than the dose modeled

---

[87] *See* Petition at 112.
[88] *Id.*
[89] *Id.* at 113.
[90] *See Seabrook,* CLI-12-5, 75 NRC at 324-27.
[91] Petition at 116.
[92] *Id.* at 119.
[93] *Id.* at 122-25, 126-34.
[94] *Id.* at 116-17.

in the Davis-Besse SAMA analysis.[95] They argue that the straight-line Gaussian plume model "underestimated the area likely to be affected in a severe accident and the dose likely to be received in those [modeled] areas."[96]

First, it bears noting that a large portion of the plume modeling arguments and cited references in the petition focused on asserted deficiencies in the straight-line Gaussian plume model's ability to model "the impact of terrain effects on atmospheric dispersion."[97] The Board, however, explicitly found that Petitioners had not supported their claim that the Davis-Besse location, in the areas relevant to the SAMA analysis modeling, is "surrounded by complex terrain."[98] Petitioners acknowledged that the Davis-Besse Environmental Report describes the "terrain in the western Lake Erie region [as] mostly flat," with "little influence on the weather,"[99] but argued that "slight variations in the surrounding region's topography" would significantly skew plume modeling results obtained with a straight-line Gaussian plume model.[100] The Board rejected arguments involving potential impact of terrain variation on wind patterns and plume dispersion, finding that Petitioners failed to "support[ ] their terrain claim with alleged facts or expert opinion."[101]

Although terrain-related arguments were a large part of the plume modeling challenge, the Board admitted the modeling issue based on other asserted deficiencies, including that (1) the straight-line Gaussian plume model did not properly depict "sea breeze" effects; (2) the model did not depict "plume behavior over water" that could lead to "hot spots" of radioactivity; and (3) the analysis used meteorological input data collected only from the Davis-Besse site, rather than from multiple locations.[102] We agree with FirstEnergy that Petitioners failed to adequately tie their claims to the Davis-Besse SAMA analysis.

We address first the "sea breeze" claim, namely that the SAMA analysis is deficient because the plume model did not account for "Great Lakes 'sea breeze' circulations." As with their terrain impact claims, Petitioners set forth the same arguments and referenced support that the intervenors in the *Seabrook* proceeding presented. But Petitioners here did not adequately link their specific "sea breeze" effect claims to the Davis-Besse location and SAMA analysis.

Instead, Petitioners referenced several site-specific studies of the "sea breeze" phenomenon — studies conducted in New England. These studies are rooted in

---

[95] *Id.* at 118.
[96] *Id.* at 116.
[97] *Id.* at 122, 124-35.
[98] LBP-11-13, 73 NRC at 573 (quoting Staff Answer at 62). *See also id.* at 581 n.337).
[99] Petition at 122 (quoting Environmental Report § 2.10, at 2.10-1).
[100] *See id.* at 125.
[101] LBP-11-13, 73 NRC at 573.
[102] *See id.* at 581-84, 588-89.

site-specific wind patterns and other site-specific features observed in portions of New England and the New England coast.[103] As FirstEnergy claims, while Petitioners refer to the existence of a "well-established body of scholarship on the Great Lakes sea breeze that could be brought into play into this proceeding," they neither referenced nor described any study or meteorological data bearing on the potential significance of lake breeze effects in areas encompassed by the Davis-Besse SAMA analysis.[104]

Petitioners appear to assume that observations made in meteorological studies of the New England coast can be transferred to Davis-Besse. For example, citing to an Eastern Massachusetts "sea breeze" study, Petitioners claim that "Great Lakes 'sea breeze' winds heading initially 'out to sea' on Lake Erie are drawn back on shore . . . sometimes penetrating inland here to 20-40 miles."[105] Petitioners attempt to tie the New England "sea breeze" studies cited in the *Seabrook* proceeding to the Davis-Besse region by quoting generalized statements from two weather websites. These statements, however, merely note that large bodies of water, such as a Great Lake, also can have "sea breeze" types of wind circulation.[106]

With no factual or expert support indicating that site-specific "sea breeze" observations from studies of the New England coast are equally applicable to the Davis-Besse region, the relevance of the cited studies to Petitioners' claims is limited. The strength, duration, frequency, and penetration distance of sea breeze effects logically will vary depending upon local climate and geography. And as we stressed in *Pilgrim,* these are key considerations underlying whether "sea breeze" effects have the potential to make any material difference in a SAMA

---

[103] *See, e.g.,* Thorp, J., The Eastern Massachusetts Sea Breeze Study (May 2009) (thesis for Master of Science); Wayne M. Angevine et al., *Modeling of the Coastal Boundary Layer and Pollutant Transport in New England,* 45 J. Appl. Meteorol. Climatol. 137 (2006) (Angevine Study).

[104] *See* Appeal at 26 (quoting Petitioners' representative at Tr. 188).

[105] Petition at 120.

[106] More specifically, the Petition states the following in regard to the "lake breeze" effect:

> [T]he U.S. National Oceanographic and Atmospheric Administration's [NOAA] National Weather Service states on its website "The Sea Breeze" that "While the sea breeze is generally associated, with the ocean, they can occur along the shore of any large body of water such as the Great Lakes." Keith C. Heidorn, PhD., also wrote on May 10, 2000 that "The lake breeze is similar to the *sea breeze* found along sea coasts."

See Petition at 117-18 (emphasis in original) (citations to websites omitted). The two cited websites are http://www.srh.weather.gov/srh/jetstream/ocean/seabreezes.htm (last visited Feb. 29, 2012) (a National Weather Service website) and http://www.islandnet.com/~see/weather/almanac/arc2000/alm00may2.htm (last visited Feb. 29, 2012) (a website called "The Weather Doctor" created by Keith C. Heidorn). FirstEnergy claims that "The Weather Doctor" is "not a peer-reviewed, or nationally recognized institutional source, of reliable scientific information." *See* Appeal at 26. Given that we are at the contention admissibility stage, we decline to make an expert determination today. However, a petitioner or party invoking a website maintained by a private individual should substantiate the accuracy and reliability of the website's content.

analysis, given the nature of the analysis.[107] The "overall impact on the SAMA cost-benefit analysis may be insignificant" if "sea breeze" or other effects are largely localized or occur a relatively small portion of the year for limited hours a day.[108]

Unlike the intervenors in the *Pilgrim*[109] or *Seabrook* proceedings, Petitioners here had nothing in the way of site-specific (or region-specific) meteorological articles, studies, data, or expert opinion proffered in support of what are, after all, site-specific meteorological claims challenging a site-specific analysis. "Sea breeze" studies for areas in New England and generic descriptions of a "lake breeze" effect are insufficient to support Petitioners' claim that lake breeze effects *in the Davis-Besse SAMA area* are a "critical feature" that if modeled by variable wind trajectory models credibly would depict "dramatically" different atmospheric dispersion and significantly greater accident consequences.[110] We therefore conclude that the Board erred in admitting the "sea breeze" claims.

The Board also admitted a challenge to the straight-line Gaussian plume model based upon Petitioners' claims regarding the "behavior of plumes over water."[111] Specifically, Petitioners claimed that a plume "over water, rather than being rapidly dispersed, will remain tightly concentrated due to the lack of turbulence, and will remain concentrated until winds blow it onto land."[112] Petitioners argue that this could lead to "hot spots of radioactivity in places along the sea coast or Great Lakes shoreline, certainly to Detroit/Windsor, Toledo, and Cleveland, bringing larger doses over a greater geographic area than modeled and with high population concentrations."[113]

The Board concluded that two articles, both referenced in the *Seabrook* and *Pilgrim* proceedings, presented sufficient support for this claim.[114] One is a study of tracer plumes emitted from Boston, Massachusetts and New York City, following the plumes' transport in New England.[115] It particularly emphasizes the effects of local New England coastline features, or what it terms the area's "coastal

---

[107] *See Pilgrim,* CLI-10-11, 71 NRC at 304-05 & nn.86-88.

[108] *Id.* at 304.

[109] Our decision in *Pilgrim* to remand a plume modeling challenge largely hinged on expert opinion submitted by Pilgrim Watch. *See id.* at 302-04. The decision additionally stressed that the Board majority simply had not addressed what we saw as significant factors regarding the materiality of the "sea breeze" claims. *See id.* at 304-07.

[110] *See* Petition at 119-20.

[111] LBP-11-13, 73 NRC at 582-83.

[112] Petition at 121.

[113] *Id.*

[114] LBP-11-13, 73 NRC at 582-83.

[115] *See generally* Angevine Study.

geometry."[116] We examined the article, but could not discern any statement — nor did Petitioners or the Board identify any — that supports Petitioners' plume "behavior" claims regarding the Davis-Besse location and SAMA analysis. In fact, the Board's only comment in regard to this study was that it was "cited" in the second article (authored by Dr. Jan Beyea) to support Dr. Beyea's conclusion that "releases *from Pilgrim* headed initially out to sea will remain tightly concentrated due to reduced turbulence until winds blow the puffs back over land," which "could lead to hot spots of radioactivity in unexpected locations."[117]

Neither article that the Board referenced in support of the "hot spots" claim has any apparent direct link to the Davis-Besse region. We agree with FirstEnergy that both articles are clearly focused on a different part of the country, and that neither Petitioners nor the Board explained how the articles were "relevant to site-specific meteorological conditions or a SAMA analysis at Davis-Besse."[118] We conclude that the Board erred in finding the articles sufficient factual support for the claim that concentrated "hot spots" of radioactivity "might be a factor near Davis-Besse."[119]

The Board additionally admitted as part of this contention Petitioners' claim that there is a "significant defect" in the SAMA analysis because it uses meteorological input data (e.g., wind speed, wind direction) collected "from just one site — at Davis-Besse itself."[120] Petitioners claim that data from one meteorological station "will definitely not suffice to define the Great Lakes 'sea breeze' or capture [terrain] variability."[121]

Petitioners argue that FirstEnergy should have "augment[ed]" meteorological data obtained onsite with meteorological data obtained from the "nearby Toledo Express commercial airport," and from NOAA.[122] They state that the Davis-Besse Environmental Report referenced meteorological data taken from the Toledo airport, but FirstEnergy failed to use the airport data in the SAMA analysis.[123]

---

[116] *See id.* at 153.

[117] LBP-11-13, 73 NRC at 582 (emphasis added) (quoting Beyea, "Report to the Massachusetts Attorney General on the Potential Consequences of a Spent-Fuel-Pool Fire at the Pilgrim or Vermont Yankee Nuclear Plant" (May 2006), at 11 (Beyea Article). The Beyea Article may be found as an attachment to Pilgrim Watch's Answer Opposing Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 3 (June 29, 2007) (ADAMS Accession No. ML071840568, at 97). Dr. Beyea's article goes on to suggest that "[r]eduction of turbulence on transport from Pilgrim across the water to Boston should be . . . studied," although this "would not be likely to make more than a factor of two difference in risk." *See id.*

[118] Appeal at 26.

[119] LBP-11-13, 73 NRC at 582-83.

[120] Petition at 125.

[121] *Id.*

[122] Reply at 36. *See also* Tr. at 187.

[123] Reply at 36.

Petitioners' representative stressed that FirstEnergy has "taken a big shortcut on these SAMA analyses by not even including those data points" available from NOAA weather monitors and the Toledo airport.[124] He further claimed that FirstEnergy is "potentially missing very significant information" on "radioactive clouds" that under the straight-line Gaussian plume model "would appear to go out into Lake Erie," but may "actually remain[ ] concentrated because of a lack of any terrain features on the lake to break up that cloud," and may "return[ ] to land with the sea breeze, very concentrated," potentially "end[ing] up in Toledo downtown, Cleveland downtown."[125]

But Petitioners provide no support for the asserted potential scenario of "concentrated" radioactive plumes extending to Toledo and Cleveland that would have been missed by the SAMA analysis plume model and inputs. Nor do Petitioners make an effort to describe how the "data points" they claim should have been used suggest potential plume trajectories or behaviors that could have led to predictions of much greater accident consequences in the SAMA analysis.[126] At the contention admissibility stage, it is *Petitioners'* burden to come forward with factual or expert support for their argument that use of additional weather data from Toledo or another site credibly could have altered the SAMA analysis to show significantly greater accident consequences and, as a result, significantly different cost-benefit results.

We note that at the prehearing conference, the Board asked counsel for FirstEnergy why meteorological data from other locations were not used for the analysis. Counsel replied that his understanding was that the MACCS2 atmospheric dispersion model "allows for input . . . from [only] a single location," and that "it made sense to use site-specific data to model the release from our site."[127] The Board then asked FirstEnergy counsel whether there was "any reason to believe that if [FirstEnergy] had used Toledo Airport [meteorological] data or other local [meteorological] data" there would have been a different SAMA analysis "answer."[128] But again, the burden is on Petitioners to come forward with the support — the "reason to believe" — that reliance on the onsite meteorological data posed a "significant defect," plausibly skewing the SAMA cost-benefit results. With no such factual or expert support, Petitioners' claims constitute speculation.

---

[124] Tr. at 187.

[125] *Id.*

[126] *See* Environmental Report §§ 2.10.1, 2.10.3, at 2.10-1, 2.10-3 (referencing Toledo airport data obtained from NOAA).

[127] Tr. at 203-05 (Mr. Polonsky).

[128] *Id.* at 205 (Trikouros, J.). Counsel for FirstEnergy replied that he did not have any reason to believe that other local meteorological data would change the SAMA analysis results. *Id.* (Mr. Polonsky).

The Board in LBP-11-13 ultimately concluded that it was "self-evident" that a "single immobile meteorological site would be unable to measure . . . spatially dependent circulation."[129] Even if true, however, the question is not the extent of the capabilities of the straight-line Gaussian plume model, but its adequacy for a NEPA SAMA analysis for the Davis-Besse site. Simply because data from "a single meteorological site is inadequate to provide data for a complex air circulation model"[130] does not suggest that a complex atmospheric dispersion model is necessary for a reasonable SAMA analysis.

Unlike plume modeling for an actual severe accident, the SAMA analysis is not focused on predicting the precise trajectory of a real-time plume. As we noted in *Pilgrim,* the SAMA analysis is a probabilistic analysis involving "statistical averaging over many hundreds of randomly selected hourly weather sequences" obtained from a year of hourly weather data.[131] To suggest that the onsite data obtained from the Davis-Besse site was deficient, Petitioners should have provided some indication of how those data were not sufficiently representative of the meteorological conditions in the 50-mile radius area around Davis-Besse, encompassed by the SAMA analysis. While we do not require petitioners to run their own computer models at the contention admissibility stage, a contention challenging a SAMA analysis nonetheless must be tethered to the computer modeling and mathematical aspects of the analysis.

Petitioners cite to various guidance documents that point out that there can be reasons warranting use of additional meteorological data collection sites, and further, that a straight-line Gaussian plume model may not be appropriate for all applications.[132] But none of the cited documents is focused on the data input or methodology needs for the NRC's license renewal SAMA analysis. Staff-endorsed guidance specific to performing SAMA analyses approves use of meteorological data obtained from the plant meteorological tower.[133] Without

---

[129] LBP-11-13, 73 NRC at 583.

[130] *Id.*

[131] *See Pilgrim,* CLI-10-11, 71 NRC at 304 n.87 (describing "total population dose").

[132] For example, quoting NRC guidance on onsite meteorological measurements, Petitioners state that the NRC has acknowledged that "at some sites, due to 'complex flow patterns in non-uniform terrain, additional wind and temperature instrumentation and more comprehensive programs may be necessary.'" Petition at 126 (quoting Regulatory Guide 1.23, "Meteorological Monitoring Programs for Nuclear Power Plants" (Rev. 1, Mar. 2007), at 11). *See also* Petition at 128. Petitioners additionally cite guidance issued by the Environmental Protection Agency, regarding "air quality models for assessing criteria pollutants under the Clean Air Act." *See* Final Rule: "Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions," 70 Fed. Reg. 68,218 (Nov. 9, 2005). The EPA guideline is intended for use by states, industry, and EPA for use in preparing or reviewing "new source permits and State Implementation Plan revisions." *Id.*

[133] *See* NEI 05-01, Rev. A at 15.

more, the cited material does not provide the necessary support for Petitioners' claim of a "significant defect" in the Davis-Besse SAMA analysis.[134]

As Judge Trikouros stated at the prehearing conference, merely because a computer model may be simpler does not mean that it would be less conservative (e.g., would underpredict radiological doses) because "sometimes the simpler model gives higher doses than the more complex model."[135] Notably, Judge Trikouros expressed concern with the lack of "expert opinion . . . supporting [Petitioners'] contention," and stressed the "need to make sure that there is something to litigate" in a hearing.[136] Assuring that our contention admissibility rule is satisfied is particularly important when it is clear that a proffered contention was taken essentially verbatim from another proceeding, and it is not obvious that the contention as proffered also applies to the proceeding at hand. Our 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. We "reserve our hearing process for genuine, material controversies between knowledgeable litigants."[137]

We recognize that the technical nature of SAMA computer modeling issues may make for some difficult decisions for the Board at the contention admissibility stage. But here, we can find no basis on which to initiate an adjudicatory proceeding. Petitioners provided neither factual support specific to the Davis-Besse location, nor expert opinion to indicate that the plume model used for the analysis overlooked either notable "lake effects" or other meteorological phenomena that may have significantly altered the Davis-Besse SAMA analysis results.

---

[134] Similarly, Petitioners do not support their challenge to the use of meteorological data from the year 2006. *See* Petition at 125. NRC-endorsed guidance on the SAMA analysis expressly provides for use of either 1 year of hourly meteorological data or an average of 5 years. *See* NEI 05-01, Rev. A at 15. The guidance specifies that the data set and period should be "representative and typical." *See id.* Here, the Environmental Report stated that results of the analysis sensitivity studies had confirmed that the 2006 meteorological data were "representative and typical." *See* Environmental Report, Att. E at E-35, E-43 to E-44. Petitioners in no respect challenge the representativeness of the data for the 50-mile-radius area encompassed by the SAMA analysis, nor otherwise provide any support for their claim that use of the 2006 data was insufficient for the analysis.

[135] Tr. at 202. *See also id.* at 188. Judge Trikouros additionally pointed out that one of the items Petitioners cited in support of their contention, a DOE guidance document on the MACCS2 code, states that because the straight-line Gaussian plume model has limitations in depicting the effects of terrain variation, it is "inherent[ly] conservati[ve]," a point that would tend to go against Petitioners' claims of under-predicted radiological doses. *See* Tr. at 201 (quoting Petition at 132).

[136] *Id.* at 202.

[137] *See Seabrook,* CLI-12-5, 75 NRC at 307 (quoting *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 219 (2003)).

We close with one additional point regarding the plume modeling challenges. In *Seabrook* we deferred to the Board's admission of an essentially identical plume modeling contention. But the proffered factual support in *Seabrook* focused on New England coastal areas, and the Seabrook facility is located on the New England coast. While we found the proffered support not obviously sufficient for the contention, we chose to defer to the Board's overall assessment of the referenced articles and studies.[138]

The *Seabrook* case presented a close call. Here, however, support for the identical contention is even thinner, particularly given that (1) the Board found the arguments regarding overlooked impacts of complex and variable terrain — a large portion of the contention — unsupported as to the Davis-Besse region; and (2) the asserted "sea breeze" and "hot spots" claims lack adequate support as to the Davis-Besse location and SAMA analysis. In the end, the support provided is far too generalized to show a genuine material dispute with the Davis-Besse SAMA analysis. The Board erred in admitting the claim.[139]

c. Radioactive Particle Size and Cleanup Costs

The Board in LBP-11-13 admitted a challenge to the estimated decontamination costs in the SAMA analysis. The Board rejected as unsupported "many of [Petitioners'] assertions of error relating to decontamination costs," but found "two claims" admissible.[140]

First, the Board admitted Petitioners' claims regarding radioactive "particle size." Petitioners argue that the MACCS2 code's "cost formula" is "outdated and inaccurate" because it inappropriately assumes unduly large radioactive particle sizes, akin to those from "nuclear explosions," which are easier and less expensive to remove.[141] Petitioners claim that "earlier estimates" of decontamination costs that were "incorporated in WASH-1400 and up through and including MACCS2 . . . are incorrect because they examined fallout from nuclear explosion of nuclear weapons that produce large particle sizes and high mass loadings."[142]

Second, the Board admitted Petitioners' claim that urban areas will be "considerably more expensive and time consuming to decontaminate and clean than rural

---

[138] *Id.* at 332-34 (agreeing with licensee that Intervenors' support for the contention did not obviously demonstrate materiality, but ultimately deferring to Board's assessment).

[139] We additionally note that the Board found the plume modeling claims potentially material to the SAMA analysis *if they were considered in conjunction with* Petitioners' asserted source term claims. It is not clear that the Board would have found the plume claims by themselves sufficient to raise a material issue. *See* LBP-11-13, 73 NRC at 584.

[140] *Id.*

[141] Petition at 135-37.

[142] *See id.* at 140.

areas."[143] The Board stated that in support of this claim Petitioners had referred to a study on the economic consequences of a "Rad/Nuc Attack," which "they allege 'provides estimates for different types of areas, from farm or range land to high density urban areas.'"[144] The Board also noted that Petitioners "suggest that '[i]n place of the outdated cost figure in the MACCS2 code, the SAMA analysis should incorporate, for example, the analytical framework contained in'" a 1996 Sandia National Laboratories report on site restoration costs for a plutonium-dispersal accident.[145]

On appeal, FirstEnergy argues that "Petitioners provided absolutely no credible information suggesting that FirstEnergy has underestimated offsite economic consequences due to invalid assumptions regarding radionuclide 'particle size' or clean-up costs for urban areas."[146] We agree, for reasons detailed in our *Seabrook* decision, which reversed the Board's admission of identical "decontamination cost" claims raised in regard to the Seabrook SAMA analysis.[147] At bottom, Petitioners did not properly support their argument that the Davis-Besse SAMA analysis assumes unduly large radioactive "particle sizes," or overlooked or underestimated "urban" decontamination costs. They neither directly challenged relevant cost estimates set forth in the Davis-Besse SAMA analysis, nor explained why or how the estimates or "framework" of other studies were appropriate for use in the Davis-Besse site-specific reactor accident SAMA analysis, or would lead to more accurate estimates than those reached in the Davis-Besse analysis. Therefore, for the reasons we set forth in *Seabrook,* we agree with FirstEnergy that the decontamination costs portion of the SAMA contention "lacks adequate foundation," and "fails to directly controvert the [Environmental Report]"[148] We therefore reverse admission of the decontamination costs claims.

* * * *

One last matter bears mention. During the pendency of FirstEnergy's appeal, Petitioners filed in this proceeding a petition requesting, among other things, that we suspend "all decisions" regarding the issuance of renewed licenses, pending completion of several actions associated with the recent nuclear events in Japan.[149] This was one of a series of substantively identical petitions filed in multiple dockets.

---

[143] *See* LBP-11-13, 73 NRC at 585 (quoting Petition at 138).

[144] *See id.* (quoting Petition at 138-39).

[145] *See id.* at 584 (quoting Petition at 140).

[146] Appeal at 27.

[147] *Seabrook,* CLI-12-5, 75 NRC at 329-37.

[148] Appeal at 30.

[149] *See generally* Emergency Petition to Suspend All Pending Reactor Licensing Decisions and Related Rulemaking Decisions Pending Investigation of Lessons Learned from Fukushima Dai'ichi Nuclear Power Station Accident (Apr. 14, 2011; amended and corrected Apr. 21, 2011).

We granted the requests for relief in part, and denied them in part.[150] In particular, we declined to suspend this or any other adjudication, or any final licensing decisions, finding no imminent risk to public health and safety, or to common defense and security. The agency continues to evaluate the implications of the events in Japan for U.S. facilities, as well as to consider actions that may be taken as a result of lessons learned in light of those events. Particularly with regard to license renewal, we stated that "[t]he NRC's ongoing regulatory and oversight processes provide reasonable assurance that each facility complies with its 'current licensing basis,' which can be adjusted by future Commission order or by modification to the facility's operating license outside the renewal proceeding (perhaps even in parallel with the ongoing license renewal review)."[151]

III. CONCLUSION

For the reasons set forth above, we affirm LBP-11-13 in part and reverse it in part.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 27th day of March 2012.

[150] *See generally Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141 (2011).
[151] *Id.* at 164.

Commissioners Svinicki and Apostolakis, Dissenting in Part

We respectfully dissent with regard to Petitioners' challenge to the use of the MAAP code for the determination of source terms in the SAMA analysis. As in *Seabrook,*[152] we find that Petitioners did not present the minimal factual or expert support necessary to demonstrate the existence of a genuine material dispute on this issue. Thus, we conclude that the Board erred in admitting this portion of the SAMA contention.

[152] CLI-12-5, 75 NRC at 351 (2012) (Commissioners Svinicki and Apostolakis, dissenting in part).

Cite as 75 NRC 421 (2012) **CLI-12-9**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of **Docket Nos. 52-027-COL**
52-028-COL

SOUTH CAROLINA ELECTRIC & GAS COMPANY and SOUTH CAROLINA PUBLIC SERVICE AUTHORITY (also referred to as SANTEE COOPER)
(Virgil C. Summer Nuclear Station, Units 2 and 3) **March 30, 2012**

MANDATORY HEARINGS

In this proceeding, the Commission considers safety issues pursuant to Atomic Energy Act (AEA) § 189(a), and environmental issues as required by section 102(2)(A), (C), and (E) of the National Environmental Policy Act of 1969, as amended (NEPA).

MANDATORY HEARINGS

The Notice of Hearing for this uncontested proceeding sets the parameters for the Commission's review. The Commission must determine whether the review of the application by the NRC Staff has been adequate to support the findings listed in 10 C.F.R. § 52.97 and 10 C.F.R. § 51.107(a), for each of the combined operating licenses (COLs) to be issued.

MANDATORY HEARINGS

The Commission does not review a COL application *de novo* in a mandatory hearing; it considers instead the sufficiency of the Staff's review of that application. *See generally Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 39 (2005); *Clinton ESP,* CLI-06-20, 64 NRC 15, 21-22 (2006).

MANDATORY HEARINGS

SAFETY ISSUES

With respect to the safety of a proposed facility, the Commission examines whether the Staff's review of the COL application has been adequate to support its findings, including whether: (1) the applicable standards and requirements of the AEA and our regulations have been met; (2) any required notifications to other agencies or bodies have been made; (3) there is reasonable assurance that the facility will be constructed and will operate in conformity with the license, the provisions of the AEA, and our regulations; (4) the applicant is technically and financially qualified to engage in the activities authorized; and (5) issuance of the license will not be inimical to the common defense and security or the health and safety of the public. 10 C.F.R. § 52.97(a)(1)(i)-(v).

MANDATORY HEARINGS

With respect to the environmental impacts of the COL for a proposed facility, the Commission (1) determines whether the requirements of NEPA § 102(2)(A), (C), and (E), and the applicable regulations in 10 C.F.R. Part 51, have been met; (2) independently considers the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; (3) determines, after weighing the environmental, economic, technical, and other benefits against environmental and other costs, and considering reasonable alternatives, whether the combined license should be issued, denied, or appropriately conditioned to protect environmental values; and (4) determines whether the NEPA review conducted by the NRC Staff has been adequate. 10 C.F.R. § 51.107(a)(1)-(4).

MANDATORY HEARINGS

NATIONAL ENVIRONMENTAL POLICY ACT

To satisfy requirements of NEPA, the Commission independently considers the final balance among conflicting factors in the record.

NATIONAL ENVIRONMENTAL POLICY ACT

The Staff's environmental review was conducted in cooperation with the Army Corps of Engineers (ACE), with the NRC acting as lead agency and the ACE as cooperating agency under a memorandum of understanding because the Applicants also needed permits from the ACE under section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act of 1899 in order to complete construction activities that may potentially affect wetlands.

LICENSE CONDITIONS

SQUIB VALVES

In order to reach a finding of reasonable assurance that the public health and safety will be protected, the Commission imposed a license condition relating to a testing program for squib valves.

LICENSE CONDITIONS

The Commission imposed a license condition requiring licensees to develop and implement strategies to maintain or restore core cooling, containment and spent fuel pool cooling capabilities following a beyond-design-basis external event, including a simultaneous loss of all AC power and loss of normal access to the normal heat sink, at all units on the VCSNS site. The requirements of the license condition will be complete prior to fuel load.

SPENT FUEL POOL INSTRUMENTATION

ORDER MODIFYING LICENSE

The Commission directed the Director of the Office of New Reactors to issue Order EA-12-051 to the license applicant, concurrent with the issuance of the COLs for VCSNS Units 2 and 3. In Order EA-12-051, the Commission determined that modifications to the spent fuel pool instrumentation required by that order represented a significant enhancement to the protection of public health and safety, and were an appropriate response to the insights from the Fukushima Dai-ichi accident. The Commission administratively exempted Order EA-12-051 from the Backfit Rule and the issue finality requirements in 10 C.F.R. § 52.63 and 10 C.F.R. Part 52, Appendix D, § VIII.

EXEMPTIONS FROM REGULATIONS

DEPARTURES FROM CERTIFIED DESIGN

The COL application included a request for a departure from the wet-bulb noncoincident temperature as described in the AP1000 Design Control Document (DCD). Because the wet-bulb noncoincident temperature is considered "Tier 1 information," or part of the AP1000 certified design, a regulatory exemption is required. 10 C.F.R. Part 52, App. D, §§ IV.A.2.d and VIII.A.4. The exemption associated with the wet-bulb temperature departure was granted because it was authorized by law, would not present an undue risk to public health or safety, and was consistent with the common defense and security, and special circumstances were present.

EMERGENCY PLANNING

The Staff found acceptable the applicant's plan to use a single technical support center for existing Unit 1 and proposed Units 2 and 3 at VCSNS, to be colocated in the basement of the new nuclear operations building, between the protected areas of the three units, which is a departure from the AP1000 DCD. Relocation of the technical support centers to a central facility allows for the relocation of each of the new units' operational support centers to the technical support center locations designated in the AP1000 DCD, adjacent to the control room. Each unit will have its own operational support center.

MEMORANDUM AND ORDER

On October 12-13, 2011, we held a hearing on the application of South Carolina Electric & Gas Company and South Carolina Public Service Authority (also known as Santee Cooper) (together, SCE&G or Applicants) for combined licenses (COLs) to build and operate two additional power reactors at the Virgil C. Summer Nuclear Station in Fairfield County, South Carolina (VCSNS).[1] The application has been under review by the NRC Staff since 2008.[2] The purpose of the evidentiary hearing was to consider the sufficiency of the Staff's review of

[1] *See* South Carolina Public Service Authority (also Referred to as Santee Cooper); Combined License for Virgil C. Summer Station, Units 2 and 3; Notice of Hearing, 76 Fed. Reg. 53,492 (Aug. 26, 2011) (Notice of Hearing).

[2] South Carolina Electric and Gas Company (SCE&G) and the South Carolina Public Service Authority (Santee Cooper); Notice of Receipt and Availability of Application for a Combined License, 73 Fed. Reg. 39,339 (July 9, 2008).

the COL application.[3] As discussed below, we conclude that the Staff's review has been adequate to support the findings set forth in 10 C.F.R. §§ 52.97(a) and 51.107(a), and we authorize the issuance of the COLs.

I. BACKGROUND

A. Proposed Action

The Applicants seek to build two new units of the AP1000 reactor design, which is a design certified in our regulations as a standard design.[4] The AP1000 design is described in a design control document (DCD), to which referencing applications must conform. The VCSNS application therefore incorporated by reference the material in the AP1000 certified design. The Staff's evaluation of that material is found in its safety evaluation for the AP1000 design.[5] The COL application underwent five revisions during the review process, reflecting, in part, changes necessitated by Staff requests for additional information (RAIs) during the review process.[6] The AP1000 design was undergoing revisions while the VCSNS application was under review; therefore, the application also was updated several times to reflect the revisions to the AP1000 DCD.[7] The VCSNS application review could not be finalized, and the licenses granted, until the amendment to the AP1000 certified design also was finalized. The amendment was affirmed on December 22, 2011; the rule became effective December 30, 2011.[8]

The Applicants did not pursue an early site permit for the VCSNS site.[9] Therefore, all relevant site characteristics, including site geology, hydrology, seismology, manmade hazards, and the characteristics of the local population were studied in the course of the COL application review.

---

[3] *See* Notice of Hearing, 76 Fed. Reg. at 53,493.

[4] *See* 10 C.F.R. Part 52, App. D.

[5] *See* "Final Safety Evaluation Report Related to Certification of the AP1000 Standard Design," NUREG-1793 (Sept. 2004) (ADAMS Accession Nos. ML043450344, ML043450354, ML043450284, ML043450290, ML043450274); NUREG-1793, Supp. 1 (Dec. 2005) (ADAMS Accession No. ML060330557).

[6] *See* South Carolina Electric & Gas, V. C. Summer Nuclear Station, Units 2 & 3 COL Application (Rev. 5), (Exs. NRC00001A to NRC0001BH). The application includes a Final Safety Analysis Report (FSAR) and an Environmental Report (ER).

[7] *See generally* "Final Safety Evaluation Report Related to Certification of the AP1000 Standard Plant Design," NUREG-1793, Vol. 1, Supp. 2 (Sept. 2011) § 1.1 (ADAMS Accession No. ML11293A120).

[8] Final Rule: "AP1000 Design Certification Amendment," 76 Fed. Reg. 82,079 (Dec. 30, 2011). The effectiveness date of the rule for those entities who receive actual notice of the rule is the date of receipt. *Id.*

[9] *See* 10 C.F.R. Part 52, Subpart A.

The Office of New Reactors (NRO) led the review and provided much of the Staff expertise in the review. Other NRC offices supported the effort, with the Office of Nuclear Security and Incident Response, the Office of Nuclear Reactor Regulation, the Office of Nuclear Material Safety and Safeguards, the Office of Federal and State Materials and Environmental Management Programs, and Staff in Regions 1 and 2 all contributing expertise. In addition, other federal agencies — including the Department of Homeland Security, the Federal Emergency Management Agency (FEMA), and the U.S. Army Corps of Engineers (ACE) — also contributed to NRC evaluations.[10] State agencies, including the South Carolina Historic Preservation Office and the South Carolina Department of Natural Resources, also were consulted.[11] The Staff utilized the Standard Review Plan,[12] the Environmental Standard Review Plan,[13] and applicable regulatory guides, interim staff guidance documents, and office instructions in reviewing the application.[14]

Shortly before our hearing on this matter, we held an uncontested hearing on the first COL application to receive complete Staff review, for the Vogtle Electric Generating Plant, Units 3 and 4.[15] Also referencing the AP1000 design, Vogtle was designated as the "reference combined license application" ("reference COLA" or "RCOLA") by NuStart Energy Development, LLC (NuStart), a consortium of companies whose mission includes facilitating the licensing of advanced nuclear power reactors. Consistent with the design-centered review approach, the subsequent COL applications (or "SCOLAs"), such as the VCSNS application, were modeled after the RCOLA. RAI responses, and any subsequent application revisions, were coordinated between the reference COL applicant and subsequent COL applicants, so that each subsequent COL applicant could adopt those RAI responses and application changes, except where site-specific factors made such

---

[10] Tr. at 51-52 (Testimony of Michael Johnson). *See also* Ex. NRC000017, Staff Responses to Commission Post-Hearing Questions (Oct. 27, 2011), at 23 (Staff Post-Hearing Responses).

[11] *See* Tr. at 62 (Flanders), 49 (Rice).

[12] "Standard Review Plan for the Review of Safety Analyses Report for Nuclear Power Plants: LWR Edition," NUREG-0800 (2007) (NUREG-0800) (*see* http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0800/cover/).

[13] NUREG-1555 "Standard Review Plan for Environmental Reviews for Nuclear Power Plants: Environmental Review Plan" (2007) (ADAMS Accession No. ML003701937).

[14] *See* Ex. NRC000003, "Staff Statement in Support of the Uncontested Hearing for Issuance of Combined Licenses for the Virgil C. Summer Nuclear Station, Units 2 and 3 (Docket Nos. 52-027 and 52-028)," Commission Paper SECY-11-0115 (Aug. 19, 2011) (Staff Testimony).

[15] *See* Southern Nuclear Operating Co. et al.; Combined Licenses for Vogtle Electric Generating Plant, Units 3 and 4, and Limited Work Authorizations; Notice of Hearing, 76 Fed. Reg. 50,767 (Aug. 16, 2011).

adoption inappropriate.[16] This approach allows the NRC Staff to review each issue a single time, and thus enhances efficiency and consistency.[17]

B. Review Standards

The requirement for a hearing at the construction permit phase of new reactor generation facilities is stated in section 189(a) of the Atomic Energy Act of 1954, as amended (AEA or Act).[18] Interested parties are given the opportunity to contest the sufficiency of the application. Even in the absence of a contested hearing, however, AEA § 189(a) requires the Commission to hold an "uncontested" or mandatory hearing. We consider environmental issues as required by section 102(2)(A), (C), and (E) of the National Environmental Policy Act of 1969, as amended (NEPA). The Notice of Hearing for this uncontested proceeding articulates the standards for our review.[19] The determination we must make "is whether the review of the application by the Commission's [S]taff has been adequate to support the findings found in 10 C.F.R. [§§] 52.97 and 10 C.F.R. [§§] 51.107 for each of the COL's to be issued."[20] In particular, we must determine whether:

> (1) The applicable standards and requirements of the Act and the Commission's regulations have been met;
>
> (2) Any required notifications to other agencies or bodies have been duly made;[21]

---

[16] *See* Tr. at 28-29 (Monroe).

[17] Under the "design-centered review approach," the NRC uses, to the maximum extent practical, a "one issue, one review, one position" strategy to promote effective use of resources for performing reviews, and to optimize application review schedules. In particular, "the [S]taff will conduct one technical review for each reactor design issue and use this one decision to support the decision on a [design certification] and on multiple COL applications." NRC Regulatory Issue Summary 2006-06, "New Reactor Standardization Needed to Support the Design-Centered Licensing Review Approach" (May 31, 2006) (ADAMS Accession No. ML053540251). *See generally* "Semiannual Update of the Status of New Reactor Licensing Activities and Future Planning for New Reactors," Commission Paper SECY-06-0019 (Jan. 31, 2006) at 5-6 (ADAMS Accession No. ML053530315).

[18] Section 189(a) provides: "The Commission shall hold a hearing after thirty days' notice and publication once in the Federal Register, on each application under section 103 or 104b. for a construction permit for a [utilization or production] facility . . . ." 42 U.S.C. § 2239(a).

[19] *See* Notice of Hearing, 76 Fed. Reg. at 53,493.

[20] *Id.*

[21] AEA § 182(c) requires the publication of notice of the application in the *Federal Register* for 4 consecutive weeks. This requirement has been satisfied. *See* South Carolina Electric and Gas Company (SCE&G) and the South Carolina Public Service Authority (Santee Cooper), Notice of Availability of Application for a Combined License, 76 Fed. Reg. 11,522 (Mar. 2, 2011); South Carolina Electric and Gas Company (SCE&G) and the South Carolina Public Service Authority

(Continued)

(3) There is reasonable assurance that the facility will be constructed and will operate in conformity with the license, the provisions of the Act, and the Commission's regulations;

(4) The applicant is technically and financially qualified to engage in the activities authorized; and

(5) Issuance of the license will not be inimical to the common defense and security or to the health and safety of the public.[22]

Also as described in the Notice of Hearing, our regulations implementing NEPA require us, in an uncontested hearing, to:

(1) Determine whether the requirements of Section 102(2)(A), (C), and (E) of NEPA and the applicable regulations in 10 C.F.R. Part 51 have been met;

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

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

(4) Determine whether the NEPA review conducted by the NRC staff has been adequate.[23]

We do not review SCE&G's application *de novo*; rather, we consider the sufficiency of the Staff's review of that application.[24]

C. Contested COL Proceeding

The "contested" portion of this proceeding was resolved without reaching an evidentiary hearing. The NRC published in the *Federal Register* a notice

---

(Santee Cooper), Notice of Availability of Application for a Combined License, 76 Fed. Reg. 12,998 (Mar. 9, 2011); South Carolina Electric and Gas Company (SCE&G) and the South Carolina Public Service Authority (Santee Cooper), Notice of Availability of Application for a Combined License, 76 Fed. Reg. 14,436 (Mar. 16, 2011); South Carolina Electric and Gas Company (SCE&G) and the South Carolina Public Service Authority (Santee Cooper), Notice of Availability of Application for a Combined License, 76 Fed. Reg. 16,456 (Mar. 23, 2011). *See also* 10 C.F.R. § 50.43(a)(3).

[22] 10 C.F.R. § 52.97(a)(1).

[23] Notice of Hearing, 76 Fed. Reg. at 53,493. *See also* 10 C.F.R. § 51.107(a).

[24] *See generally Exelon Generation Co.* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 39 (2005); *Exelon Generation Co.* (Early Site Permit for Clinton ESP Site), CLI-06-20, 64 NRC 15, 21-22 (2006).

of opportunity for hearing in October 2008.[25] In response, two organizational petitioners, the Sierra Club and Friends of the Earth (filing jointly), and one individual, Mr. Joseph Wojcicki, requested a hearing before the Atomic Safety and Licensing Board. The Board found that only the Sierra Club had demonstrated standing. The Board found, however, that none of the proposed contentions offered by any petitioner was admissible, and therefore denied the hearing requests in February 2009.[26]

Both the joint petitioners and Mr. Wojcicki appealed. On appeal, we affirmed the Board's decision in all respects save one: we reversed the Board's ruling with respect to the admissibility of one proposed contention offered by the Sierra Club regarding alternatives to the proposed action.[27] The joint petitioners' proposed "energy alternatives" contention had argued that "demand-side management" was an alternative to the proposed project that should have been considered in the application. We held that the Board had read too narrowly a prior Commission decision relating to a differently situated applicant, and we therefore remanded that issue to the Board for further consideration in light of our ruling.[28] We found that for a public utility such as Santee Cooper, who is proposing to produce power for state-designated service territories in which customers have no choice of alternative electric service providers, promoting energy efficiency by the end users may be a viable alternative. In contrast, the *Clinton* early site permit case involved a merchant power producer proposing to sell power on the open market; such an applicant had "neither the mission nor the ability to implement 'energy efficiency' alternatives."[29]

In the same decision, we affirmed the Board's rejection of the joint petitioners' other two proposed contentions. This included one contention that argued that the COL application necessarily was incomplete because it referenced a version of the design (at that time, DCD Revision 17) that was still undergoing review.[30] In rejecting this contention, we explained that an applicant may reference an as-

---

[25] South Carolina Electric and Gas Company, Acting for Itself and as Agent for the South Carolina Public Service Authority (Also Referred to as Santee Cooper); Application for the Virgil C. Summer Nuclear Station Units 2 and 3; Notice of Order, Hearing, and Opportunity to Petition for Leave to Intervene, 73 Fed. Reg. 60,362 (Oct. 10, 2008).

[26] LBP-09-2, 69 NRC 87 (2009). *See also* Order (Denying Motion for Reconsideration) (Mar. 12, 2009) (unpublished).

[27] CLI-10-1, 71 NRC 1, 20-21 (2010).

[28] *Id.* at 20 (contrasting the *VCSNS* application with that in *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801 (2005), *aff'd, Environmental Law & Policy Center v. NRC,* 470 F.3d 676 (7th Cir. 2006)).

[29] *Id.*

[30] *See id.* at 8-10.

yet-uncertified design "at its own risk."[31] We also affirmed the Board's rejection of a contention concerning both safety and environmental aspects of potential hazards from aircraft impacts. The proposed contention had failed to challenge the Applicants' probabilistic risk calculation of the likelihood of such a crash, and, moreover, was mooted by the publication of the final rule on consideration of aircraft impacts at new nuclear power plants.[32]

On remand of the "energy alternatives" contention, the Board concluded that the joint petitioners had not submitted an otherwise admissible contention on the subject of whether energy efficiency is a viable alternative to the proposed project.[33] We subsequently affirmed the Board's decision on appeal, ending the contested portion of the proceeding.[34]

In April 2011, Friends of the Earth and the South Carolina Chapter of the Sierra Club joined in a petition, filed on multiple dockets, to (among other things) suspend licensing decisions while the Commission considered the impacts of the accident at the Fukushima Dai-ichi plant in Japan.[35] We granted the petition in part, and denied it in part.[36]

D. Uncontested Proceeding

1. Prehearing Activities

As part of its COL review, the Staff and the ACE, as a cooperating agency, prepared an environmental impact statement. The Staff's environmental review was conducted in cooperation with the ACE under a memorandum of understanding. The Applicants also must obtain permits from the ACE under section 404 of the Clean Water Act[37] and section 10 of the Rivers and Harbors Act of 1899[38] in order to complete construction activities that may potentially affect wetlands.

---

[31] *See id.* (citing *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-08-15, 68 NRC 1, 3-4 (2008) (in turn citing 10 C.F.R. § 52.55(c) and 10 C.F.R. § 2.335(a))).

[32] *Id.* at 12-13 (citing Final Rule: "Consideration of Aircraft Impacts for New Nuclear Power Plants," 74 Fed. Reg. 28,112 (June 12, 2009)).

[33] LBP-10-6, 71 NRC 350 (2010).

[34] CLI-10-21, 72 NRC 197 (2010).

[35] *See generally* 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 (Apr. 18, 2011). *See also* Supplemental Comments by Friends of the Earth and the South Carolina Chapter of the Sierra Club in Support of Emergency Petition Regarding NEPA Requirement to Address Safety and Environmental Implications of the Fukushima Task Force Report (Aug. 10, 2011).

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

[37] 33 U.S.C. § 1344.

[38] 33 U.S.C. § 403.

The Final Environmental Impact Statement was released in April 2011.[39] It concluded, among other things, that unavoidable adverse environmental impacts during operation would be small, and that unavoidable adverse environmental impacts during construction for NRC-authorized construction activities would be small.[40] The Staff concluded that construction and operation of the proposed units would have accrued benefits that most likely would outweigh the economic, environmental, and other societal costs.[41] The Staff's recommendation to the Commission related to the environmental aspects was that the COLs be issued, based on: the COL applications; consultation with other federal, state, tribal, and local agencies; the Staff's independent review; the Staff's consideration of comments during the scoping process and on the draft EIS; and the assessments and mitigation measures in the ER and FEIS.[42]

The Staff completed its safety review with the issuance of the Final Safety Evaluation Report in August 2011.[43] The Staff concluded that the COL application complied with applicable safety regulations and recommended that the Commission make the findings necessary for issuance of the COLs.[44]

Consistent with 10 C.F.R. § 52.87, the Advisory Committee on Reactor Safeguards (ACRS) reviewed those portions of the application that concern safety. The ACRS reviewed the Staff's Advanced Safety Evaluation Report, and the full committee reviewed its concerns with the Staff at a meeting in February 2011.[45] The ACRS concluded that there was "reasonable assurance that VCSNS, Units 2 and 3, can be built and operated without undue risk to the health and safety of the public."[46]

---

[39] Exs. NRC00006A & NRC00006B, "Final Environmental Impact Statement for Combined Licenses for Virgil C. Summer Nuclear Station, Units 2 and 3," NUREG-1939 (Apr. 2011) (FEIS). *See* South Carolina Electric and Gas; Notice of Availability of the Final Environmental Impact Statement for Virgil C. Summer Nuclear Station, Units 2 and 3, Combined Licenses Application Review, 76 Fed. Reg. 22,734 (Apr. 22, 2011).

[40] NRC00006A, FEIS, Table 10-1, at 10-5 to 10-8. For some ACE-authorized construction and preconstruction activities, such as land use impacts from building transmission lines, the unavoidable adverse environmental impacts were rated "moderate." *Id.*

[41] *Id.* at 10-27.

[42] *Id.* at xxxiii and 10-27.

[43] Ex. NRC000004, Final Safety Evaluation Report for Combined Licenses for Virgil C. Summer Nuclear Station Units 2 and 3 (Aug. 2011) (FSER).

[44] *Id.* at ii-iii.

[45] *See* Abdel-Khalik, Said, Chairman, ACRS, Letter to Gregory B. Jaczko, Chairman, NRC "Report of the Safety Aspects of the South Carolina Electric and Gas Company Combined License Application for V.C. Summer Nuclear Station, Units 2 and 3" (Feb. 17, 2011) (ADAMS Accession No. ML110450490) (ACRS Report).

[46] *Id.* at 5. The Staff subsequently responded to the ACRS Report, describing specific changes to the

(Continued)

Following completion of its safety review and issuance of the FSER, the Staff filed a statement in support of the uncontested hearing, which constituted its prehearing testimony, as is consistent with the Internal Commission Procedures.[47] SCE&G (representing both applicants) filed as hearing exhibits prehearing testimony and the curriculum vitae of principal witnesses who were to serve as panelists. Both parties also filed answers to the Commissioners' prehearing questions, as well as their exhibit lists for the October 12-13, 2011 hearing.[48]

In the Notice of Hearing, State and local government bodies, as well as any affected federally recognized Indian Tribes, were given the opportunity to file a statement including their position on any issues associated with the application or any questions they would like us to pose at the hearing.[49] We received no responses to this notice.

Prior to the hearing, the Secretary issued a scheduling order detailing matters such as the identification and swearing-in of witnesses, the process that would be used for formally admitting evidence, and the format of presentations.[50] This was followed by a Scheduling Note prescribing the content and time allotment of the presentations to be provided at the hearing by SCE&G and by the Staff.[51]

2. Hearing

At the hearing, small witness panels for SCE&G and for the Staff gave presentations on topics we previously had determined to be of interest, followed by a question-and-answer period. During the question-and-answer period, witnesses for both the Staff and SCE&G (some of whom did not serve on the presentation panels) answered questions related to their particular areas of expertise. These

---

application and the final safety evaluation report, together with an explanation for actions taken. *See* Borchardt, R.W., Executive Director for Operations, NRC, Letter to Said Abdel-Khalik, Chairman, ACRS, "Report on the Safety Aspects of the South Carolina Electric and Gas Company Combined License Application for Virgil C. Summer Nuclear Station, Units 2 and 3" (Mar. 26, 2011) (ADAMS Accession No. ML110560591).

[47] *See generally* Ex. NRC000003, Staff Testimony.

[48] Ex. NRC000007, NRC Staff Responses to Commission Pre-Hearing Questions (Sept. 28, 2011) (Staff Pre-Hearing Responses); Ex. SCE000001, South Carolina Electric & Gas Company's Answers to the Commission Questions for the V.C. Summer Units 2 and 3 Mandatory Hearing (SCE&G Pre-Hearing Responses). *See generally* Order (Transmitting Pre-Hearing Questions) (Sept. 15, 2011) (unpublished) (Pre-Hearing Order).

[49] Notice of Hearing, 76 Fed. Reg. at 53,493.

[50] Scheduling Order (Sept. 28, 2011) (unpublished).

[51] Vietti-Cook, Annette, Secretary of the Commission, Memorandum to Counsel for Applicant and Staff (Enclosure: Scheduling Note) (Sept. 30, 2011); Scheduling Note (Revised) (Oct. 6, 2011) (Revised Scheduling Note).

witnesses all had been involved in either the development or review of the COL application.

a. Witnesses for the Overview Panel and Safety Panels

The Staff provided fifty-nine witnesses to be sworn in by the Chairman.[52] Eighteen of these sworn witnesses were scheduled panelists, as described below. The remainder stood by to answer our questions concerning topics of their expertise; about thirteen of these "standby" witnesses had the opportunity to testify. SCE&G provided sixteen witnesses, including several who were not panelists, but were available to answer our questions.[53]

Michael Johnson, Director, NRO; Scott Flanders, Director, Division of Site and Environmental Reviews, NRO; and Frank Akstulewicz, Deputy Director, Division of New Reactor Licensing, NRO, gave an overview of the COL application review, including the topic of the design-centered review approach for the AP1000 COL applications and a summary of the regulatory findings.[54]

Testifying for the Applicants were Stephen A. Byrne, Executive Vice President, Generation & Transmission, and Chief Operating Officer of SCE&G, and Alfred M. Paglia, Jr., Manager, Nuclear Licensing, New Nuclear Deployment, for SCE&G. These witnesses offered prefiled written testimony as well as live testimony at the hearing.[55] They provided background information and an overview of the VCSNS project, including a discussion of the COL application, incorporation by reference of the AP1000 DCD, and the relationship between the VCSNS COL application and the AP1000 Reference COL application.

The first safety panel addressed site characteristics of the VCSNS site and SCE&G's request for a site-specific regulatory exemption involving a departure from AP1000 site parameters. Testifying for the Staff were three Staff members from NRO: Joseph Sebrosky, Senior Project Manager and Lead Safety Project

---

[52] *See* Revised Staff Witness List (Oct. 5, 2011). *See also* Tr. at 16-18, 167, 277.

[53] Nonpanelist SCE&G witnesses were Dave H. Carroll, Ronald B. Clary, Julie M. Giles, Gerald A. Loignon, Mark E. Stella, and Allan D. Torres. *See* Tr. at 15-16.

[54] *See generally* Tr. at 50-77.

[55] *See* Ex. SCE000002, Testimony of Stephen A. Byrne and Alfred M. Paglia, Jr. in Support of the Mandatory Hearing for V.C. Summer Units 2 and 3 Combined Licenses. Mr. Byrne has a Bachelor of Science degree in Chemical Engineering from Wayne State University in Michigan and has over 27 years' experience in the nuclear industry. He also has chaired the industry's New Plant Working Group for the past 3 years, and is currently chair of the New Plant Oversight Committee. *Id.* at 1-2. *See also* Ex. SCE000005, Curriculum Vitae of Stephen A. Byrne. Mr. Paglia holds a Bachelor of Science degree in Mechanical Engineering from the University of South Carolina, and has 31 years' experience in the nuclear industry. *See* Ex. SCE000006, Curriculum Vitae of Alfred M. Paglia, Jr., P.E.

Manager for the Summer COL Review; Michelle Hayes, Reactor Systems Engineer; and John Segala, Chief, Balance of Plant Branch 1.[56]

Testifying for the Applicants on safety matters was Amy M. Monroe, SCE&G Licensing Engineer, New Nuclear Deployment, who provided prefiled written and live testimony during all three panels addressing safety issues.[57] During the first safety panel, addressing general site characteristics of the VCSNS site, Ms. Monroe was joined in testifying at the hearing by Stephen E. Summer, Supervisor, Environmental Services, SCANA Services, Inc.[58]

The second safety panel addressed site hydrology, geology, seismology, and geotechnical engineering. Testifying for the Staff were four Staff members from NRO: Kenneth See, Senior Hydrologist; Gerry Stirewalt, Senior Geologist; Sarah Tabatabai, Geophysicist; and Malcolm Patterson, Reliability and Risk Analyst.[59] For the Applicants, Robert B. Whorton, P.E, consulting engineer for SCE&G,[60] testified along with Ms. Monroe and Mr. Summer.

The third safety panel addressed emergency planning, including relocation of the technical support center and control room habitability, engineered safety features, and auxiliary systems including the raw water and wastewater systems, and offsite power. The Staff's testimony was presented by Donald Habib, Project Manager, NRO, and Daniel Barss, Team Leader, New Reactor Licensing Branch, Office of Nuclear Security and Incident Response.[61] For the Applicants, Ms. Monroe was joined on that panel by Robert E. Williamson, III, Manager, Emergency Planning, SCE&G;[62] Timothy Schmidt, Engineer, New Nuclear De-

---

[56] *See generally* Tr. at 94-130.

[57] *See* Ex. SCE000003, Testimony of Amy M. Monroe in Support of the Mandatory Hearing for V.C. Summer Units 2 and 3 Combined Licenses. Ms. Monroe holds a Bachelor of Science degree in Mechanical Engineering from the University of South Carolina, has 24 years' experience in nuclear power plant engineering in the fields of licensing and system performance, and has worked at SCE&G for 28 years. *Id.* at 1. *See also* Ex. SCE000007, Curriculum Vitae of Amy M. Monroe.

[58] *See* Ex. SCE000011, Curriculum Vitae of Stephen E. Summer. Mr. Summer holds a Master of Science in Wildlife Biology from Clemson University and a Bachelor of Science in Biology from University of South Carolina. He has over 33 years' experience in environmental licensing, permitting, monitoring, and assessment relating to electric generating facilities. *Id.* at 1.

[59] *See* Tr. at 137-82.

[60] *See* Ex. SCE000009, Curriculum Vitae of Robert B. Whorton. Mr. Whorton holds a Bachelor of Science in Civil-Structural Engineering from the University of South Carolina and has over 40 years' experience. He has worked on the VCSNS Units 2 and 3 project since 2005. He was involved in the initial site layout for the new units and participated in geological, geotechnical, and seismic investigations for the COL application. *Id.* at 2-3.

[61] *See* Tr. at 191-235.

[62] *See* Ex. SCE000010, Curriculum Vitae of Robert E. Williamson. Mr. Williamson holds a Bachelor of Science in Workforce Education from Southern Illinois University and started his career in the nuclear field at the U.S. Navy Nuclear Power Training Unit in 1990. He worked at Cooper Nuclear Station and Pilgrim Nuclear Power Station prior to starting at VCSNS in 2003. *Id.*

ployment, SCE&G;[63] and James C. Laborde, Consulting Engineer, New Nuclear Deployment, SCE&G.[64]

b. Witnesses for Environmental Panels

The first environmental panel discussed the scoping process, consultations with other governmental agencies, public outreach, and environmental impacts. Testifying for the Staff were four Staff members from NRO: Scott Flanders; Ryan Whited, Chief of Environmental Projects, Branch 2; Patricia Vokoun, Project Manager for the Summer Environmental Review; and Jack Cushing, Senior Project Manager.[65] In addition, Nancy Kohn, Senior Research Scientist with contractor Pacific Northwest National Laboratory, and Deputy Team Leader for the VC Summer Environmental Review, spoke on the Staff's panel.[66] April R. Rice, Licensing Supervisor and Project Manager for the environmental review for the VCSNS project, provided SCE&G's principal testimony on environmental issues.[67] She was joined in testifying by Stephen Summer and by Lisa A. Matis, Project Manager and Regulatory Specialist for Tetra Tech, an environmental contractor.[68]

The final environmental panel discussed the environmental justice review and the Staff's collaboration with the ACE to produce the FEIS.[69] Panelists included Scott Flanders; Ryan Whited; Patricia Vokoun; Daniel Mussatti, Economist, NRO; and David Anderson, Senior Research Economist, Pacific Northwest National Laboratory.

---

[63] *See* Ex. SCE000020, Curriculum Vitae of Timothy Schmidt. He holds a Bachelor of Science in Chemical Engineering from the University of South Carolina and is a registered professional engineer in South Carolina. He joined SCE&G's office for New Nuclear Deployment in 2006, and, prior to that, worked at Vogtle Electric Generating Plant for 4 years. *Id.*

[64] *See* Ex. SCE000019, Curriculum Vitae of James C. LaBorde. He holds a Bachelor of Science in Engineering from the University of South Carolina. He is a registered professional engineer in South Carolina and has worked for SCE&G since 1974. *Id.*

[65] *See* Tr. at 249-52, 257-64, 267-71, 274-89.

[66] *See* Tr. at 252-57.

[67] Ex. SCE000004, Testimony of April R. Rice in Support of the Mandatory Hearing for V.C. Summer Units 2 and 3 Combined Licenses. Ms. Rice has Bachelor of Science degree in Nuclear Engineering from N.C. State University and has 30 years' experience in the nuclear industry. She has worked as a supervisor at SCE&G for 9 years. *Id.* at 1. *See also* Ex. SCE000008, Curriculum Vitae of April R. Rice.

[68] *See* Ex. SCE000018, Curriculum Vitae of Lisa Matis. She holds a Master of Science in Mechanical Engineering from Stevens Institute of Technology and a Bachelor of Science in Chemical Engineering from Stanford University, and has more than 26 years' experience in the field of environmental management services. *Id.*

[69] *See* Tr. at 296-309.

3. Post-Hearing Questions

After the hearing, the Secretary issued orders setting deadlines for proposed transcript corrections, and for responses to additional questions.[70] The Staff and SCE&G filed a joint motion for proposed transcript corrections.[71] Following the hearing, the Staff and SCE&G provided additional responses to questions posed during and following the hearing.[72] The Secretary subsequently issued an order admitting all additional exhibits into the record, adopting transcript corrections, and closing the evidentiary record.[73]

II. DISCUSSION

A. Site-Specific Issues Addressed at Hearing

We asked a series of prehearing questions to inform our consideration of the sufficiency of the Staff's review of the COL application.[74] The hearing itself focused on issues that are of particular concern due to their novelty or specificity to the VCSNS site. The presentation topics were selected to correspond to areas of the Staff's FSER or FEIS where we required additional information or clarifications as part of our evaluation. We asked detailed questions during the hearing and followed up in areas of concern with post-hearing questions. Although the hearing focused on particular issues and did not give equal weight to all subjects considered in the Staff's environmental and safety reviews, we base today's decision on the entire record of this proceeding.

---

[70] *See* Order (Setting Deadline for Proposed Transcript Corrections) (Oct. 17, 2011); Order (Supplemental Responses and Post-Hearing Questions) (Oct. 20, 2011) (unpublished) (Post-Hearing Order).

[71] Joint Motion for Transcript Corrections (Oct. 24, 2011).

[72] Ex. NRC000017, Staff Post-Hearing Responses; South Carolina Electric & Gas Company's Supplemental Responses to In-Hearing Questions and Responses to Post-Hearing Questions for the V.C. Summer Units 2 and 3 Mandatory Hearing (Oct. 27, 2011) (Ex. SCE000027, SCE&G Post-Hearing Responses). In addition, the Staff filed a letter making revisions to the FSER and to the draft combined license. Martin, Jody C., Counsel for the NRC Staff, Letter to Chairman and Commissioners, U.S. Nuclear Regulatory Commission (Nov. 1, 2011). The letter (with its enclosure) was assigned Exhibit number NRC000018.

[73] Order (Adopting Proposed Transcript Corrections, Admitting Post-Hearing Responses, and Closing the Record of the Proceeding) (Nov. 7, 2011) (unpublished).

[74] *See* Pre-Hearing Order.

1. Response to Japan Task Force Recommendations[75]

a. Near-Term Task Force Recommendations and Emergency Petitions

As described above, we recently granted in part, and denied in part, a petition for emergency action in this and a number of other licensing proceedings relating to the events at the Fukushima Dai-ichi Nuclear Power Station, following the March 11, 2011 earthquake and tsunami.[76] We granted the petitioners' request for a safety analysis, to the extent that the requested analyses had already been undertaken.[77] Specifically, the NRC's Near-Term Task Force already had completed a short-term analysis of the implications of that accident.[78] The Near-Term Task Force was established in the weeks following the accident, and it completed its report with recommendations for future agency actions by July 2011.[79] At the time of our ruling on the "emergency petitions," we already had directed the Staff to commence a longer-term review of the implications of the accident, and to recommend priorities for future regulatory actions.[80]

We denied, however, the petitioners' requests to suspend various licensing proceedings, pending completion of the long-term analyses and the issuance of any resulting regulatory changes.[81] We found that continuing the licensing processes in accordance with our current regulations would cause "no imminent risk to public health and safety," because our current regulations provide for incorporating new requirements into existing licenses as they are shown to be necessary:

> We have well-established processes for imposing any new requirements necessary to protect public health and safety and the common defense and security. Moving forward with our decisions and proceedings will have no effect on the NRC's ability

---

[75] *See* Ex. NRC000003, Staff Testimony, at 9; Ex. NRC000007, Staff Pre-Hearing Responses, at 1-2; Ex. NRC000017, Staff Post-Hearing Responses at 1-3, 9-12; Ex. SCE000027, SCE&G Post-Hearing Responses, at 7; Tr. at 52-53, 67-69, 72, 76-78, 83, 331-32.

[76] *Callaway,* CLI-11-5, 74 NRC 141.

[77] *Id.* at 168, 176.

[78] *See id.* at 147-49.

[79] *See also* "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) (Near-Term Report) (transmitted to the Commission via "Near-Term Report and Recommendations for Agency Actions Following the Events in Japan," Commission Paper SECY-11-0093 (July 12, 2011) (ADAMS Accession No. ML11186A950 (package)).

[80] *See* Staff Requirements — SECY-11-0093 — Near-Term Report and Recommendations for Agency Actions Following the Events in Japan (Aug. 19, 2011) (ADAMS Accession No. ML112310021), for our direction to the Staff in response to the Near-Term Report.

[81] *Callaway,* CLI-11-5, 74 NRC at 159-66.

> to implement necessary rule or policy changes that might come out of our review of the Fukushima [Dai-ichi] events.[82]

In its information paper supporting the issuance of the VCSNS COLs, the Staff noted that three of the Near-Term Task Force recommendations apply specifically to the COL application: (1) confirmation of station blackout and spent fuel capabilities of the AP1000 design; (2) enhancement of onsite emergency response capability by integrating emergency operating procedures, severe accident management guidelines, and extensive damage mitigation guidelines; and (3) enhancement of emergency planning to address prolonged station blackout and multiunit accidents.[83] The Staff also discussed two options for implementing these recommendations: (1) to formulate license conditions implementing the recommendations; or (2) to issue the licenses without conditions relating specifically to the recommendations, and later use the applicable regulations in 10 C.F.R. § 52.98 and 10 C.F.R. § 50.109 to amend the licenses to add appropriate conditions (depending on whether the conditions are within the scope of the certified design).[84] At that time, the Staff did not articulate a preferred course of action.[85]

In response to our prehearing questions, the Staff indicated that there are generally fewer regulatory and administrative requirements to follow in imposing license conditions prior to issuing a license than in imposing similar requirements retrospectively.[86] But because the VCSNS COL application references a certified design, elements of the licensing basis already have been established. Thus, the NRC would have to establish a regulatory basis for any change to the established design regardless of whether the COLs have issued.[87] Therefore, the Staff recommended that the NRC proceed with issuing the licenses, and use appropriate regulatory tools to impose new requirements in the event that new requirements are established.[88]

---

[82] *Id.* at 166.

[83] Ex. NRC000003, Staff Testimony, at 9.

[84] *Id.*

[85] *See id.*

[86] Ex. NRC000007, Staff Pre-Hearing Responses, at 1.

[87] *Id. See also* 10 C.F.R. §§ 52.83, 52.63(a) ("the Commission may not modify, rescind or impose new requirements on the certification information . . . unless [it] determines in a rulemaking" that the change meets one of several conditions, such as that the change is "necessary to provide adequate protection to the public health and safety or the common defense and security," or that it "[s]ubstantially increases overall safety, reliability, or security of facility design, construction, or operation and the direct and indirect costs of implementation of the rule change are justified in view of the increased safety.").

[88] Ex. NRC000007, Staff Pre-Hearing Responses, at 1.

At the hearing, the NRC Staff witnesses recommended proceeding with issuance of the licenses without delay regardless of whether we decide to impose license conditions pertaining to the Near-Term Task Force recommendations.[89] As noted above, Mr. Johnson, NRO Director, indicated that if the COLs issue without including license conditions, our regulations relevant to the finality of decisions could result in some additional administrative requirements to satisfy in imposing new requirements on the licensee.[90] He also testified that, ultimately, the licensee would be subject to the same requirements regardless of the timing of license issuance.[91] In response to our post-hearing questions on this topic, the Staff clarified that some Near-Term Task Force recommendations are not appropriate for implementation in the short term because their specifics are not yet established.[92]

After completion of the evidentiary hearing, the Staff transmitted to us SECY-12-0025, in which it proposed, among other things, to issue orders on certain topics to the Vogtle COL holder, based on its determination that additional requirements were needed to provide adequate protection to public health and safety.[93] Contemporaneously, the Staff filed a notice of material new information relevant to this adjudication, noting the pendency of SECY-12-0025, and stating that, if we agreed that the orders proposed for the Vogtle COLs "are necessary to provide adequate protection of the public health and safety," then the Staff was prepared to include the substance of those orders as license conditions in the VCSNS COLs.[94]

The first order relates to the development of strategies to address beyond-design-basis external events resulting in the simultaneous loss of all alternating

---

[89] Tr. at 71-72 (Johnson).

[90] Tr. at 76 (citing 10 C.F.R. § 50.109) (Johnson)).

[91] Tr. at 76, 77, 83 (Johnson).

[92] Ex. NRC000017, Staff Post-Hearing Responses, at 9-11 (citing "Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned," Commission Paper SECY-11-0137 (Oct. 3, 2011) (ADAMS Accession No. ML11269A204)).

[93] *See* "Proposed Orders and Requests for Information in Response to Lessons Learned from Japan's March 11, 2011, Great Tohoku Earthquake and Tsunami," Commission Paper SECY-12-0025 (Feb. 17, 2012) (ADAMS Accession No. ML12039A103) (package). The Staff also recommended issuance of orders requiring reliable hardened vents in BWR Mark I and Mark II containments — an issue not relevant to the AP1000 reactor design.

[94] *See* Notice to Commission of Information Relevant to the V.C. Summer Uncontested Hearing (Feb. 22, 2012). The Secretary of the Commission subsequently provided an opportunity for the Applicants to respond to the Staff's notification. *See* Order (Feb. 24, 2012) (unpublished). In response, SCE&G indicated that, "if the Commission already has concluded that the Vogtle Orders or any other actions proposed in SECY-12-0025 are necessary for adequate protection, then SCE&G agrees to their inclusion as license conditions." South Carolina Electric & Gas Company's Response to the Nuclear Regulatory Commission Staff's February 22, 2012 Notice (Feb. 27, 2012). We include these filings as part of the adjudicatory record of this proceeding.

current (AC) power and loss of normal access to the ultimate heat sink.[95] For Part 50 licensees, the Staff proposed a "phased" approach for mitigating these events. The "initial" phase requires the use of installed equipment and resources to maintain core, containment, and spent fuel pool cooling capabilities. The "transition" phase requires providing portable onsite equipment to maintain or restore these functions until they can be accomplished with resources brought from offsite. The third and "final" phase requires obtaining sufficient offsite resources to sustain those functions indefinitely.[96]

The Staff observed that the AP1000 standard design includes passive design features that provide core, containment, and spent fuel pool cooling capability for 72 hours, without reliance on AC power.[97] The Staff therefore proposed that the Vogtle COL holder address only those requirements relative to the "final" phase. We approved issuance of this order to the Vogtle COL holder, finding that issuance of the order was warranted "as necessary for ensuring adequate protection under . . . 10 C.F.R. § 50.109(a)(4)(ii)."[98] For the same reasons, we impose the following condition on the licenses for VCSNS Units 2 and 3:

Requirements for Mitigation Strategies for Beyond-Design-Basis External Events

The Licensees shall address the following requirements:

1. The Licensees shall develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event.

2. These strategies must be capable of mitigating a simultaneous loss of all AC power and loss of normal access to the normal heat sink and have adequate capacity to address challenges to core cooling, containment, and spent fuel pool cooling capabilities at all units on the VCSNS site.

---

[95] SECY-12-0025, at 7.

[96] *Id.,* Enclosure 4, Attachment 3, "Requirements for Mitigation Strategies for Beyond-Design-Basis External Events at COL Holder Reactor Sites (Vogtle Units 3 and 4)."

[97] SECY-12-0025, at 11.

[98] Staff Requirements — SECY-12-0025 — Proposed Orders and Requests for Information in Response to Lessons Learned from Japan's March 11, 2011, Great Tohoku Earthquake and Tsunami (Mar. 9, 2012) (ADAMS Accession No. ML120690347) at 1 (Staff Requirements — SECY-12-0025). Section 50.109(a)(4)(ii) provides an exception to the "Backfit Rule" where the Commission determines "[t]hat 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." The order notes that additional guidance, discussing an acceptable approach for complying with the order will be contained in final Interim Staff Guidance (ISG) scheduled to be issued by the NRC in August 2012. SECY-12-0025, Enclosure 7, at 4.

3. The Licensees must provide reasonable protection for the associated equipment from external events. Such protection must demonstrate that there is adequate capacity to address challenges to core cooling, containment, and spent fuel pool cooling capabilities at all units on the VCSNS site.

4. The Licensees must be capable of implementing the strategies in all modes.

5. Full compliance shall include procedures, guidance, training, and acquisition, staging, or installing of equipment needed for the strategies.

6. The Licensees shall promptly start implementation of the requirements stated in this condition and shall complete full implementation prior to initial fuel load.

   6.1 The Licensees shall, within twenty (20) days of issuance of this license, notify the Commission (1) if they are unable to comply with any of these requirements, (2) if compliance with any of the requirements is unnecessary in their specific circumstances, or (3) if implementation of any of the requirements would cause the Licensees to be in violation of the provisions of any Commission regulation or this license. The notification shall provide the Licensees' justification for seeking relief from or variation of any specific requirement.

   6.2 If the Licensees consider that implementation of any of these requirements would adversely impact safe and secure operation of the facility, the Licensees must notify the Commission, within twenty (20) days of issuance of the license, of the adverse safety impact, the basis for their determination that the requirement has an adverse safety impact, and either a proposal for achieving the same objectives specified in this license condition, or a schedule for modifying the facility to address the adverse safety condition. If neither approach is appropriate, then the Licensees must supplement their response to Section 6.1 of this license condition to identify the condition as a requirement with which they cannot comply, with attendant justifications as required in Section 6.1.

   6.3 The Licensees shall, within one (1) year after issuance of the NRC's final Interim Staff Guidance detailing an acceptable approach for complying with these requirements, submit to the Commission for review an overall integrated plan, including a description of how compliance with the requirements described in this license condition will be achieved.

6.4 The Licensees shall provide an initial status report sixty (60) days following issuance of the final Interim Staff Guidance and at six (6)-month intervals following submittal of the overall integrated plan, as required in Section 6.3 of this license condition, which delineates progress made in implementing the requirements of this license condition.

6.5 The Licensees shall report to the Commission when full compliance with the requirements described in this license condition is achieved.

6.6 Licensee responses to conditions 6.1, 6.2, 6.3, 6.4, and 6.5, above, shall be submitted in accordance with 10 C.F.R. § 52.3.

In SECY-12-0025, the Staff also proposed to issue orders to licensees requiring reliable indication of the water level in site spent fuel storage pools, capable of supporting identification, by trained personnel, of three pool water level conditions: (1) a water level adequate to support operation of the normal spent fuel pool cooling system, (2) a water level adequate to provide substantial radiation shielding for a person standing on the spent fuel pool operating deck, and (3) a water level where fuel remains covered and actions to implement makeup water addition should no longer be deferred.[99]

The AP1000 design basis, as incorporated by reference in the VCSNS 2 and 3 COL application, addresses many of these attributes of spent fuel pool level instrumentation. The Staff reviewed these design features in conjunction with its review for the certification of the AP1000 design. The spent fuel pool instruments in the AP1000 certified design measure the water level from the top of the spent fuel pool to the top of the fuel racks to address the range requirements listed above. The safety-related classification provides for several additional design features: (1) seismic and environmental qualification of the instruments; (2) independent power supplies; (3) electrical isolation and physical separation between instrument channels; (4) display in the control room as part of the post-accident monitoring instrumentation; and (5) routine calibration and testing.[100]

In view of the above, we approved issuance of an order to the Vogtle COL holder to address spent fuel pool instrumentation requirements not specified in the certified design as enhanced protective measures that represent a substantial

[99] *See* SECY-12-0025, Enclosure 6, Attachment 3, "Requirements for Reliable Spent Fuel Pool Level Instrumentation at COL Holder Reactor Sites."

[100] *Id.*

increase in the protection of public health and safety.[101] In contrast to the order regarding mitigation strategies, the provisions of this order are not being incorporated as a license condition for the COLs for VCSNS Units 2 and 3. The Commission did not issue the spent fuel pool instrumentation requirements as an action that was necessary to ensure adequate protection. We recognize that the timing of the VCSNS COL licensing review presented a unique circumstance relative to Vogtle in determining how to impose the two applicable Fukushima orders to VCSNS. Similar to the Vogtle COL review, these requirements were not embedded in the existing Staff licensing review before the Commission; however, future licensing reviews will take into account these requirements. Furthermore, we have the authority to take necessary regulatory action, either by directing issuance of an order modifying the license or by directing inclusion of a license condition in the license where appropriate, with respect to these lessons learned. The spent fuel pool instrumentation order represents a substantial increase in the protection of public health and safety, and therefore, we direct the Director of the Office of New Reactors to issue Order EA-12-051 to SCE&G, concurrent with the issuance of the COLs for VCSNS Units 2 and 3.

In addition, in SECY-12-0025, the Staff informed us of its intent to issue requests for information addressing seismic and flooding reevaluations (Task Force Recommendation 2.1), seismic and flooding hazard walkdowns (Task Force Recommendation 2.3), and a request for licensees to address their current communications system and equipment under conditions of onsite and offsite damage and prolonged station blackout, and to perform a staffing study to determine the number and qualifications of staff required to fill all necessary positions in response to a multiunit event (Task Force Recommendation 9.3).[102] On March 12, 2012, the Staff sent the request for information to the sole existing COL holder (for the Vogtle site), and stated that it is not requesting responses from COL holders under 10 C.F.R. Part 52 with respect to Recommendations 2.1 and 2.3 because the issues related to the seismic and flooding reevaluations and

[101] *See* Staff Requirements — SECY-12-0025, at 1. *See also id.,* Attachment 3, "Revisions to SECY-12-0025, Enclosure 6," at 4, 6-8 (unnumbered). We decided to "administratively exempt" this order from the provisions of the Backfit Rule (10 C.F.R. § 50.109), and the issue finality requirements of 10 C.F.R. § 52.63 and 10 C.F.R. Part 52, Appendix D, § VIII. This determination was based on insights gained to date from the agency's review of the accident, including its initiating cause and particular failure sequence, as well as extensive stakeholder engagement, and broad endorsement for timely action. *Id.* at 7 (unnumbered).

[102] *See generally* SECY-12-0025 at 8; Enclosure 7, "Draft 50.54(f) Letter — External Hazards Reevaluation, Walkdown and Emergency Staffing."

walkdowns are resolved.[103] Promptly after the VCSNS COLs are issued, the Staff shall pose the same request for information to the VCSNS licensees previously issued to the Vogtle COL holder.

Our review of the remaining recommended actions associated with lessons learned from the Fukushima events is ongoing. We approved and provided direction on certain near-term actions identified by the Near-Term Task Force to be initiated without delay and shortly thereafter approved the prioritization of all of the recommendations and supported the Staff's proposed actions on the top two tiers of recommendations.[104] SECY-12-0025, as discussed above, represents only the first of the Staff's substantive recommendations for action. We will act on the Staff's recommended actions to implement the remaining recommendations, including those that result from the Staff's review of the responses to our information requests. The Staff's review is proceeding expeditiously.

As we stated in CLI-11-5, we have in place well-established regulatory processes by which to impose any new requirements or other enhancements that may be needed.[105] The applicability of any new requirement will be determined when the justification is fully developed and we evaluate the Staff's bases. While these processes are well under way, it takes time to complete the steps necessary to ensure that any new requirements are technically justified and implemented appropriately. We are confident that the Commission's approach

---

[103] Regarding Recommendation 2.1, the Staff states that, as part of its COL review, the Vogtle licensee used an NRC-endorsed seismic source characterization model that had recently been updated, and that the use of a newer, recently endorsed model would not result in differences in the seismic hazard characterizations that would affect the plant design for this site. The Staff stated that it intends to confirm this position by developing seismic hazard curves for each of the sites, using the new source model. SECY-12-0025, at 11. Regarding the flooding reevaluation in Recommendation 2.1, the Staff stated that, because of the experience gained by both the NRC and the industry in preparing and reviewing numerous ESPs and COLs, present-day methodologies associated with evaluating flooding hazards at plant sites are well documented. Leeds, E.J., and Michael R. Johnson, NRC, Letter to All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident" (Mar. 12, 2012), Enclosure 2 (ADAMS Accession No. ML12053A340). Recommendation 2.3 is not applicable to a facility that has not yet been constructed. SECY-12-0025, at 11.

[104] *See* Staff Requirements — SECY-11-0124 — Recommended Actions to Be Taken Without Delay from the Near-Term Task Force Report (Oct. 18, 2011) (ADAMS Accession No. ML112911571). Among other things, we directed that the agency "should strive to complete and implement the lessons learned from the Fukushima accident within five years — by 2016." *Id.* at 1. *See also* Staff Requirements — SECY-11-0137 — Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned (Dec. 15, 2011) (ADAMS Accession No. ML113490055); "Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned," Commission Paper SECY-11-0137 (Oct. 3, 2011) (ADAMS Accession No. ML11272A111) (package).

[105] *See generally Callaway,* CLI-11-5, 74 NRC at 162-63.

— using rigorous, well-established processes rather than the Chairman's loosely defined proposed license condition — will assure timely implementation of new requirements based on Fukushima lessons learned. Indeed, this is the same approach we took in *Vogtle.* As we stated there, departing from our stable, predictable licensing process may unintentionally impact the Staff's disciplined work.[106] Moreover, all affected licensees ultimately will be required to comply with NRC direction resulting from lessons learned from the Fukushima accident, regardless of the timing of issuance of the affected licenses.[107] We therefore expect that the new VCSNS units will comply with all applicable "post-Fukushima" requirements in a timely fashion as they are developed, and we impose no additional Fukushima-related license conditions today.

2. Maximum Safety Wet-bulb (Noncoincident) Temperature Departure

a. Wet-Bulb Noncoincident Temperature and Need for the Departure

The Staff found that the VCSNS site falls within the AP1000 site parameters, with only one exception.[108] The VCSNS COL application included a request for a departure from the wet-bulb noncoincident temperature as described in the AP1000 DCD. Because the wet-bulb noncoincident temperature is considered "Tier 1 information," or, part of the AP1000 certified design, a regulatory exemption is required.[109] This is the only site-specific exemption request for the VCSNS COL application.[110]

Michelle Hayes, testifying for the Staff, explained this value:

> The wet bulb temperature is a derived temperature. It represents the lowest dry bulb temperature that can be obtained by evaporating water into the air at constant pressure. A higher wet bulb temperature means the air is wetter, and can therefore absorb less water vapor than a lower wet bulb temperature. The wet bulb temperature is derived from observations of dry bulb temperature, dew point temperature and atmospheric pressure. It is directly related to the relative humidity of the air.[111]

---

[106] *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-2, 75 NRC 63 (2012).

[107] As discussed above, we have the regulatory flexibility to choose the appropriate vehicle (including imposition of a specific order or license condition, or promulgation of a generally applicable rule) to implement new requirements arising from our review of the Fukushima accident. The mechanisms used have no bearing on the underlying result — the imposition of identical, binding requirements upon the affected licensees.

[108] Tr. at 100 (Sebrosky). *See also* Ex. NRC000004, FSER, at 2-7.

[109] *See* 10 C.F.R. Part 52, App. D, §§ IV.A.2.d, VIII.A.4.

[110] *Id.* This is not the only site-specific departure, however. *See, e.g.,* discussion *infra* regarding the relocation of the Technical Support Center.

[111] Tr. at 100-01 (Hayes).

Ms. Hayes also explained that a "coincident" wet-bulb temperature is a wet-bulb temperature that was recorded at the same time as the dry-bulb temperature, whereas a "noncoincident" temperature was not.[112] The Applicants noted that the maximum safety wet-bulb (noncoincident) air temperature is the highest such temperature at a site, excluding peaks of less than 2 hours' duration, that is allowable by the DCD.[113]

SCE&G calculated the wet-bulb temperature for the site, using individual daily maximum wet-bulb temperatures recorded over 30 years at Columbia South Carolina National Weather Service Station, and performing a linear regression analysis to derive a 100-year return value.[114] The DCD-specified site parameter of maximum safety wet-bulb, noncoincident air temperature, 86.1 degrees Fahrenheit, is slightly lower than the value SCE&G derived for the VCSNS site — 87.3 degrees Fahrenheit.[115]

Because the cooling towers use evaporation to cool process water, a higher wet-bulb temperature would reduce their cooling efficiency.[116] Evaluations therefore were performed to determine how the change could affect various systems, including the service water system.[117] The service water system supplies water to the component cooling water system, which in turn supports twelve systems.[118] SCE&G calculated that with the slight decrease in evaporative cooling resulting from the change, the maximum component cooling water temperature would increase by about 0.3 degrees Fahrenheit, remaining within the AP1000 DCD design parameter of less than 100 degrees Fahrenheit.[119] SCE&G evaluated all twelve of the systems cooled by the component cooling system, and determined that the existing design could accommodate the higher temperatures.[120]

Another potentially affected system is the nuclear island nonradioactive ventilation system. This is considered a nonsafety system, although it provides ventilation to two safety-related areas: the control room and the battery rooms.[121] SCE&G determined that the existing chillers could accommodate the higher heat load.[122]

---

[112] *Id.* (Hayes).

[113] Tr. at 89 (Monroe).

[114] *Id.* (Monroe).

[115] Tr. at 31-32 (Monroe).

[116] Ex. NRC000003, Staff Testimony, at 14-15.

[117] Tr. at 90 (Monroe). *See* Ex. NRC00001P, COL Application Part 7, at 859-61.

[118] *See generally* Ex. NRC000004, FSER § 9.2.2.

[119] Tr. at 106 (Hayes). *See generally* Ex. NRC000004, FSER § 9.2.2.

[120] Tr. at 106 (Hayes). *See* Ex. NRC00001P, COL Application, Part 7, at 859-60; Ex. NRC000004, FSER § 9.2.2.

[121] Tr. at 106 (Hayes).

[122] *Id.* (Hayes).

As a result of these analyses, SCE&G concluded that the departure would have no detrimental effect on safety- and nonsafety-related systems. Moreover, SCE&G performed an additional review to ensure that these conclusions would remain valid after incorporating Revision 19 of the AP1000 DCD into its application.[123]

b. The Staff's Review and Findings Related to Wet-Bulb Temperature Departure

The Staff first reviewed the Applicants' method for deriving the wet-bulb temperature, and also performed an independent analysis using 32 years of data from the Columbia weather station.[124] The Staff concluded that the Applicants' analysis was acceptable and conservative.[125]

The Staff then confirmed the Applicants' evaluations of the effects of the slightly higher temperature on a variety of systems.[126] Systems that could be affected by the change are systems that rely on evaporative cooling or systems used to maintain relative humidity.[127] "Systems of interest" included the passive containment cooling system, the service water system, and the nuclear island nonradioactive ventilation system.[128]

The passive containment cooling system is a safety-related system designed to use evaporative cooling and air and water convection to cool the inside of the containment following an accident.[129] The Staff performed an independent analysis, utilizing the CONTAIN thermo-hydraulic model, which was developed during the review of the AP1000 DCD.[130] The Staff undertook a specific effort to independently evaluate this system — rather than simply "confirming" results of the Applicants' analysis — because it is safety-related.

For nonsafety-related systems, the Staff reviewed the application and the

---

[123] Tr. at 91 (Monroe).

[124] Tr. at 103-04 (Hayes). *See generally* Ex. NRC000004, FSER § 2.3.1.

[125] *Id.*

[126] Tr. at 104 (Hayes).

[127] *Id.* (Hayes).

[128] *Id.* The Staff's evaluations of the effects that the higher temperature has on the operation of the AP1000 design are found in Ex. NRC000004, FSER §§ 2.3.1, 5.4 (reactor coolant systems), 6.2 (containment systems),6.4 (habitability systems), 9.1.3 (spent fuel pool cooling system), 9.2.2 (component cooling water system for reactor auxiliaries), and 9.2.7 (component cooling water system for reactor auxiliaries — HVAC system).

[129] Tr. at 104 (Hayes).

[130] Tr. at 104-05, 117-18, 123-24, 128 (Hayes). *See generally* Ex. NRC000004, FSER § 6.2.4.

Applicants' RAI responses, and also audited the Applicants' calculations to confirm their analyses.[131] The Staff found the calculations to be acceptable.[132]

The Staff evaluation found that the exemption associated with the wet-bulb temperature departure should be granted because it is authorized by law, will not present an undue risk to public health or safety, and is consistent with the common defense and security, and that special circumstances are present.[133] In addition, the Staff found that application of the regulation is not necessary to achieve the underlying purpose of the rule.[134] The Staff concluded that the exemption will not result in a decrease in the level of safety otherwise provided by the design.[135]

3. Site Characteristics: Demography, Geography, Hydrology, and Manmade Hazards[136]

Safety Panel One also addressed site characteristics of the VCSNS site that are covered in Chapter 2 of the FSER, including nearby populations and hazards associated with industrial, transportation, and military facilities.[137] Safety Panel Two discussed, among other things, flooding scenarios addressed in FSER § 2.4.[138]

a. General Site Characteristics

The VCSNS site is located in central South Carolina, in the Piedmont section of the state, approximately 140 miles east of the Atlantic Coast, and approximately 90 miles from the base of the Blue Ridge Mountains.[139] The site is in a sparsely populated rural area; the largest town located within a 10-mile radius of this site

---

[131] Tr. at 106 (Hayes). *See* Tr. at 128-29 (Segala) (discussion of margins of conservatism in service water and component cooling water systems, and with ventilation system chillers).

[132] Tr. at 106-07 (Hayes). *See generally* Ex. NRC000004, FSER § 9.2.7.

[133] Tr. at 102-03 (Hayes). *See* Ex. NRC000004, FSER § 2.0.4, at 2-6 to 2-7 (Staff finding on exemption). *See also* 10 C.F.R. § 50.12(a)(2)(ii) (standard for granting exemption); NRC000003, Staff Testimony, at 14-16.

[134] Tr. at 121-22 (Hayes, Sebrosky). The Commission will only grant an exemption from a regulation where "special circumstances" are shown. A demonstration that application of the regulation is not necessary to achieve its underlying purpose is listed as one such special circumstance. *See* 10 C.F.R. § 50.12(a)(2)(ii).

[135] *See* Tr. at 118-20 (Hayes, Sebrosky).

[136] *See* Ex. NRC000007, Staff Pre-Hearing Responses, at 5; Ex. SCE000001, SCE&G Pre-Hearing Responses, at 1-2; Tr. at 134-35, 141-52, 155-56, 158-77.

[137] Revised Scheduling Note at 3 (unnumbered).

[138] *Id.*

[139] Tr. at 91 (Summer).

is Chapin, with a population of 628.[140] The largest nearby population center is Columbia, South Carolina, approximately 14 miles southeast of VCSNS.[141]

The site is south of the Monticello Reservoir, and it is bounded on the west by the Parr Reservoir and the Broad River.[142] There is no commercial navigation on these water bodies.[143] The site is situated on a ridge top at an elevation of 400 feet, approximately 135 feet above the Parr Reservoir. Accordingly, SCE&G found that flooding from the adjacent water bodies is not a concern at the site.[144]

The application analyzed military facilities, industrial facilities, and transportation facilities and found that they presented no potential hazard to the site. For example, several small airports are located within a 25-mile radius of the plant site, but due to their low activity level and distance from the site, they were found to present an insignificant risk.[145] In addition, of the few major industrial facilities located within a 5-mile radius, all are located approximately 1 mile or more from the VCSNS site.[146] The Applicants found overall that accidents from marine, military, aeronautical, and industrial hazards are probabilistically insignificant.[147]

b. Staff Analysis of Demography, Geography, Hydrology, and Manmade Hazards

The purpose of the geography and demography review in FSER § 2.1 is to determine whether the COL applicant has proposed an acceptable site, including acceptable site boundaries, with appropriate consideration of nearby populations and natural and manmade features. The Staff described the steps in its review, as follows:

(1) The Staff verified that no publicly used transportation modes or public roads cross the proposed exclusion area boundary, confirming that it would not be necessary to arrange for traffic control in the event of an emergency.[148]

(2) The Staff reviewed the Applicants' demography and population estimates and

---

[140] *Id.* (citing 2000 Census data).

[141] *See* Ex. NRC000009, Safety Panel One, Staff Slide 21.

[142] Tr. at 91 (Summer); Ex. SCE000014, Safety Panel Two, SCE&G Slide 3.

[143] Tr. at 93 (Summer).

[144] Tr. at 133 (Summer). *See* Ex. SCE000014, Safety Panel Two, SCE&G Slide 4 (map of site topography).

[145] Tr. at 93 (Summer), 110 (Sebrosky). *See also* Ex. NRC000004, FSER § 2.2.1.4, at 2-25 to 2-26).

[146] Tr. at 92 (Summer).

[147] *See* Ex. SCE000013, Safety Panel One, SCE&G Slide 14 (overview of nearby industrial, transportation, and military facilities). "Probabilistically insignificant" is interpreted to mean a probability of 1×10^{-7}, or 1 in 10 million. *See* Tr. at 136 (Monroe).

[148] Tr. at 108-09 (Sebrosky).

> performed independent calculations using census data to estimate the future population in the area up to the year 2060. The Staff determined that the Applicants' specified low population zone is acceptable because appropriate protective measures could be taken in the event of an accident.[149]

The Staff also confirmed that various offsite and anthropogenic hazards presented little danger to operations at the site. As one example, the Staff performed independent probability calculations to verify SCE&G's analysis of aircraft hazards. SCE&G acknowledged that one of the acceptance criteria provided in the Standard Review Plan used to assess nearby hazards — that the plant is at least 2 miles beyond the nearest edge of a federal airway — was not met.[150] Therefore, SCE&G used an alternative methodology to demonstrate that the risk of an aircraft accident at the site was acceptably low. The Staff independently calculated the probability using the most conservative total flight data within 5 miles of the plant, obtained from the Federal Aviation Administration for the airway in question, and verified that the total aircraft accident probability is on the order of 1 in 10 million.[151]

The Staff independently evaluated SCE&G's analyses concerning hazards from explosions at nearby industrial sites and transportation routes, and determined that any such explosion hazards are at safe distances from the VCSNS site.[152] Similarly, the Staff performed independent evaluations of toxic gas and hazards from chemicals that are transported on the rail line running beside the Broad River, that are stored at VCSNS Unit 1, and that are expected to be stored at Units 2 and 3. The Staff determined that these chemical hazards would not adversely affect control room habitability of the two new units.[153]

The Staff looked at hydrology to confirm that flooding presents no danger to operations at the site and that operations at the site present no danger to surface and groundwater. The Staff performed confirmatory analyses on SCE&G's flood scenarios, such as the local site flooding caused by local intense precipitation, flooding on the Broad River and nearby reservoirs, and the hypothetical breaching of upstream dams.[154] Based on its review of various flooding scenarios, including local intense precipitation and dam breach scenarios, the Staff found that the

---

[149] *Id.* at 109 (Sebrosky). *See* 10 C.F.R. § 100.21. *See also* Ex. NRC000004, FSER § 2.1.

[150] Tr. at 110 (Sebrosky). NUREG-0800 § 3.5.1.6 provides three acceptance criteria for the probability of aircraft accidents to be less than 10^{-7} per year. If all three criteria are met, then no further analysis is performed.

[151] Tr. at 110 (Sebrosky). *See* Ex. NRC000004, FSER § 2.2.1.4, at 2-25 to 2-26.

[152] Tr. at 111 (Sebrosky). *See generally* Ex. NRC000004, FSER § 2.2.

[153] *Id.*

[154] Tr. at 137-38 (See).

VCSNS is a dry site and needs no flood protections.[155] The Staff also analyzed the potential impact of a postulated accidental effluent release on nearby water users.[156] The Staff confirmed SCE&G's calculations, using more conservative assumptions about groundwater flow velocity, contaminant decay, adsorption, and dilution. These conservatisms resulted in larger concentrations of contaminants at receptor locations.[157] The Staff concluded that, even with the additional conservatisms, concentrations at potential receptor locations resulting from these bounding accidental effluent release scenarios remained within applicable regulatory limits.[158]

4. Site Characteristics: Geology, Seismology, Geotechnical Engineering

Safety Panel Two discussed geology of the VCSNS site, including ground motion response spectra (GMRS) and the seismic margin analysis.[159]

a. Site Geology of VCSNS Site

The VCSNS site is underlain by hard bedrock.[160] Robert Whorton, testifying for the Applicants, explained that the AP1000 certified seismic design response spectrum (CSDRS) is based on NRC Regulatory Guide 1.60 recommendations and assumes a peak ground acceleration of 0.30*g* at high frequency.[161] The VCSNS GMRS, also known as the site-specific safe shutdown earthquake, was developed through the probabilistic seismic hazards analysis process, with a peak ground acceleration of 0.23*g* at 100 hertz (Hz).[162] Mr. Whorton testified that the VCSNS GMRS exceeds the CSDRS at frequencies of approximately 17 to 80 Hz in a horizontal direction.[163] Westinghouse, however, developed an AP1000 hard-rock high-frequency response spectra (HRHF), to bound the first three hard-rock-site COL applications and to address high-frequency exceedences above the certified

---

[155] Tr. at 138 (See).

[156] *Id.* (See).

[157] Tr. at 139-40 (See).

[158] *Id. See* 10 C.F.R. Part 20, App. D.

[159] Revised Scheduling Note at 3 (unnumbered).

[160] Tr. at 133-34 (Whorton).

[161] Tr. at 134 (Whorton). *See* Regulatory Guide 1.60, "Design Response Spectra for Seismic Design of Nuclear Power Plants" (Rev. 1) (1973) (ADAMS Accession No. ML003740207).

[162] Tr. at 168-69 (Whorton).

[163] Tr. at 134 (Whorton). *See* Ex. SCE000014, Safety Panel Two, SCE&G Slide 7.

design.[164] These high-frequency exceedences were evaluated and found to be acceptable to the Staff.[165]

b. Staff Review of Geology and Seismology

The Staff reviewed the application to ensure that there were no capable tectonic features at the site or surrounding area that could present a hazard at the site.[166] As explained by Staff witness Mr. Stirewalt, "capable tectonic features" are defined as tectonic features of Quaternary age, that is, 2.6 million years of age to the present.[167]

The Staff visited the VCSNS site during the excavation performed for Unit 2 in August 2010 and April 2011 to directly examine the geologic features being mapped.[168] The Staff confirmed that no capable tectonic features were found. The Staff proposes a license condition for Unit 3 geologic mapping, which has yet to be performed.[169]

The Staff confirmed that the only capable tectonic features in the site region are associated with seismically induced paleoliquefaction along the South Carolina coast. These features were generated by seismic shaking of saturated sediments during the 1886 and the pre-1886 earthquakes, which occurred in the Charleston area.[170] Based on its detailed technical review of the application, independent review of references cited by the Applicants, and knowledge of regional and site-specific geology for the VCSNS site, the Staff concluded that there were no capable tectonic features requiring further investigation other than in the Charleston area.[171]

Geophysicist Sara Tabatabai discussed the Staff's review of FSAR § 2.5.2, which addresses vibratory ground motion.[172] The Staff focused on ensuring that SCE&G adequately had updated the seismic source model for its probabilistic seismic hazard analysis. According to Ms. Tabatabai, the most significant seismic

---

[164] Tr. at 134 (Whorton).

[165] Tr. at 134-35 (Whorton).

[166] Tr. at 140 (Stirewalt).

[167] Tr. at 140-41 (Stirewalt). It is assumed that tectonic features older than Quaternary are unlikely to become active. *Id.* at 155-56 (Stirewalt).

[168] Tr. at 143-44 (Stirewalt).

[169] *Id.* According to the witness, geologic mapping for Unit 3 has not been performed because excavation at the site is not yet at foundation grade level, which is 20 to 40 meters below the surface. Tr. at 157 (Stirewalt). *See generally* Ex. NRC000004, FSER § 2.5.1.

[170] Tr. at 141 (Stirewalt). *See* Ex. NRC000010, Safety Panel Two, Staff Slide 4 (map of geologic and seismic features in VCSNS region).

[171] Tr. at 141 (Stirewalt).

[172] Tr. at 146-50. *See* Ex. NRC00001I, COL Application Part 2, FSAR § 2.5.2-i (Rev. 5), subsection 2.5.2 — vibratory ground motion.

source is the Charleston seismic source. SCE&G updated the 1986 seismic source model, prepared by the Electric Power Research Institute, with an entirely new model, which was based on paleoseismic data.[173]

With respect to the GMRS, the Staff reviewed the methodology by which Westinghouse derived the HRHF and found it consistent with Staff guidance.[174] It also performed confirmatory analysis to ensure that SCE&G had implemented properly the seismic modeling parameters.[175] After reviewing, auditing, and verifying the Applicants' seismic design analysis, the Staff concluded that the AP1000 standard design is acceptable for the VCSNS site.

5. Probabilistic Risk Assessment

a. Probabilistic Risk Assessment at VCSNS

Safety Panel Two discussed at length various hazards that contribute to overall risk.[176] Probabilistic risk assessment (PRA) is addressed in Chapter 19 of the FSER and includes internally initiated events and external events including seismic events.

The VCSNS COL application incorporated by reference the AP1000 DCD PRA for internally initiated events.[177] External events, such as the hazards addressed in Chapters 2 and 3 of the FSAR (which correspond to Chapters 2 and 3 of the FSER), including high winds, flooding, fire, transportation accidents, and accidents at nearby facilities, also are addressed probabilistically to determine their contributions to total plant risk.[178] According to the Applicants' analyses, risk from high winds, floods, and other external events were calculated to be probabilistically insignificant, thus requiring no further analysis.[179]

b. Staff PRA Review

Testifying for the Staff, Malcolm Patterson explained that even though the external events evaluated in Chapters 2 and 3 of the FSER may have a very low probability of occurrence, they still may represent a "significant percentage" of

---

[173] Tr. at 147-48 (Tabatabai). *See* Ex. NRC000010, Safety Panel Two, Staff Slide 10.

[174] Tr. at 149 (Tabatabai).

[175] Tr. at 149-50 (Tabatabai).

[176] Revised Scheduling Note at 3 (unnumbered).

[177] *See* Ex. NRC000004, FSER, at 19-1 to 19-3 (listing AP1000 DCD sections relating to PRA that were incorporated by reference in the COL application).

[178] Tr. at 152 (Patterson).

[179] *See* Tr. at 136 (Monroe) (citing Ex. NRC00001J, FSAR Table 19.58-201, at 500).

the estimated "core damage frequency" because the risk from internally initiated events is considered to be even lower.[180]

Mr. Patterson also explained that the Staff requires a seismic margin analysis to identify the equipment needed to shut down the plant after a seismic event. Our regulations demand a safety margin — "a cushion beyond the design basis" — to account for "uncertainty about how much shaking a particular [earth]quake is going to cause on a given site," Mr. Patterson explained.[181] According to the witness, the AP1000 DCD established a "review level earthquake" with a peak ground acceleration of 0.5*g*, to be used in the seismic margin analysis, to demonstrate a margin of safety over the safe shutdown earthquake of 0.3*g*.[182] Because the VCSNS site falls within the AP1000 hard-rock high-frequency spectrum established by Westinghouse, the Staff found the DCD seismic margin analysis to be conservative and acceptable.[183]

6. Use of HABIT Code

Also discussed by Safety Panel Three was the Staff's use of the HABIT code to model the dispersion of hazardous gases in the case of a release from an offsite rail, truck, or pipeline accident or from chemicals stored at Unit 1.[184] General Design Criterion 19 requires an applicant to ensure that its control room remains habitable in case of accidental release of hazardous gases.[185] Potential toxic hazards are reviewed in FSER § 2.2.3.

SCE&G first looked at the types of chemicals stored at or transported to nearby facilities, and then used the Areal Locations of Hazardous Atmospheres (ALOHA) air dispersion model to predict the dispersion of gases released in a hypothetical accidents.[186] ALOHA determines the maximum distance a vapor cloud could travel before it disperses enough to fall below the concentrations "immediately dangerous to life and health."[187]

The Staff used the HABIT code to confirm SCE&G's calculations.[188] The HABIT code is an NRC-developed meteorological model and code used to determine control room habitability in case of an accident involving hazardous

---

[180] Tr. at 150 (Patterson).

[181] Tr. at 150-51 (Patterson).

[182] Tr. at 151 (Patterson). *See generally* Ex. NRC000004, FSER § 19.55.4.

[183] Tr. at 151 (Patterson). *See generally* Ex. NRC000004, FSER § 19.55.4.

[184] Tr. at 198-200 (Habib). *See* "General Design Criteria for Nuclear Power Plants," 10 C.F.R. Part 50, App. A (Criterion 19 — Control Room).

[185] Tr. at 199 (Habib).

[186] Tr. at 187 (Monroe). *See also* Ex. NRC00001C, FSAR § 2.2.3.1.

[187] Tr. at 187 (Monroe).

[188] Tr. at 199 (Habib).

gases. In reviewing the advanced safety evaluation report, the ACRS raised a concern with the Staff's use of the HABIT code.[189] The ACRS observed that HABIT is valid for gases of neutral weight but not for heavy gases.[190] In response, the Staff agreed that the HABIT code does not include an explicit heavy gas dispersion model and that HABIT can and should be improved.[191]

Mr. Habib, speaking for the Staff, explained that the Staff and ACRS took the HABIT code's limitations into consideration when making the safety finding.[192] He stated that, as long as these limitations are recognized and understood, the model can continue to be used appropriately for evaluation of toxic gas threats to the control room.[193] In its statement in support of the uncontested hearing, the Staff affirmed its position that HABIT can be used appropriately to perform independent confirmatory analyses.[194]

In response to our questioning at the hearing, John McKirgan, speaking for the Staff, stated that SCE&G's analyses using the ALOHA code are the "[analyses] of record" and the analyses on which both the Staff and ACRS based their safety findings.[195] Mr. McKirgan explained that the Staff uses the HABIT code to look at concentrations at the intake to the control room, so that "if the concentrations at the intake to the control room are below the levels of concern no further analysis is needed."[196] He reasserted that the HABIT code was used only to confirm the Applicants' analyses.[197]

7. Emergency Planning

The COL application provided an emergency plan for the site, in accordance with 10 C.F.R. § 52.79(a)(21).[198] SCE&G proposes to use a consolidated emer-

---

[189] *Id. See also* ACRS Report at 3.

[190] *See id.*

[191] Tr. at 200 (Habib). According to Mr. Habib, NRO has requested assistance from the Office of Nuclear Regulatory Research in improving the HABIT code. *Id. See also* Ex. NRC000003, Staff Testimony, at 8 (Staff is taking steps to improve the HABIT code in response to ACRS recommendation).

[192] Tr. at 200 (Habib).

[193] *Id.* (Habib).

[194] *See* Ex. NRC000003, Staff Testimony, at 8.

[195] Tr. at 224 (McKirgan). *See also* "ALOHA Analysis for On-Site Chemicals Stored at Unit 1" (Oct. 28, 2009) (ADAMS Accession No. ML103140719), "ALOHA Railroad Calculation" (Dec. 29, 2009) (ADAMS Accession No. ML103140720).

[196] Tr. at 226 (McKirgan).

[197] Tr. at 224 (McKirgan).

[198] *See also* "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (Rev. 1), NUREG-0654/FEMA-REP-1 (Nov. 1980) (ADAMS Accession No. ML040420012).

gency plan for the three units at VCSNS, with unit-specific "annexes" for each of the two new reactors and for the existing Unit 1.[199]

Onsite emergency plans are developed by the applicant and reviewed by the NRC. Offsite plans are developed by state and local emergency response authorities, and reviewed by FEMA. The NRC Staff considered FEMA's findings in making its necessary finding of reasonable assurance that adequate protective measures can, and will, be taken in the event of a radiological emergency:[200]

> FEMA has reviewed the emergency plans for the State of South Carolina and the local government plans for Lexington, Newberry, Richland, and Fairfield counties . . . . FEMA has determined that the plans are adequate, and there is reasonable assurance that the plans can be implemented with no corrections needed. The NRC staff has reviewed the FEMA report and based its overall reasonable assurance finding on the FEMA findings and determinations regarding offsite emergency planning.[201]

According to Staff witnesses, the NRC and FEMA periodically evaluate emergency preparedness.[202] The licensee holds drills and exercises throughout the year.[203] Every 2 years, the licensee stages full-participation exercises, which are evaluated by both FEMA and NRC.[204]

At the hearing, the Staff and SCE&G discussed emergency planning issues of particular concern, including the use of a single, centrally located technical support center (TSC) for all three units, the size of the emergency planning zone, and the emergency action levels to be developed for the emergency plan.

a. Relocation of the Technical Support Center[205]

The VCSNS COL application proposes to use a single TSC for existing Unit 1 and proposed Units 2 and 3, to be colocated in the basement of the new nuclear operations building, between the protected areas of the three units.[206] Relocation

---

[199] Tr. at 184 (Williamson).

[200] *See* Tr. at 192 (Barss). *See generally* Ex. NRC000004, FSER § 13.3.1; 10 C.F.R. § 50.47(a)(2).

[201] Ex. NRC000004, FSER § 13.3.4, at 13-17.

[202] Tr. at 225 (Barss).

[203] *Id.* (Barss).

[204] *Id.* (Barss). *See also* 10 C.F.R. Part 50, App. E, § IV.F.2.

[205] *See* Ex. NRC000003, Staff Testimony, at 13; Ex. NRC000007, Staff Pre-Hearing Responses, at 8, 14; Tr. at 185-86, 227-28, 233 (Williamson), 228-31 (Barss).

[206] Tr. at 185-86 (Williamson). Relocation of Unit 1's TSC requires a separate NRC approval under 10 C.F.R. § 50.54(q). Ex. NRC000017, Staff Post-Hearing Responses, at 20. SCE&G submitted a proposed revision of the Unit 1 emergency plan in February 2012. *See* Gatlin, Thomas D., SCE&G,

(Continued)

of the technical support centers to a central facility allows for the relocation of each of the new units' operational support centers to the TSC locations designated in the AP1000 DCD, adjacent to the control room.[207] Each unit will continue to have its own operational support center.[208] This rearrangement is a departure from the AP1000 DCD.[209]

The relocation of the TSCs also differs from current NRC guidance, implemented in 1981 after the Three Mile Island accident, which directs that the TSC be proximate to the control room to facilitate communications in case of emergencies.[210] Daniel Barss, testifying for the Staff, stated that transit time between the TSC and the affected control rooms will be "approximately 10 to 15 minutes [including] processing time through the exclusionary and protected area security control points."[211]

According to the Staff, however, improvements in communications since the 1970s will make it unnecessary for the TSC personnel to be physically present in or near the control room:

> The TSC will have dedicated diverse communication capabilities between the affected control rooms, technical support center, the OSC, and the emergency operations facility or EOF. Use of the current technologies, such as updated computer equipment, telecommunication — teleconferencing, real time system monitoring of plant data, telephone and radio systems for primary and backup emergency communications — will bridge this physical separation.[212]

The Staff witness stated that relocation of the TSCs will have advantages in terms

---

to USNRC Document Control Desk (Feb. 16, 2012) (ADAMS Accession No. ML12054A105) (transmitting licensee's 10 C.F.R. § 50.54(q) evaluation of the proposed changes and proposed changes to emergency plan). SCE&G expects to implement the multiunit emergency plan 18 months prior to fuel load of the new units. Ex. SCE000027, SCE&G Post-Hearing Responses, at 9.

[207] Tr. at 186 (Williamson).

[208] SCE&G explains the relationship between the two support centers as follows:

> The TSC is the lead facility for onsite emergency response and is the evaluation and decision-making facility for the onsite mitigation strategies. The Operational Support Centers (OSCs), one for each Unit, are the investigative and implementation facilities for onsite actions and assessments being taken during the emergency. Each OSC has a facility manager, the OSC Manager, who reports to the TSC Emergency Director per the Emergency Plan. Although these managers report to the TSC, the operation of each OSC is independent of the other OSCs.

Ex. SCE000027, SCE&G Post-Hearing Responses, at 11.

[209] Tr. at 184 (Williamson). *See also* Ex. NRC000003, Staff Testimony, at 13.

[210] *See* "Functional Criteria for Emergency Response Facilities — Final Report," NUREG-0696 (Feb. 1981), at 9 (see http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0696) (walking time between TSC and control room should not exceed 2 minutes).

[211] Tr. at 194 (Barss).

[212] *Id.* (Barss).

of efficiency, elimination of confusion, and avoidance of staffing multiple TSCs where an incident affects more than one unit.[213]

The Staff also looked at other factors to assess the appropriateness of the change. Relocation to a single TSC does not change any of the design parameters for external events that the TSCs would otherwise have to withstand.[214] In addition, the emergency planning Staff worked with the Staff reviewing human factors engineering to resolve a concern that, during an emergency, it could be unclear to the TSC staff which of the three units is giving information.[215] To address this issue, SCE&G will be required to design the displays within the TSC to ensure that it is clear from which unit relevant information derives.[216] The Staff therefore found that the changed locations would meet regulatory requirements and were acceptable.

b. Emergency Planning Zone[217]

In accordance with applicable regulations, the existing emergency planning zone (EPZ) is approximately a 10-mile radius around Unit 1, as adjusted to reflect the road network and land use.[218] Therefore, the boundary for the EPZ may be a bit greater than 10 miles on one side of this circle, a little less than 10 miles on another.[219]

The EPZ was developed in coordination with SCE&G, FEMA, and state and

---

[213] Tr. at 194-95, 228-31 (Barss).

[214] Tr. at 233 (Williamson). *See also* Ex. NRC000017, Staff Post-Hearing Responses, at 20.

[215] Tr. at 221-22 (Sebrosky, Barss). This concern was first raised by the ACRS with respect to the Vogtle application, which also proposes a single TSC for both the two new units and the two existing reactors. *See* Armijo, J.S., Vice-Chairman, ACRS, to Gregory B. Jaczko, Chairman, NRC (Jan. 24, 2011), at 4 (ADAMS Accession No. ML110170006).

[216] Tr. at 221 (Sebrosky). The issue is addressed in the following ITAAC (Inspections, Tests, Analyses, and Acceptance Criteria):

> ITAAC 1.1: An inspection of the Control Rooms, Technical Support Center (TSC), and Emergency Operations Facility (EOF) will be performed to verify that they have displays for retrieving facility system and effluent parameters that are specified in the Emergency Classification and EAL scheme and the displays are functional.

Ex. NRC00004, FSER § 18.2.5.

[217] *See* Ex. NRC000004, FSER § 13.3; Ex. SCE000027, SCE&G's Pre-Hearing Responses, at 5 & Attachment 1 (map of EPZ); Ex. NRC000017, Staff's Post-Hearing Responses, at 17-18.

[218] *See* Tr. 192-93 (Barss). *See* 10 C.F.R. §§ 50.33(g), 50.47(b) and 10 C.F.R. Part 50, App. E, "Emergency Planning and Preparedness for Production and Utilization Facilities. *See also* Ex. NRC000003, Staff Testimony, at 13-14.

[219] *See* Ex. NRC000003, Staff Testimony, at 14.

local officials.[220] In consultation between SCE&G, South Carolina emergency officials, and the affected county governments, it was decided that the existing EPZ would be used for all three VCSNS units.[221]

Because the new units are to be located approximately 1 mile southwest of the existing Unit 1, the new units are 1 mile closer to the southwest boundary.[222] FEMA therefore investigated whether the original EPZ would be appropriate for use with the new units. FEMA's investigation showed that the additional area that would be included in a 10-mile radius around the new units was a sparsely populated area primarily used for logging.[223] Based on this information, FEMA agreed that use of the original EPZ for all three VCSNS units was acceptable.[224]

In addition to reviewing the application and FEMA's findings, the NRC Staff conducted two site visits to the proposed location for the new units, including various areas within the 10-mile EPZ.[225] The Staff concluded, based on these reviews, that the EPZ for the new units is acceptable and satisfies the applicable regulatory requirements.[226]

c. Emergency Action Levels[227]

Emergency action levels (EALs) — predetermined, site-specific, observable thresholds that determine the emergency classification level in a given event — are not yet available for accidents involving the proposed new units.[228] To address this, SCE&G proposed a license condition, which would require it to submit a set of fully developed EALs to the NRC at least 180 days prior to fuel load:[229]

---

[220] Once the EPZ is approved, the licensee is not required to update the EPZ boundaries to reflect changes in land use. Any such change would be made on the recommendation of state and local officials, and would not need prior NRC approval as long as the change does not reduce the effectiveness of the emergency plan. *See* Ex. NRC000007, Staff Pre-Hearing Responses, at 14-15.

[221] Tr. at 185 (Williamson). *See also id.* at 195-96 (Barss) (observing that South Carolina and all four affected counties provided letters certifying their approval of the emergency plan, their commitment to participating in exercises, their commitment to executing their responsibilities under the plan, and their assurance that the plans are practicable).

[222] *See* Ex. NRC000003, Staff Testimony, at 14.

[223] *Id.*

[224] *Id.*

[225] Tr. at 197-98 (Barss).

[226] *Id.* (Barss). *See* Ex. NRC000004, FSER § 13.3B, at 13-29.

[227] *See* Ex. NRC000017, Staff Post-Hearing Responses, at 13-14; Tr. at 184, 210-15 (Williamson, Barss).

[228] An EAL can be an instrument reading, an equipment status indicator, a measurable parameter, or an observable event (e.g., flooding, fire).

[229] Tr. at 184 (Williamson).

> The licensee shall submit a fully developed set of plant-specific Emergency Action Levels (EALs) for VCSNS Units 2 and 3 to the NRC in accordance with NEI 07-01, Revision 0. These fully developed EALs shall be submitted to the NRC for confirmation at least 180 days prior to initial fuel load. The submitted EALs will be written with no deviations.[230]

The Staff accepted this proposed license condition with the addition of a provision that the EALs will have been reviewed and approved by State and local officials prior to submission to NRC.[231]

Testifying for SCE&G, Robert Williamson explained that Westinghouse has not completed the design of the radiation monitors that will be used at the VCSNS site (these monitors are not part of the certified design for the AP1000).[232] SCE&G therefore cannot complete the offsite dose calculations now.[233] Once those design details are known, SCE&G will develop the EALs in accordance with NEI-07-01.[234] The EALs then will be reviewed with, and agreed upon by, state and local officials prior to submission to the NRC.[235]

The NRC Staff found that SCE&G's commitment, in the license condition, to develop the EALs in accordance with the NEI guidance was sufficiently specific to satisfy the regulation.[236] In response to our post-hearing question, the Staff stated that SCE&G did not require an exemption from our regulations in Part 50, Appendix E, because there is sufficient information in the application *at this point* "to permit the Staff to make a finding of reasonable assurance that [SCE&G] will meet the applicable requirements when the COL is issued" because it "provided an overview of the EAL scheme, including defining its four emergency classification levels."[237]

8. Squib Valves

During the mandatory hearing for the COL application associated with Vogtle Units 3 and 4, held 2 weeks before the VCSNS hearing, we discussed at length

---

[230] Ex. NRC000004, FSER § 13.3, at 13-15.

[231] *See id.* at 13-18.

[232] Tr. at 210-11 (Williamson).

[233] *Id.* (Williamson).

[234] Tr. at 211 (Barss). *See* Nuclear Energy Institute, NEI-07-01, Methodology for Development of Emergency Action Levels Advanced Passive Light Water Reactors, Rev. 0 (Sept. 2007) (ADAMS Accession No. ML072710311). The NEI approach has been approved by the NRC Staff. *See* Miller, Christopher G., U.S. Nuclear Regulatory Commission, Letter to Alan Nelson, Nuclear Energy Institute (Aug. 12, 2009) (ADAMS Accession No. ML092190035).

[235] Tr. at 184 (Williamson).

[236] Tr. at 213-15 (Barss).

[237] Ex. NRC000017, Staff Post-Hearing Responses, at 13-14.

issues associated with the inservice testing and inspection program for squib valves.[238] Squib valves are explosively actuated valves used in the AP1000 automatic depressurization system to reduce reactor pressure in the event of a loss of coolant accident, and as part of the passive core cooling system in the event of a severe accident. The design and qualification of the squib valves is described in the AP1000 DCD and incorporated by reference into the COL application.[239] ITAAC specified in Tier 1 of the AP1000 DCD require squib valves to be tested to demonstrate operational capability under design conditions.

The ACRS questioned the adequacy of inservice testing and inspection program for squib valves during its review of the Vogtle COL application, because that testing program was contingent on an American Society of Mechanical Engineers code provision that is still under development.[240] Because the VCSNS COL application also references the AP1000 design, it presents a similar concern. Although we did not hear a presentation on this issue during the VCSNS hearing, we asked the Staff a post-hearing question on this topic.[241]

Although we find that the Staff's review of the squib valve issues was rigorous, we have a concern similar to that initially raised by the ACRS regarding the status of the inservice inspection/inservice testing program for this component. As such, we find that including a license condition directing the implementation of a surveillance program, with the requirements described below, prior to fuel load, is appropriate.[242]

We therefore impose the following condition on the licenses for VCSNS Units 2 and 3:

> Before initial fuel load, the licensees shall implement a surveillance program for explosively actuated valves (squib valves) that includes the following provisions in addition to the requirements specified in the edition of the ASME *Code for Operation and Maintenance of Nuclear Power Plants* (OM Code) as incorporated by reference in 10 C.F.R. § 50.55a.
>
> a. Preservice Testing
>
> All explosively actuated valves shall be preservice tested by verifying the operational readiness of the actuation logic and associated electrical circuits

---

[238] *See Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), Tr. at 144-47, 160-64, 166-67, 168-70, 174-78, 179-80.

[239] *See generally* NRC00001J, FSAR § 3.9.

[240] *See* Advisory Committee on Reactor Safeguards, 579th Meeting, Tr. at 44-52 (Jan. 13, 2011) (ADAMS Accession No. ML110310213).

[241] *See* NRC000017, Staff Post-Hearing Responses, at 15-16.

[242] Our action in formulating and imposing a license condition in an adjudicatory order has precedent. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-13, 52 NRC 23, 29-31 (2000).

for each explosively actuated valve with its pyrotechnic charge removed from the valve. This must include confirmation that sufficient electrical parameters (voltage, current, resistance) are available at the explosively actuated valve from each circuit that is relied upon to actuate the valve. In addition, a sample of at least 20% of the pyrotechnic charges in all explosively actuated valves shall be tested in the valve or a qualified test fixture to confirm the capability of each sampled pyrotechnic charge to provide the necessary motive force to operate the valve to perform its intended function without damage to the valve body or connected piping. The sampling must select at least one explosively actuated valve from each redundant safety train. Corrective action shall be taken to resolve any deficiencies identified in the operational readiness of the actuation logic or associated electrical circuits, or the capability of a pyrotechnic charge. If a charge fails to fire or its capability is not confirmed, all charges with the same batch number shall be removed, discarded, and replaced with charges from a different batch number that has demonstrated successful 20% sampling of the charges.

b. Operational Surveillance

Explosively actuated valves shall be subject to the following surveillance activities after commencing plant operation:

(1) At least once every 2 years, each explosively actuated valve shall undergo visual external examination and remote internal examination (including evaluation and removal of fluids or contaminants that may interfere with operation of the valve) to verify the operational readiness of the valve and its actuator. This examination shall also verify the appropriate position of the internal actuating mechanism and proper operation of remote position indicators. Corrective action shall be taken to resolve any deficiencies identified during the examination with post-maintenance testing conducted that satisfies the preservice testing requirements.

(2) At least once every 10 years, each explosively actuated valve shall be disassembled for internal examination of the valve and actuator to verify the operational readiness of the valve assembly and the integrity of individual components and to remove any foreign material, fluid, or corrosion. The examination schedule shall provide for both of the two valve designs used for explosively actuated valves at the facility to be included among the explosively actuated valves to be disassembled and examined every 2 years. Corrective action shall be taken to resolve any deficiencies identified during the examination with post-maintenance testing conducted that satisfies the preservice testing requirements.

(3) For explosively actuated valves selected for test sampling every 2 years in accordance with the ASME OM Code, the operational readiness of the actuation logic and associated electrical circuits shall be verified for each sampled explosively actuated valve following removal of its charge. This must include confirmation that sufficient electrical parameters (voltage, current, resistance) are available for each valve actuation circuit. Corrective action shall be taken to resolve any deficiencies identified in the actuation logic or associated electrical circuits.

(4) For explosively actuated valves selected for test sampling every 2 years in accordance with the ASME OM Code, the sampling must select at least one explosively actuated valve from each redundant safety train. Each sampled pyrotechnic charge shall be tested in the valve or a qualified test fixture to confirm the capability of the charge to provide the necessary motive force to operate the valve to perform its intended function without damage to the valve body or connected piping. Corrective action shall be taken to resolve any deficiencies identified in the capability of a pyrotechnic charge in accordance with the preservice testing requirements.

This license condition shall expire upon (1) incorporation of the above surveillance provisions for explosively actuated valves into the facility's inservice testing program, or (2) incorporation of inservice testing requirements for explosively actuated valves in new reactors (i.e., plants receiving a construction permit, or combined license for construction and operation, after January 1, 2000) to be specified in a future edition of the ASME OM Code as incorporated by reference in 10 C.F.R. § 50.55a, including any conditions imposed by the NRC, into the facility's inservice testing program.

This license condition supplements the current requirements in the ASME OM code for explosively actuated valves, and sets forth requirements for both preservice testing and operational surveillance, as well as any necessary corrective action. The license condition will expire when either (1) the license condition is incorporated into the VCSNS IST program; or (2) the updated ASME OM Code requirements for squib valves in new reactors, as accepted by the NRC in 10 C.F.R. § 50.55a, are incorporated into the VCSNS IST program.[243] For the purpose of satisfying the license condition, the licensee retains the option of

[243] While the proposed condition is based on a revision to the ASME OM Code currently under consideration, the Code requirements ultimately might differ from the license condition when the full ASME review process is complete.

including in its IST program either the requirements stated in this condition, or including updated ASME Code requirements.

We note, however, that regardless of the option chosen to satisfy the license condition, the relevant provisions of the OM Code may be subject to further revision in the future, and IST requirements for the squib valve components may change. We do not expect the IST program for squib valves necessarily to be a static one. As with any facility, the VCSNS units will be subject to our rules providing for the application of future Code revisions to operating plants; SCE&G ultimately may be required to comply with a later version of the OM Code, as accepted by the NRC and incorporated by reference into 10 C.F.R. § 50.55a. In particular, section 50.55a(f)(4) requires that, throughout the service life of the plant, valves such as squib valves must, to the extent practical, meet the IST requirements set forth in the ASME OM Code and addenda that become effective during that time. Therefore, even if SCE&G chooses to satisfy the license condition by incorporating the condition into its IST program, it still must comply with section 50.55a(f)(4) throughout the life of the plant.

9. Environmental Impacts

The second day of the uncontested hearing focused on environmental issues, including overall environmental impacts, environmental justice, and the cooperation between the NRC and the ACE. Although the COL application includes the Applicants' own Environmental Report, the NRC review team, which included more than forty experts from the NRC and its contractor staff at Pacific Northwest National Laboratory, working with the ACE as a cooperating agency (collectively, the "environmental review team"),[244] conducted an independent review in fulfillment of their NEPA responsibilities. As discussed above, NRC regulations that implement NEPA are found in 10 C.F.R. Part 51.

The Staff initiated its review with a Notice of Intent to conduct scoping to identify environmental issues important to the stakeholders, and invited public participation.[245] The environmental review team issued a draft EIS,[246] conducted

---

[244] *See* Ex. NRC00006A, FEIS, at 1-2 and 1-6. *See also* Tr. at 61 (Flanders) and 252 (Vokoun). Cooperating agencies have the responsibility to assist the lead agency, here the NRC, through early participation in the NEPA process, including scoping, by providing technical input to the EIS and by making staff support available as needed by the lead agency. Ex. NRC00006A, FEIS, at 1-6. More information regarding the role of the ACE in the EIS process can be found *infra* Part II.A.9.c, "Cooperation with the Army Corps of Engineers in the Environmental Review."

[245] *See* Tr. at 251 (Vokoun). *See* South Carolina Electric and Gas Company Acting for Itself and as Agent for the South Carolina Public Service Company (Also Referred to as Santee Cooper[,] Virgil C. Summer Nuclear Station Units 2 and 3; Combined License Application; Notice of Intent to Prepare an Environmental Impact Statement and Conduct Scoping Process, 74 Fed. Reg. 323 (Jan. 5, 2009).

[246] *See* South Carolina Electric and Gas Company Acting for Itself and as Agent for the South

(Continued)

additional public meetings to solicit public comment on the draft EIS, and extended the comment period to ensure stakeholders had an opportunity for meaningful comment.[247] These efforts are described in Appendix E of the FEIS.[248]

The environmental review for the COL application included an assessment of the impacts from construction and operation of the new units on the human environment and considered alternatives to the proposed project.[249] The review also included audits of the proposed and alternative sites, more than seventy requests for additional information to SCE&G, confirmatory modeling and analyses, stakeholder interviews, and the review of relevant databases and maps. The ACE also evaluated certain construction and maintenance activities (onsite dredge-and-fill activities and construction of related transmission lines) proposed in U.S. waters, including wetlands that would be affected by the proposed project under the requested ACE permit.[250] We review the FEIS and the record of the proceeding to see if the Staff's review is reasonably supported in logic and fact and sufficient to support the Staff's conclusions.[251] Under NEPA, we also independently "consider the final balance among the conflicting factors contained in the record" in determining whether the licenses should issue.[252]

The environmental review team found, for the most part, that the impacts from the operation and construction of the project would be small. This includes impacts on: groundwater and surface water resources; aquatic ecology; air quality; radiological health (including radiological exposures to plant workers, the public, and wildlife); and nonradiological health effects on the public and workers.[253] The Staff also considered postulated accidents (from a risk perspective)[254] and the uranium fuel cycle (including waste disposal, transportation of radioactive mate-

---

Carolina Public Service Authority (Also Referred to as Santee Cooper)[,] Notice of Availability of the Draft Environmental Impact Statement for the Combined Licenses for Virgil C. Summer Nuclear Station, Units 2 and 3, 75 Fed. Reg. 21,368 (Apr. 23, 2010).

[247] *See* South Carolina Electric and Gas Company Acting for Itself and as Agent for the South Carolina Public Service Company (Also Referred to as Santee Cooper)[,] Virgil C. Summer Nuclear Station, Units 2 and 3 Combined License Application; Notice of an Extension to the Environmental Scoping Period, 74 NRC Fed. Reg. 9112 (Mar. 2, 2009).

[248] Tr. at 251 (Vokoun).

[249] *See* Ex. NRC00006A, FEIS, at 1-3.

[250] *Id.* at 1-2 and 1-5. The ACE evaluates these activities to determine whether to issue permits pursuant to section 404 of the Federal Water Pollution Control Act (33 U.S.C. § 1344), as amended by the Clean Water Act of 1977 (33 U.S.C. § 1251 et seq.) (Clean Water Act). Ex. NRC00006A, FEIS, at 1-1 and 1-6.

[251] The NRC alone makes the licensing decision under the Atomic Energy Act regarding whether the COLs should be issued. *See, e.g.,* Ex. NRC00006A, FEIS, at 1-1 and 1-6.

[252] 10 C.F.R. § 51.107(a)(2).

[253] Tr. at 253 (Kohn).

[254] Tr. at 269-71 (Flanders). *See* Ex. NRC000017, Staff Post-Hearing Responses, at 24-25.

rial, and decommissioning).[255] The environmental review team consulted with the U.S. Fish and Wildlife Service, which concurred in the finding that the project is unlikely to adversely affect any endangered species.[256] They also consulted with the State Historic Preservation Officer concerning possible adverse effects on cultural resources.[257] The environmental review team found moderate impacts for land use and terrestrial ecology during construction, due to construction of 39 miles of new transmission lines.[258] While the NRC usually does not consider the impacts of building transmission lines, the ACE does, because construction of the lines may impact wetlands.[259]

The principal benefits of the project were found to be providing 16 to 18 million megawatt hours of reliable baseload power annually (depending on the capacity reached),[260] increased energy diversity, and the lack of carbon emissions from the units as opposed to the emissions that would come from a coal- or gas-powered alternative.[261] In addition, the project is expected to generate 3600 jobs during construction, 800 direct jobs during operation, and an additional 1700 indirect jobs during operation.[262] The environmental review team concluded that there would be a large positive economic impact in that the project is expected to generate approximately $860 million in property tax revenue to Fairfield County over the 40-year license period.[263]

As part of its review, the environmental review team conducted a week-long audit of the proposed site, which involved over seventy-five people from the NRC Staff, SCE&G, cooperating government agencies, and contractors Bechtel and Tetra Tech.[264] The environmental review team also conducted a separate audit of alternative sites in March 2009.[265]

At the hearing, the Staff summarized its recommendation that we find in favor of the proposed project with respect to environmental impacts:

---

[255] Tr. at 253 (Kohn).

[256] Tr. at 254 (Kohn).

[257] Tr. at 275 (Cushing).

[258] Tr. at 254-55 (Kohn) (stating that a total of 400 miles of transmission lines would be added, but mostly within existing corridors, leading to moderate impacts on land use). *See* Ex. NRC00006A, FEIS §§ 4.1.2, 4.3.1.

[259] Tr. at 300 (Whited).

[260] Tr. at 262 (Cushing). *See also* Tr. at 247 (Matis).

[261] Tr. at 247 (Matis).

[262] *See* Tr. at 262-63 (Cushing). *See also* Ex. NRC00006A, FEIS §§ 4.4.3.1 (jobs created directly and indirectly, during construction), 5.4.3.1 (jobs created directly and indirectly, during operation of the new units).

[263] Tr. at 262 (Cushing). *See also* Ex. NRC00006A, FEIS §§ 5.4.3.2 and 5.4.3.3.

[264] Tr. at 242 (Rice).

[265] *Id.* (Rice).

> The basis for [NRC Staff's] recommendation includes [that] most of the environmental impacts would be small; none of the reasonable alternatives would be environmentally preferable; [and that] the short term use of the environment from the production of electricity enhances the long term productivity of the region and would not be equaled by any other use of the site.[266]

We addressed specific topics of interest at the hearing. In particular, we directed the Staff and SCE&G to summarize, in Environmental Panel One, the process for developing the EIS, the environmental impacts for eleven specified topics, the alternatives analysis (including energy alternatives and alternative sites), and the costs and benefits of the proposed action.[267] Environmental Panel Two addressed the two novel issues identified in the Staff's information paper: the environmental justice review and interactions with the ACE.[268]

a. Environmental Justice

The Staff's environmental justice review follows the guidance in the relevant sections of NUREG-1555, the environmental standard review plan, and our 2004 "Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions."[269]

Ms. Matis discussed how SCE&G used census data to identify minority and low-income populations in the region and vicinity of the VCSNS site.[270] SCE&G evaluated census data for a 50-mile radius around the site. If a block group's minority or low-income population exceeded 50%, or exceeded the state's overall percentage of minority or low-income people by more than 20%, then the block group was considered minority or low income (as applicable).[271] Ms. Matis explained that, using this metric, much of Fairfield County was deemed a minority population area.[272] But SCE&G found no "low-income" block groups within the immediate vicinity of the VCSNS site, using this method.[273]

---

[266] Tr. at 263 (Cushing).

[267] Revised Scheduling Note at 4-5 (unnumbered).

[268] *Id.* at 5 (unnumbered).

[269] Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions, 69 Fed. Reg. 52,040 (Aug. 24, 2004). *See generally* Ex. NRC00006A, FEIS § 2.6; Ex. NRC000003, Staff Testimony, at 16-19; Ex. NRC000007, Staff Pre-Hearing Responses, at 18-21; Ex. NRC000017, Staff Post-Hearing Responses, at 25; Ex. SCE000027, SCE&G Post-Hearing Responses, at 16.

[270] Tr. at 293-94 (Matis).

[271] Tr. at 294 (Matis).

[272] *Id.* (Matis).

[273] *Id.* (Matis).

The Staff explained that census data are only a starting point for its review process for identifying minority or low-income populations relevant to the environmental justice analysis.[274] The Staff conducts its own investigation by visiting local communities to observe general socioeconomic conditions, speaking with public officials and visiting with other community leaders, including minority leaders, church officials, and the managers of local philanthropic and charitable organizations.[275] The Staff conducted its own investigation, which involved "driving affected roadways, meeting with local stakeholders, visiting river and lake recreation sites used by the local communities, and visiting the cities and towns in the region."[276]

The Staff found that Fairfield County, particularly in the area immediately surrounding the plant, and Jenkinsville, the nearest town, have high concentrations of low-income residents. There is no scheduled public transportation, and many of the local residents walk as their primary means of transportation.[277]

The Staff's initial investigation found that many of the low-income people in the area felt disenfranchised from the political system in Fairfield County and that they would reap no benefits from the project.[278] The Staff therefore expanded its scoping process to reach out to the community. For example, during the scoping process, the Staff personally would transcribe comments so that the speaker would not have to speak publicly or use Internet comment forms.[279]

The Staff found that the project's principal potential adverse impact, as it relates to environmental justice considerations, was transportation impacts from trucks during construction and commuters during operations.[280] In response, SCE&G is drafting a traffic mitigation plan to help mitigate these adverse impacts.[281] Some of the mitigation measures described in the Applicants' Environmental Report have been undertaken already.[282] The Staff found that SCE&G's commitment to implementing a traffic mitigation plan would serve to minimize these adverse effects.[283]

The Staff found that benefits to the local community would be small during construction, but potentially greater during operation due to tax revenue, and

---

[274] *See* Tr. at 303-04 (Mussatti).
[275] Tr. at 304 (Mussatti), 306 (Anderson).
[276] Tr. at 305 (Anderson).
[277] Tr. at 305-06 (Anderson).
[278] Tr. at 322, 328 (Mussatti).
[279] Tr. at 306 (Anderson).
[280] Tr. at 307 (Anderson).
[281] *See* Tr. at 273 (Rice), 294 (Matis).
[282] Tr. at 273-74 (Rice).
[283] Tr. at 307-08 (Anderson).

direct and indirect jobs, generated by the plant.[284] According to Staff and SCE&G witnesses, an effort is being made to coordinate with local community colleges to train workers for jobs both in construction and operation of the plant.[285]

We inquired during the hearing whether reported subsistence gardening, hunting, and fishing by the low-income population would affect the estimated radiation dose to those individuals. According to the Staff witnesses, many low-income residents in the area rely on subsistence gardening or fishing.[286] In response to our post-hearing question, the Staff explained that radiological doses from subsistence gardening, hunting, and fishing do not raise any environmental justice concerns.[287] The Staff stated that this is because the hypothetical "maximally exposed individual" already is conservatively assumed to subsist entirely on locally produced foodstuffs.[288] Impacts to the maximally exposed individual, and to the local population, were found to be small overall.[289] Therefore, the Staff concluded that minority or low-income individuals engaged in subsistence behaviors would not experience disproportionately high and adverse impacts from radiation exposures from the new units.[290]

b. Environmental Alternatives Analysis

The FEIS examines alternatives to the project, both in terms of using a different form of energy (or conservation) and of building the proposed reactors at alternative sites.[291] The application included SCE&G's alternatives analysis, which serves as a starting point for the Staff's review. Alternatives not requiring new generation capacity (purchased power, extending the service life of existing plants, etc.) were not reasonable alternatives because the Staff concluded that these alternatives were not useful to provide baseload power.[292]

SCE&G evaluated a number of energy alternatives, including wind, solar, hydropower, geothermal power, biomass, coal and gas, and alternatives that do not involve building new power sources, such as demand-side management.[293]

---

[284] Tr. at 256 (Kohn).

[285] Tr. at 328-29 (Anderson), 333 (Byrne).

[286] Tr. at 306 (Anderson).

[287] *See* Ex. NRC000017, Staff Post-Hearing Responses, at 7-8.

[288] *Id. See generally* Ex. NRC00006A, FEIS § 5.9.3.

[289] *See* Ex. NRC000017, Staff Post-Hearing Responses, at 7-8. *See generally* Ex. NRC00006A, FEIS § 5.9.3.

[290] *See* Ex. NRC000017, Staff Post-Hearing Responses, at 8. *See generally* Ex. NRC00006A, FEIS § 5.5.4.

[291] *See generally* Environmental Standard Review Plan, Ch. 9; Ex. NRC00006A, FEIS, Ch. 9.

[292] Ex. NRC00006A, FEIS § 9.2.1, at 9-3 to 9-5.

[293] Tr. at 245 (Rice).

It then performed a more detailed evaluation for those alternatives that were considered to be reasonable baseload power sources in the region of interest — coal-fired and gas-fired options.[294] The ER concluded that these would not be environmentally preferable to new nuclear as energy alternatives, due to air quality impacts.[295]

The Staff evaluated in detail the reasonable alternatives that could meet the project's purpose to supply baseload power within SCE&G's and Santee Cooper's service territories, by the time the new units are projected to go online.[296] An alternative was not considered reasonable if it could not supply baseload power.[297] The Staff agreed with SCE&G's conclusions that only coal or natural gas could, by themselves, provide sufficient baseload power.[298] The Staff also looked at combining alternative energies with natural gas to generate the necessary baseload power.[299]

After narrowing down the alternative energy sources to those considered reasonable — coal, natural gas, or a combination — the Staff compared their environmental effects.[300] Primarily due to air emissions, none of these was found to be environmentally preferable to the proposed new AP1000 units.[301]

After the hearing, the Staff supplied a more in-depth response to our hearing question asking for a comparison between the NRC's approach to energy alternatives and those of other federal agencies.[302] Based on a survey, the Staff responded that the NRC's alternatives analysis is broader in scope, which is likely due to the difference in the "purpose and need" of the proposed federal action.[303] That is, the purpose and need of the VCSNS project was defined broadly as "providing baseload power" to the Applicants' service area, whereas the EISs selected for comparison had a narrower focus (providing loan guarantees for a solar plant).[304]

Distinct from the energy alternatives evaluation is the evaluation of alternative sites. Testifying for SCE&G, Ms. Rice stated that SCE&G conducted several siting studies in the course of the project and evaluated twenty potential sites for suitability.[305] SCE&G then narrowed down the twenty sites using exclusionary

---

[294] *Id.* (Rice).
[295] Tr. at 245-46 (Rice).
[296] Tr. at 258 (Cushing).
[297] *Id.* (Cushing).
[298] Tr. at 261 (Cushing).
[299] *Id.* (Cushing).
[300] *Id.* (Cushing).
[301] *Id.* (Cushing).
[302] Ex. NRC000017, Staff Post-Hearing Responses, at 5-6. *See also* Tr. at 281-82 (Flanders).
[303] Ex. NRC000017, Staff Post-Hearing Responses, at 5-6.
[304] *Id.* at 5.
[305] Tr. at 246 (Rice). *See generally* Ex. NRC00001O, Environmental Report § 9.3.2.2.

criteria that would preclude the site for the location of a nuclear power plant, such as geotechnical issues or the potential for significant impacts to natural resources.[306] This process eliminated nine of the twenty sites.[307] SCE&G then ranked the remaining eleven sites using site suitability criteria established by the Electric Power Research Institute.[308] The five sites receiving the highest score (including VCSNS) were evaluated in the Environmental Report.[309] The four alternative sites identified included two greenfield sites, one site currently used for a coal generating plant, and the Savannah River site owned by the Department of Energy.[310]

The Staff audited these alternative sites as well as the proposed site.[311] These alternative sites were then compared to the proposed action to determine if there was an "environmentally preferable" or "obviously superior" alternative site.[312] Speaking for the Staff, Andrew Kugler explained that the NRC uses the "obviously superior" standard both in recognition of the fact that the proposed site has been examined more thoroughly than the alternatives, and to avoid situations where one alternative is superior with respect to one resource but another is superior with respect to a different resource.[313] Based on its review of alternative sites, the Staff concluded that none of the alternatives analyzed was "obviously superior" to the VCSNS site.[314]

c. Cooperation with Army Corps of Engineers in the Environmental Review

On September 12, 2008, the NRC and the ACE signed an updated memorandum of understanding (MOU) for the review of nuclear power plant applications.[315] The MOU established a framework for coordination and participation of both agencies, anticipating that the NRC normally would serve as the lead agency

---

[306] Tr. at 246 (Rice).

[307] *Id.* (Rice). *See generally* Ex. NRC00001O, Environmental Report § 9.3.2.3.

[308] Tr. at 246 (Rice). *See* Ex. NRC00001O, Environmental Report Table 9.3-7 (comparing results).

[309] Tr. at 246-47 (Rice). *See* Ex. NRC00001O, Environmental Report §§ 9.3.3.1 through 9.3.3.4 (evaluation of four site alternatives to VCSNS).

[310] Tr. at 260 (Cushing).

[311] *Id.* at 274 (Vokoun).

[312] Tr. at 320-21 (Kugler). *See Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), CLI-07-27, 66 NRC 215, 222 (2007) (the ER must evaluate alternative sites to determine whether any is "obviously superior" to the proposed site).

[313] Tr. at 320-21 (Kugler).

[314] *See* Ex. NRC00006A, FEIS § 9.3.7.3.

[315] Tr. at 297 (Whited).

and that the ACE would act as a cooperating agency.[316] Its overall goal was to develop a single EIS that supported both the NRC's licensing process and the ACE's permitting process.[317] ACE staff participated in site audits, developed requests for additional information specific to its own informational needs, and also participated in writing the EIS and responding to public comments on the draft EIS.[318]

At the hearing, the Staff explained some differences in approach between the ACE and NRC in completing the EIS. The ACE's mission is to protect the nation's aquatic resources, including wetlands under section 10 of the Rivers and Harbors Act of 1899 and section 404 of the Clean Water Act.[319] Applicants for an ACE permit must demonstrate that they have taken "all appropriate and practicable steps to first avoid, then minimize and, finally, to mitigate unavoidable impacts to aquatic resources."[320] In making permit decisions, the ACE may only issue the permit if it determines that the proposed action is the "least environmentally damaging practicable alternative."[321]

In addition, the ACE must consider environmental impacts of construction and preconstruction activities, such as site clearing and grading.[322] The NRC, in contrast, limits the scope of environmental analysis of preconstruction activities to activities falling within the scope of its regulatory authority.[323]

At the time of the hearing, the Applicants had not received a section 401 Water Quality Certification from the South Carolina Department of Health and Environmental Control.[324] The South Carolina Department of Health and Environmental Control granted the certification on December 16, 2011.[325]

B. Findings

We have conducted an independent review of the sufficiency of the Staff's safety findings, with particular attention to the topics discussed above, and in the Staff and Applicants' panel presentations. We posed a number of questions

---

[316] *Id.* (Whited).

[317] Tr. at 297-98 (Whited).

[318] Tr. at 299-300 (Whited).

[319] Tr. at 298 (Whited).

[320] *Id.* (Whited).

[321] *Id. See generally* Ex. NRC00006A, FEIS § 1.1.1.2.

[322] Tr. at 299 (Whited). *See* Ex. NRC00006A, FEIS, at 4-1 to 4-4.

[323] Tr. at 299 (Whited). *See* Final Rule: "Limited Work Authorizations for Nuclear Power Plants," 72 Fed. Reg. 57,416, 57,427-28 (Oct. 9, 2007); 10 C.F.R. § 51.45(c).

[324] Tr. at 302 (Whited). *See also* Ex. NRC000007, Staff Pre-Hearing Responses, at 24.

[325] *See* Clary, Ronald B., SCE&G, to USNRC Document Control Desk (Dec. 21, 2011) (ADAMS Accession No. ML12011A028) (transmitting the section 401 Water Quality Certification).

challenging the Staff's experts, both in writing and at the hearing itself, and find no reason to question their conclusions. For each of the topics discussed in these presentations, we determine that the Staff's review was reasonably supported in logic and fact, and was sufficient to support its findings. We make the same determination for topics addressed in the FSER that were not expressly discussed at the hearing or in today's decision.

Based on the evidence presented in support of the uncontested hearing, including the Staff's review documents and the testimony presented, we find that the applicable standards and requirements of the Act and the Commission's regulations have been met. The required notifications to other agencies or bodies have been duly made.[326] The Applicants are technically and financially qualified to engage in the activities authorized.[327] We find that there is reasonable assurance that the facility will be constructed and operated in conformity with the license, the provisions of the Act, and the Commission's regulations; and that issuance of the license will not be inimical to the common defense and security or to the health and safety of the public.

We also conducted an independent review of the Staff's environmental analysis in the FEIS — including with respect to those topics not expressly addressed at the hearing — taking into account the particular requirements of NEPA, discussed briefly below. NEPA § 102(2)(A) requires agencies to use "a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts" in decisionmaking that may impact the environment.[328] We find that the environmental review team used the systematic, interdisciplinary approach NEPA requires. The environmental review team consisted of more than sixty individuals with expertise in disciplines including ecology, geology, hydrology, radiological health, socioeconomics and cultural resources.[329] Further, we commend the team's scoping efforts and outreach to the community as described during the hearing and in the FEIS.[330]

NEPA § 102(2)(E) calls for agencies to study, develop, and describe appropriate alternatives. The alternatives analysis is the "heart of the environmental impact statement."[331] Based on the Staff's testimony at hearing as described above, as well as the discussion in the FEIS, we find that the environmental review identified an appropriate range of alternatives with respect to both alternative power sources

---

[326] *See* 10 C.F.R. § 50.43(a)(3); Notices, *supra* note 21. *See generally* Ex. NRC000004, FSER § 1.5.3.2.

[327] *See generally* Ex. NRC000004, FSER § 1.5.1.

[328] NEPA § 102(2)(A), 42 U.S.C. § 4332(2)(A).

[329] *See* Ex. NRC00006B, FEIS, App. A (list of contributors).

[330] *Id.* § 1.1.1.1.

[331] 10 C.F.R. Part 51, Subpart A, App. A, § 5. *See also* 40 C.F.R. § 1502.14 (parallel provision in Council on Environmental Quality regulations).

and alternative sites, and adequately described the environmental impacts of each alternative.[332] We find reasonable the FEIS conclusion that none of the alternative power sources, and none of the alternative sites, is environmentally preferable to the proposed action.[333]

NEPA § 102(2)(C) requires us to assess the relationship between local short-term uses of the environment and the long-term productivity of the environment,[334] and to describe the unavoidable adverse environmental impacts[335] and the irreversible and irretrievable commitments of resources associated with the proposed action.[336] These impacts were considered in FEIS Chapter 10. The environmental review team found that the short-term use of the site for electrical generation would have a positive long-term result: "the enhancement of regional productivity resulting from the electrical energy produced by the plant is expected to result in a correspondingly large increase in regional long-term productivity that would not be equaled by any other long-term use of the site."[337] With respect to unavoidable adverse environmental impacts, the environmental review team concluded that such impact from operation of the two new facilities would be small.[338] The environmental review team concluded that the unavoidable adverse impacts from NRC-authorized construction activities would be generally small, with the exception of the adverse impact on traffic, which would be moderate, temporary, and highly localized.[339] Finally, the environmental review team concluded that the irretrievable commitment of resources for construction would be "similar to that of any major construction project."[340] During operation, the principal resource that would be irretrievably committed would be uranium. On this point, the FEIS concluded that the impacts on the availability of uranium would be negligible.[341]

We must weigh these unavoidable adverse environmental impacts and resource commitments — the environmental "costs" of the project — against its benefits.[342] As described in the FEIS, the Public Service Commission of South Carolina determined that there is a need for power in the region, which the proposed

---

[332] Tr. 258-61 (Cushing). *See generally* Ex. NRC00006A, FEIS, Ch. 9 (alternatives to the proposed action); 10 C.F.R. Part 51, Subpart A, App. A, § 5.

[333] *See* Ex. NRC00006A, FEIS § 10.5 (conclusions).

[334] NEPA § 102(2)(C)(iv), 42 U.S.C. § 4332(2)(C)(iv).

[335] NEPA § 102(2)(C)(ii), 42 U.S.C. § 4332(2)(C)(ii).

[336] NEPA § 102(2)(C)(v), 42 U.S.C. § 4332(2)(C)(v).

[337] Ex. NRC00006A, FEIS § 10.3.

[338] *Id.* § 10.2.1, Table 10-1.

[339] *Id.* Table 10-1.

[340] *Id.* § 10.4.2.

[341] *Id.*

[342] *See* Notice of Hearing, 76 Fed. Reg. at 53,493.

generating plants would meet.[343] We find that the benefits to the local and regional population from the needed electricity and the resulting increased productivity, jobs, and taxes, as described during the hearing and in the FEIS,[344] outweigh the costs described above.

In sum, for each of the topics discussed at hearing, we find that the Staff's review was reasonably supported in logic and fact and sufficient to support the Staff's conclusions. Based on our review of the FEIS, we make the same determination for topics not directly addressed at the hearing or in today's decision. Finally, in carrying out our review, we have considered particularly each of the requirements of NEPA § 102(2)(C), and find nothing in the record that would lead us to disturb the FEIS conclusions on those requirements. Overall, nothing in the adjudicatory record of this proceeding (including the contested proceeding) leads us to believe that the environmental findings are unreasonable. We conclude that the NEPA review conducted by the NRC Staff has been adequate.

Therefore, as a result of our review of the FEIS environmental analysis, and in accordance with the notice of hearing for this uncontested proceeding, we find that the requirements of NEPA § 102(2)(A), (C), and (E), and the applicable regulations in 10 C.F.R. Part 51, have been satisfied with respect to the combined license application. We independently considered the final balance among conflicting factors contained in the record of this proceeding and we find, after weighing the environmental, economic, technical, and other benefits against environmental and other costs, and considering reasonable alternatives, that the combined licenses should be issued.

III. CONCLUSION

We find that the Staff's review of the safety and environmental issues related to SCE&G's COL applications was sufficient to support the findings, identified in 10 C.F.R. §§ 52.97 and 51.107(a), for each of the COLs to be issued. In addition, we direct the NRC Staff to include in the VCSNS COLs the conditions described in today's decision relative to the implementation of a surveillance program for squib valves, and the development of strategies to address beyond-design-basis external events. Concurrent with the issuance of the licenses, the Director of the Office of New Reactors shall issue Order EA-12-051, related to the enhancement of reliable spent fuel pool instrumentation, to SCE&G. In addition, the Staff shall issue a request for information relative to Task Force Recommendation 9.3. The Director of the Office of New Reactors is authorized to issue the appropriate

[343] *See* NRC00006A, FEIS § 8.4.

[344] *See* Tr. at 247-48, 262. *See generally* NRC00006A, FEIS §§ 4.4.3, 5.4.3.

licenses for the construction and operation of Virgil C. Summer Nuclear Stations, Units 2 and 3.

IT IS SO ORDERED.

For the Commission

ANDREW L. BATES
Acting Secretary of the Commission

Dated at Rockville, Maryland,
this 30th day of March 2012.

Chairman Gregory B. Jaczko, Dissenting

This COL decision is the second one we reach in a matter of months. In February, we issued COLs for two new reactors at the Vogtle site using the same AP1000 reactor design as Summer. Soon after, on March 12, 2012, we issued orders requiring safety enhancements based on the unprecedented and catastrophic accident at Fukushima, two of which apply to a COL holder using the AP1000 design. By virtue of this timing, the Vogtle licenses did not require compliance with those new requirements. These Summer licenses, in contrast, will include a license condition requiring compliance with one of these orders, directing development of mitigation strategies to address loss of power and access to the ultimate heat sink.

I fully support the decision by my colleagues to include this license condition and I consider this important progress in incorporating the lessons from Fukushima. However, I continue to believe that we should require that all Fukushima-related safety enhancements are implemented before these new reactors begin operating. To that end, I proposed a license condition that would require implementation of all new requirements that are presently being developed by the Staff, at our direction, to incorporate the lessons from Fukushima. Unfortunately, I do not have the support of my colleagues for this license condition and, therefore, cannot join them in approving the issuance of these COLs. My rationale for concluding that we have sufficient information to form a concrete, well-defined license condition has already been explained in my dissenting opinion on the decision authorizing issuance of the Vogtle licenses.[1]

This has not been the first COL we consider while our Fukushima review is ongoing, nor will it be the last. Going forward, I continue to believe the best way to ensure safety, inspire public confidence, and promote regulatory efficiency and stability is to impose a license condition in each COL that requires implementation of all Fukushima safety enhancements before operation. This would apply a simple, logical, and consistent standard to all new COL holders.

We already see the inconsistency that will be inevitable under the majority approach. The Summer COLs contain a license condition for a Fukushima-related requirement that was not included in the Vogtle licenses issued only a few weeks ago. This type of happenstance cannot justify issuing COLs with differing safety standards. But this will be the outcome if we proceed with licensing without proactively imposing license conditions requiring compliance with all Fukushima recommendations.

My proposed license condition will have the additional benefit of ensuring that future licenses are not delayed by our Fukushima review activities. The

[1] *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-2, 75 NRC 63, 123-31 (Chairman Gregory B. Jaczko, Dissenting).

recent orders imposing Fukushima-related requirements were issued to licensees (including a COL holder), not applicants. Likewise, the Staff's recent information requests were only issued to the COL holder, not COL applicants. The Staff intends to obtain the necessary information and ensure compliance with the recent orders and requests for information during the license review process for future applications. This may delay issuance of the final safety review for the next COL application we expect to consider, for new reactors at the Levy County site. We could expect similar delays for future COLs, causing unnecessary uncertainty into our licensing process. A simple license condition will serve our regulatory interest in ensuring the safe operation of new reactors while, at the same time, ensuring a predictable process.

Over time, the safety of the nation's nuclear reactors has improved with technological advances and better understanding of potential hazards. Events like the accidents at Three Mile Island and Chernobyl, the September 2001 attacks, and the accident at Fukushima provide real-world experience that offer new insights into our regulatory requirements, programs, and processes. In the aftermath of Fukushima, we must move expeditiously to implement the lessons learned and enhance the safety of our nuclear fleet. We should proceed deliberately and thoughtfully when licensing new reactors. Without a binding requirement in the license, we know from past experience that licensees may be relieved from compliance based on cost considerations or delay compliance for extended periods of time. We have seen this time and again, most notably with fire protection, and should not allow that to happen here. We should exercise our regulatory authority when we license these COLs to proactively require compliance with all Fukushima safety enhancements before operation.

Cite as 75 NRC 479 (2012) **CLI-12-10**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, 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) **March 30, 2012**

The Commission denies review of an Atomic Safety and Licensing Board decision that rejected three new contentions submitted by the intervenor.

SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS

The severe accident mitigation alternatives (SAMA) analysis involves extensive predictive judgments, many reflected in the computer modeling inputs used in the analysis. That there may be a range of conceivable choices among inputs used in the SAMA analysis goes without saying, and many alternative inputs may be reasonable choices — reflecting reasonable predictions — even though some may be more conservative and others less so. A mitigation alternatives analysis under the National Environmental Policy Act (NEPA) need not reflect the most conservative, or worst-case, analysis.

SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS: NEPA

NEPA neither requires nor authorizes the NRC to order implementation of mitigation measures analyzed in an environmental analysis.

CONTENTIONS, LATE-FILED

New or amended contentions must be based on new facts not previously available.

REOPENING A RECORD

The reopening standards are intended to impose a heavy burden on parties seeking to supplement the evidentiary record at the 11th hour, after the record has closed. The purpose of the rule is to raise the threshold — increase the showing necessary — for last-minute claims for additional hearings. The rule provides no exception for previously unlitigated issues.

REOPENING A RECORD

Reopening an evidentiary record will only be allowed where the proponent presents material, probative evidence which either could not have been discovered before or could have been discovered but is so grave that, in the judgment of the presiding officer, it must be considered anyway.

REOPENING A RECORD

The reopening standard is not the equivalent of a summary disposition standard. A motion to reopen a record must demonstrate that a materially different result would be *likely* had the newly proffered evidence been considered initially. This appropriately requires the Board to consider the information in the submitted supporting affidavits. While the Board does not reach an ultimate decision on the merits of the contention, it nonetheless must apply its expertise and make a record-based judgment on the evidence. To meet the reopening standard, it is insufficient merely to point to disputed facts.

MEMORANDUM AND ORDER

This long-pending proceeding stems from the application of Entergy Nuclear

Generation Company and Entergy Nuclear Operations, Inc. (together, Entergy or Applicant) to renew the operating license for the Pilgrim Nuclear Power Station for an additional 20 years beyond the current license expiration date of June 8, 2012. Before us is intervenor Pilgrim Watch's petition for review of LBP-11-20, an Atomic Safety and Licensing Board decision rejecting Pilgrim Watch's requests for hearing on three new contentions.[1] Entergy and the NRC Staff oppose the petition for review.[2] For the reasons set forth below, we deny review.

I. BACKGROUND

This highly contentious proceeding has spanned nearly 6 years of litigation. The procedural history has been described in detail in recent Board decisions, and we do not repeat that full history here.[3] Below we outline the background most relevant to our decision today.

The Board originally admitted Pilgrim Watch as an intervenor in 2006, granting a hearing on two contentions: Contention 1, a safety contention challenging Entergy's aging management program (AMP) for buried piping; and Contention 3, an environmental contention challenging the Severe Accident Mitigation Alternatives (SAMA) analysis in Entergy's Environmental Report.[4] Subsequently, the Board granted summary disposition of Contention 3.[5] The Board went on to hold an evidentiary hearing on Contention 1. Following the hearing, the Board ruled in favor of Entergy, and terminated the proceeding.[6]

Pilgrim Watch petitioned for Commission review of the Board's merits decision on Contention 1 (buried piping), the dismissal on summary disposition of Contention 3 (SAMA analysis), and numerous Board interlocutory orders. We partially reversed the dismissal of Contention 3, remanding a limited portion of the contention to the Board.[7] We denied review of the other challenged Board decisions.[8]

---

[1] *See* Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Requests for Hearing on Certain New Contentions) ASLBP No. 06-848-02-LR, August 11, 2011 (Aug. 26, 2011) (Petition); LBP-11-20, 74 NRC 65 (2011).

[2] *See* Entergy's Answer Opposing Pilgrim Watch's Petition for Review (Sept. 6, 2011) (Entergy Brief); NRC Staff's Answer to Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Requests for Hearing on Certain New Contentions) (Sept. 6, 2011) (Staff Brief).

[3] *See, e.g.,* LBP-11-18, 74 NRC 29, 31-36 (2011).

[4] *See* LBP-06-23, 64 NRC 257, 348-49 (2006).

[5] *See* LBP-07-13, 66 NRC 131, 137 (2007).

[6] *See* LBP-08-22, 68 NRC 590, 610 (2008).

[7] *See* CLI-10-11, 71 NRC 287 (2010), *reconsideration denied,* CLI-10-15, 71 NRC 479 (2010).

[8] *See* CLI-10-14, 71 NRC 449 (2010).

While the limited remand before the Board was pending, Pilgrim Watch filed the three new contentions that the Board rejected in LBP-11-20. The first of these three new contentions was a new challenge to the Pilgrim SAMA analysis.[9] Because the contention raised claims regarding the "cleanup" or decontamination following a potential severe nuclear reactor accident, the Board referred to this as the "Cleanup Contention." The second contention challenged Entergy's AMP for non-environmentally qualified inaccessible cables at the Pilgrim Nuclear Power Station.[10] The third contention was nearly identical to the second, but challenged Entergy's AMP for non-environmentally qualified inaccessible cables "*as amended by Entergy on January 7, 2011*."[11] The Board referred to the two cable-related contentions as "Cables Contention 1" and "Cables Contention 2." In LBP-11-20, the Board rejected all three contentions.

Pilgrim Watch's petition for review suggests that we address only the Board's conclusions on the Cleanup Contention and Cables Contention 2.[12] Pilgrim Watch states that "the allegations in [Cables Contention 1] have in effect been superseded by those in [Cables Contention 2]," given that the amended AMP "has effectively replaced" the AMP submitted with the original license renewal application.[13] Because Pilgrim Watch's petition for review focuses only on the Cleanup Contention and Cables Contention 2, we confine our decision accordingly.

II. DISCUSSION

A. Contention Standards

To be accepted for hearing, contentions must meet our strict admissibility standards under 10 C.F.R § 2.309(f)(1). These standards are designed to help assure that adjudicatory hearings will be meaningful — that is, focused on matters that have genuine underlying factual or legal support, and that fall within the scope of a renewal proceeding, raising a material dispute with the application. Our process demands that petitioners carefully review the license renewal application and raise all their distinct challenges at the outset, avoiding

---

[9] Pilgrim Watch Request for Hearing on a New Contention (Nov. 29, 2010) (Cleanup Contention).

[10] *See* Pilgrim Watch Request for Hearing on a New Contention: Inadequacy of Entergy's Aging Management of Non-Environmentally Qualified (EQ) Inaccessible Cables (Splices) at Pilgrim Station (Dec. 13, 2010) (Cables Contention 1).

[11] *See* Pilgrim Watch Request for Hearing on a New Contention: Inadequacy of Entergy's Aging Management of Non-Environmentally Qualified (EQ) Inaccessible Cables (Splices) at Pilgrim Station (Jan. 20, 2011) at 1 (Cables Contention 2) (emphasis in original). Pilgrim Watch included as an attachment to Cables Contention 2 the Affidavit of Paul M. Blanch (Jan. 19, 2011) (Blanch Affidavit).

[12] *See* Petition at 2.

[13] *Id.*

piecemeal supplemental contentions unless they could not have been raised earlier. Contentions submitted after the deadline for initial intervention petitions must satisfy the standards for late-filed contentions.[14] And where a Licensing Board has closed the evidentiary record, intervenors seeking to have new evidence admitted must demonstrate sufficient grounds for reopening the record.[15] "Commission practice holds that the standard for admitting a new contention after the record is closed is higher than for an ordinary late-filed contention."[16]

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.[17] Nonetheless, our rules on new or amended contentions are not intended to sweep away any genuine safety matter that may be identified later in a proceeding. Even where an intervenor does not satisfy the contention standards, we can direct the Staff, outside of the adjudicatory process, to address any safety matter that warrants further inquiry. In addition, our section 2.206 petition process can respond to claims of regulatory violations.

We may grant a petition for review at our discretion, giving due weight to whether there exists a "substantial question" regarding the following considerations:

> (1) A finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding;
> (2) A necessary legal conclusion is without governing precedent or is a departure from or contrary to established law;
> (3) A substantial and important question of law, policy, or discretion has been raised;
> (4) The conduct of the proceeding involved prejudicial procedural error; or
> (5) Any other consideration which the Commission may deem to be in the public interest.[18]

We generally defer to Board rulings on contention admissibility unless we

---

[14] *See* 10 C.F.R. § 2.309(f)(2).

[15] *See* 10 C.F.R. § 2.326.

[16] *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 668 (2008) (citation omitted).

[17] *See, e.g., Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-28, 62 NRC 721, 727-28 (2005).

[18] 10 C.F.R. § 2.341(b)(4)(i)-(v).

find "an error of law or abuse of discretion."[19] We have carefully considered Pilgrim Watch's petition. As we discuss below, the petition does not identify any Board error of law or abuse of discretion, or other reason warranting review of LBP-11-20.

B. Cleanup Contention

Pilgrim Watch's Cleanup Contention challenged the Pilgrim SAMA analysis. The SAMA analysis is a mitigation alternatives analysis under the National Environmental Policy Act (NEPA). The requirement for license renewal applicants to consider severe accident mitigation alternatives stems from our environmental regulations.[20] We described the nature of the analysis in earlier decisions in this proceeding.[21] Our discussion here focuses on the Board's reasoning in rejecting the Cleanup Contention and Pilgrim Watch's arguments in seeking review.

Pilgrim Watch's Cleanup Contention reads as follows:

> Until and unless some third party assumes responsibility for cleanup after a severe nuclear reactor accident to pre-accident conditions, sets a cleanup standard, and identifies a funding source, Entergy should be required to take all of the mitigation steps that would be required by a SAMA analysis (i) based on a conservative source term using release fractions no lower than those specified in NUREG-1465 or used by the NRC in studies such as NUREG-1450, cleanup to a dose rate of not more than 15 millirem a year, and at least the 95th percentile of the total consequences determined by the EARLY and CHRONC modules of the MACCS2 Code, and (ii) [that] does not reduce any costs by use of a discount factor or probabilistic analysis.[22]

Pilgrim Watch claimed that it had learned from a November 2010 article in *Inside EPA* that "neither the NRC, nor EPA [Environmental Protection Agency], nor FEMA [Federal Emergency Management Agency] is responsible for cleanup" of a nuclear reactor accident; that "the cleanup standards that will determine what cleanup is required (and hence its cost) have not been defined"; and further that "no funding source has been identified."[23] The cited article (attached to the contention) refers to discussions between the three agencies regarding "which agency — and with what money, and legal authority — would oversee cleanup

---

[19] *See, e.g., South Carolina Electric and Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-21, 72 NRC 197, 200 (2010) (citing *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 336 (2009)).

[20] *See* 10 C.F.R. § 51.53(c)(3)(ii)(L).

[21] *See, e.g.,* CLI-10-11, 71 NRC at 291, 316; CLI-12-1, 75 NRC 39, 41-42, 52-53 (2012).

[22] Cleanup Contention at 1.

[23] *Id.* at 2.

in the event of a large-scale accident."[24] These included discussions regarding whether funds collected under the Price-Anderson Act would be available to pay for decontamination costs, whether "EPA can assert its Superfund authorities over" cleanup of a nuclear power plant accident, and what cleanup standards would apply.[25] Pilgrim Watch attached numerous agency e-mails obtained by *Inside EPA* relating to these interagency discussions.

Pilgrim Watch further claimed that "nothing in . . . NRC policy" on conducting the NEPA SAMA analysis "places the responsibility for actual cleanup on the licensee; neither does it require the licensee" to implement potential cost-beneficial measures identified in the analysis.[26] Pilgrim Watch went on to claim that the "only . . . potential justification for this NRC policy is the unspoken assumption that someone other than the licensee is responsible for cleanup."[27] As Pilgrim Watch's argument goes, "[u]ntil this is resolved — who is in charge, who pays, and what are the cleanup standards — Pilgrim's license renewal should not go forward" unless the SAMA analysis is redone using the particular inputs and methodology proposed by Pilgrim Watch in the contention, *and* "Entergy is required to take all of the mitigation steps" that may be identified by this alternate SAMA analysis.[28]

The Board rejected the Cleanup Contention on several grounds. One, the Board found that the issues raised in the *Inside EPA* article were "policy matters that are solely within the jurisdiction of the Commission," and therefore fall outside the scope of the license renewal proceeding.[29] Two, the Board found that the technical concerns raised in the contention could and therefore should have been raised earlier in the proceeding.[30] And three, the Board found that the contention failed to meet the standards for reopening the evidentiary record.[31] Pilgrim Watch does not identify error in these conclusions.

Determinations regarding the precise role and relative authority of each relevant agency in the event of a severe reactor accident, and statutory interpretations going to sources of funding for decontamination efforts, do not fall within the scope of

---

[24] *Id.* at 16 (Attachment A, "Agencies Struggle to Craft Offsite Cleanup Plant for Nuclear Power Accidents," *Inside EPA,* Nov. 22, 2010). Our decision today should not be read to intimate an opinion on the accuracy of any specific statements in the referenced article.

[25] *Id.* at 16-19.

[26] *Id.* at 2.

[27] *Id.*

[28] *See id.* at 6. Presumably, in referring to "mitigation steps" Pilgrim Watch means cost-beneficial mitigation alternatives. The SAMA analysis examines an extensive range of potential mitigation alternatives, many of which are found not to be cost-beneficial to implement.

[29] LBP-11-20, 74 NRC at 80.

[30] *See id.* at 81 n.93.

[31] *See id.* at 79, 81-82.

an individual license renewal proceeding. As the Staff states, these are not matters "susceptible to[ ] resolution in an NRC hearing."[32] Contentions for adjudicatory hearings must raise a genuine dispute "with the applicant/licensee on a material issue of law or fact."[33]

Pilgrim Watch argues, however, that the Board misunderstood its contention, and that it was not challenging "policy matters."[34] Pilgrim Watch claims that it raises a NEPA contention challenging Entergy's SAMA analysis, a matter within the scope of a license renewal proceeding.[35] But the *Inside EPA* article and attached e-mails lend no support to Pilgrim Watch's claim that the Pilgrim SAMA analysis must be redone, much less that it requires redoing using the inputs or methodology outlined in the contention. Nothing in the *Inside EPA* article or other attachments even mentions source terms, discount factors, accident consequence values, or probabilistic analysis. In short, Pilgrim Watch demonstrated no direct link between the interagency discussions alluded to in the *Inside EPA* article and the aspects of the NEPA mitigation analysis that Pilgrim Watch seeks to challenge. The article and attachments do not call into question the adequacy of the Pilgrim SAMA analysis.

Pilgrim Watch therefore fails to provide the necessary minimal basis and factual or expert support for its SAMA analysis challenge. To the extent that the Board did not reach the question whether the contention satisfies the contention requirements in 10 C.F.R. § 2.309(f)(1), we find, based on the record before us, that it does not. We elaborate further below.

The SAMA analysis is a NEPA mitigation alternatives analysis, examining various categories of hypothetical severe accidents (e.g., accident sequences) to identify potential measures that could be taken by licensees to further reduce severe accident risk. The analysis is not directed to, and does not rely upon, the relative roles different agencies may take following a potential actual accident, or the funding sources for any actual decontamination effort. Indeed, in the event of an actual accident, many interagency determinations may need to be based on the nature of the specific accident or on other real-time information and considerations.

The SAMA analysis does assume some level of maximum allowable long-term radiological dose, as a basis for determining whether particular levels of decontamination efforts would be sufficient to achieve the dose criteria and would be cost-efficient to pursue. If it would be more cost-efficient, for example, to

[32] Staff Brief at 15.

[33] *See* 10 C.F.R. § 2.309(f)(1)(vii).

[34] *See* Petition at 22.

[35] *Id.* at 23.

outright condemn contaminated land, then the analysis would account for the cost of the condemned land instead of the cost to decontaminate it.[36]

Here, Pilgrim Watch claims that if EPA "is in charge [of cleanup efforts] there will be a more conservative cleanup standard."[37] But Pilgrim Watch nowhere addresses or otherwise challenges the cleanup dose rates that were used in the Pilgrim SAMA analysis, which *are* based on EPA — not NRC — standards.[38] Pilgrim Watch merely describes how there are different potential "cleanup" standards among the agencies, some more stringent, some less so. It states, for example, that "potential standards appear to range from" 15 millirem/yr to 5 rem/yr.[39] But Pilgrim Watch provided no support for any suggestion that the long-term dose standard used in the Pilgrim SAMA analysis was not a reasonable choice among options, particularly where neither current law nor practice establishes one definitive "cleanup" standard for all severe reactor accidents.

Notably, the SAMA analysis involves extensive predictive judgments, many reflected in the computer modeling inputs used in the analysis. That there may be a range of conceivable choices among inputs used in the SAMA analysis goes without saying, and many alternative inputs may be reasonable choices — reflecting reasonable predictions — even though some may be more conservative and others less so. A NEPA mitigation alternatives analysis need not reflect the most conservative — or worst-case — analysis.[40] There always will be myriad alternate ways a NEPA analysis could have been done. While proposing its own preferred inputs or methodology for the SAMA analysis, Pilgrim Watch fails to raise a genuine material dispute with the analysis that was done. Its petition does

---

[36] *See, e.g.,* "Code Manual for MACCS2: User's Guide," NUREG/CR-6613 (Vol. 1 May 1998) (ADAMS Accession No. ML063550020), at 7-3 to 7-4, 7-8 (MACCS2 User's Guide) (if it "is not possible to reduce doses" to the maximum allowable, "the property is condemned and the resident population is permanently relocated").

[37] Petition at 24.

[38] Before the Board, Entergy described that the dose rates used in the Pilgrim SAMA analysis were taken from the guidance manual for the MACCS2 computer code, which Entergy cited in its Environmental Report. *See* Entergy Answer Opposing Pilgrim Watch Request for Hearing on a New Contention (Dec. 27, 2010) (Entergy Answer on Cleanup Contention) at 8; MACCS2 User's Guide at 7-8. The dose rates are based on the EPA "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents" (May 1992). *See* Entergy Answer on Cleanup Contention at 8 n.14. At oral argument on the contention, Entergy counsel described the standard as allowing a maximum dose of 2 rem in the first year and 0.5 rem in each of the next 4 years. *See* Transcript (Mar. 9, 2011) at 846; MACCS2 User's Guide at 7-8.

[39] Petition at 23.

[40] *See, e.g., Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 354-56 (1989).

not point to any ground — technical or legal — for the claim that Entergy "did not conduct a valid [SAMA] cost-benefit analysis."[41]

Pilgrim Watch states that its contention "offered two solutions" to the inter-agency matters discussed in the *Inside EPA* article: (1) deny the license renewal application unless and until all matters discussed in the article have been definitively resolved; or (2) require the SAMA analysis to be redone in the "far more conservative" manner the Cleanup Contention "suggested."[42] But again, the contention contains merely Pilgrim Watch's own unsupported suggestions of alternate inputs or methodology for the SAMA analysis. Pilgrim Watch does not specify or otherwise discuss the inputs, factors, or standards the Pilgrim SAMA analysis actually considered. Moreover, Pilgrim Watch's apparent claim that the NRC must "require" Entergy to implement "all possible" mitigation alternatives is inconsistent with NEPA, which neither requires nor authorizes the NRC to order implementation of mitigation measures analyzed in an environmental analysis.[43]

Pilgrim Watch's failure to provide adequate basis and support by itself is sufficient to require rejection of the contention. But Pilgrim Watch also suggests no error in the Board's finding that all of the technical aspects of the SAMA analysis that Pilgrim Watch now seeks to challenge could have been challenged earlier.[44] Entergy's Environmental Report, for example, described how the Pilgrim SAMA analysis source terms were derived, identified the source term release fractions, described the use of discount rates, and also indicated that mean accident consequence values were used.[45] Further, Entergy states that in May 2007 it provided Pilgrim Watch the set of all inputs used in the SAMA analysis, including the cleanup dose levels.[46]

In short, Pilgrim Watch's challenge to the inputs and methodology in the

---

[41] Petition at 23. Pilgrim Watch also provides no support for its claim that "if EPA is in charge" of decontamination efforts in the event of an actual severe accident, there would be an "overall longer time period" in the "decision-making process," leading to "increase[d] overall costs." *Id.* at 24.

[42] *Id.*

[43] *See, e.g., Methow Valley Citizens Council,* 490 U.S. at 353.

[44] *See* LBP-11-20, 74 NRC at 81 n.93 (citing Entergy Answer on Cleanup Contention at 7-11; NRC Staff's Answer in Opposition to Pilgrim Watch's Request for Hearing on New Contention (Dec. 23, 2010) at 11).

[45] *See, e.g.,* Entergy Answer on Cleanup Contention at 7-11; Entergy Brief at 3-4.

[46] *See* Entergy Answer on Cleanup Contention at 8. Additionally, Pilgrim Watch acknowledged that one of its own cited references in its original intervention petition, a Sandia National Laboratories report from 1996, described "disagreement regarding which agency is responsible for cleanup" and "no agreed upon cleanup standard." *See* Pilgrim Watch Reply to Entergy's and NRC Staff's Answers Opposing Pilgrim Watch Request for Hearing on a New Contention (Jan. 7, 2011) at 8. *See also* SAND96-0957, D. Chanin et al., Site Restoration: Estimation of Attributable Costs from Plutonium-Dispersal Accidents (May 1996), at B-1 to B-11 (addressing different potential "criteria for cleanup," including the dose rates from the EPA Protective Action Guides).

SAMA analysis is impermissibly late under our standards in section 2.309(f)(2),[47] and is, in any event, unsupported. The *Inside EPA* article and attached e-mails neither render Pilgrim Watch's various SAMA analysis suggestions timely nor otherwise provide the necessary factual or legal support for them. The Cleanup Contention therefore does not point to any material deficiency — any NEPA violation — in the SAMA analysis. Pilgrim Watch's petition fails to identify error or abuse of discretion in the Board's rejection of the Cleanup Contention.

In rejecting the contention, the Board additionally found that Pilgrim Watch had not met, nor even addressed, our standards for reopening the evidentiary record.[48] Pilgrim Watch takes the position that it did not need to address the reopening standards. While it is unnecessary to reach the reopening standard issue in regard to the Cleanup Contention (given the contention's lack of support and untimeliness under section 2.309(f)(2)), we nonetheless address Pilgrim Watch's arguments on reopening later in this decision, following our discussion of Cables Contention 2.

C. Cables Contention 2

In December 2010, Pilgrim Watch filed Cables Contention 1, challenging Entergy's AMP for "non-environmentally qualified (EQ) inaccessible cables and

---

[47] *See* LBP-11-20, 74 NRC at 81 n.93 (citing Entergy and Staff briefs before Board). The standard for new or amended contentions involves a balancing of eight factors:

> (i) Good cause, if any, for failure to file on time;
>
> (ii) The nature of the requestor's/petitioner's right under the [AEA] to be made a party . . . ;
>
> (iii) The nature and extent of the requestor's/petitioner's property . . . ;
>
> (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.

See 10 C.F.R. § 2.309(c)(1)

The factor given the most weight among these standards is whether the intervenor has shown "good cause" for the late filing. *See Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2), CLI-10-12, 71 NRC 319, 323 (2010). Pilgrim Watch's petition does not identify a "good cause" for the late SAMA claims. Further, given the lack of support for the SAMA input/methodology claims, it is not evident that Pilgrim Watch's participation would "reasonably be expected" to assist in developing a sound technical or legal record for the SAMA claims.

[48] *See* LBP-11-20, 74 NRC at 75-78, 81-82.

cable splices."[49] The contention claimed that the AMP was "insufficient to provide reasonable assurance that these cables will be in compliance with NRC regulations and public health and safety shall be protected during license renewal."[50] Pilgrim Watch claimed that the contention was timely because the "information upon which this contention [was] based did not become available" until December 2, 2010, when the NRC issued NRC Information Notice 2010-26 on submerged electrical cables.[51]

The Board rejected Pilgrim Watch's Cables Contention 1 as impermissibly late under our contention admissibility rule, and additionally for failure to satisfy the requirements for reopening the evidentiary record.[52] The Board stated that Pilgrim Watch had "plainly concede[d]" that Entergy's January 2006 license renewal application addressed aging management of inaccessible cables, yet Pilgrim Watch filed its cables contention nearly 5 years later.[53] The Board rejected Pilgrim Watch's argument that Information Notice 2010-26 provided "new information" constituting good cause for the late filing.[54] Citing our decision in *Vermont Yankee,* the Board stated that the Information Notice "merely summarized information" that had long been publicly available.[55]

Pilgrim Watch does not appeal dismissal of Cables Contention 1. Pilgrim Watch describes Cables Contention 1 as "superseded" by Cables Contention 2, which reads as follows:

> Entergy's Aging Management Plan (*as amended by Entergy on January 7, 2011*) for non-environmentally qualified (EQ) inaccessible cables and cable splices at Pilgrim Station is insufficient to provide reasonable assurance that these cables will be in compliance with NRC Regulations and public health and safety will be protected during license renewal.[56]

---

[49] *See* Cables Contention 1, at 1. Section 50.49 sets forth particular requirements for the environmental qualification of electric components important to safety for nuclear power plants. Electric equipment important to safety but located in a "mild environment" does not fall within the scope of this rule. *See* 10 C.F.R. § 50.49(c). A mild environment "would at no time be significantly more severe than the environment that would occur during normal plant operation, including anticipated operational occurrences." *See id.*

[50] Cables Contention 1, at 1.

[51] *Id.* at 34. *See also* NRC Information Notice 2010-26, Submerged Electrical Cables (Dec. 2, 2010) (ADAMS Accession No. ML102800456).

[52] *See* LBP-11-20, 74 NRC at 82-83.

[53] *Id.* at 82.

[54] *Id.* at 83.

[55] *See id.* at 82-83 (citing *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 344 (2011)).

[56] Cables Contention 2, at 1 (emphasis in original).

Pilgrim Watch claimed that two new documents rendered Cables Contention 2 timely: (1) an updated version of the Generic Aging Lessons Learned (GALL) Report, a guidance document for license renewal, containing the NRC Staff's revised section on non-EQ inaccessible cables (section XI.E3); and (2) Entergy's January 2011 supplement to its license renewal application, based on the revised GALL Report.

Entergy's supplement included amendments to the AMP for non-EQ medium-voltage inaccessible cables, essentially heightening the monitoring of the cables.[57] Among other enhancements, Entergy's revised AMP increases the frequency of testing and inspections. The enhanced program includes commitments to test inaccessible cables at least once every 6 years (an increase over the earlier commitment of at least once every 10 years), and to inspect cable manholes at least yearly (an increase over the earlier commitment of at least every other year).[58] The scope of the program also increased, and now includes low-voltage cable between 400 V to 2 kV.[59]

In support of Cables Contention 2, Pilgrim Watch raised many of the same or similar claims that it had raised in support of Cables Contention 1. Pilgrim Watch claimed that the amended AMP is deficient because (1) the program "ignores cables carrying less than 400 Volts"; (2) inspections of cables, although more frequent than those in the original AMP, "remain too infrequent"; (3) the AMP did not specifically address recommendations made in a 1996 Sandia National Laboratories report and a 2010 Brookhaven National Laboratory study; (4) Entergy "never commits to . . . replacing non-EQ cables exposed to any submergence"; and (5) although the AMP includes a commitment to use a "proven method" for detecting cable degradation, there is no "'proven' technology to detect cable and splice degradation due to periodic submergence in a saltwater and otherwise chemically contaminated environment."[60] Pilgrim Watch argued that all cables "exposed to any submergence must be replaced with cables designed and qualified for underwater operation."[61] Pilgrim Watch further claimed that, despite Entergy's amendments to the AMP, the program "remains woefully insufficient."[62]

---

[57] *See id.* at 25, 53-54. *See also* "Generic Aging Lessons Learned (GALL) Report," NUREG-1801 (Rev. 2, Dec. 2010) (ADAMS Accession No. ML103490041), at XI.E3-1 to XI.E3-4; Bethay, Stephen J., Entergy, Letter to NRC, Att. 1, License Renewal Application Supplemental Information (Jan. 7, 2011) (ADAMS Accession No. ML110200058), at 8-10 (revising sections A.2.1.21 and B.1.19 of the license renewal application) (LRA Supplement).

[58] *See* LBP-11-20, 74 NRC at 86-87 (citing LRA Supplement).

[59] *See id.* at 86.

[60] *See generally* Cables Contention 2, at 28-48.

[61] *Id.* at 29 (quoting Blanch Affidavit at 37).

[62] *Id.* at 28.

The Board rejected Cables Contention 2 as untimely under both our rule for new and amended contentions and our standard for reopening the record.[63] The Board stressed that "every single objection" to the amended AMP "could (and therefore should) have been raised at the outset of this proceeding as an objection to the AMPs set out in the original" license renewal application, submitted in January 2006.[64] The asserted "shortcomings are not new today," the Board explained.[65]

Pilgrim Watch did not suggest, for example, that any of Entergy's revisions to the AMP made the program weaker or introduced a deficiency that was new. On the contrary, Pilgrim Watch described the new AMP as an improvement over the original program.[66] In Pilgrim Watch's view, the revised GALL Report and AMP simply did not go far enough. As the Board stated, the complaint in Cables Contention 2 was that the asserted deficiencies "*remain[ed]*" in the amended AMP, not that any of the claimed deficiencies were new or otherwise weakened the originally proposed AMP.[67]

Because the Board found that Pilgrim Watch's claims in Cables Contention 2 did not genuinely stem from the specific amendments to the AMP (or from particular information in the revised GALL Report), the Board concluded that the contention was untimely both under our standards for admission of new or amended contentions (10 C.F.R. § 2.309(f)(2)) and under our standards for reopening the evidentiary record (10 C.F.R. § 2.326(a)(1)).[68]

On appeal, Pilgrim Watch's arguments on timeliness do not point to any Board error or abuse of discretion.[69] Pilgrim Watch's petition nowhere suggests how any of the asserted deficiencies set forth in the contention are based on new

---

[63] *See* LBP-11-20, 74 NRC at 85-89.

[64] *See id.* at 87-88.

[65] *See id.* at 88 n.123.

[66] At oral argument, Pilgrim Watch's representative stated, for example, that the revised AMP "is a little better" than the original, "but it doesn't do the trick" because there is "still . . . no requirement" to replace the cables. *See* Tr. at 800; Pilgrim Watch Reply to Entergy's and NRC Staff's Answers Opposing Pilgrim Watch Request for Hearing (Jan. 14, 2011) at 4 ("Entergy's new AMP may be marginally better than its original one . . . [but] remains deficient.").

[67] LBP-11-20, 74 NRC at 85 (emphasis in original). *See also* Cables Contention 2, at 28.

[68] LBP-11-20, 74 NRC at 86 & n.115.

[69] *See, e.g.,* Petition at 9 n.9 (addressing the standards for "non-timely filings" listed in 10 C.F.R. § 2.309(c)). *See also* 10 C.F.R. § 2.309(f)(2) (specifying standards for late-filed contentions, which must show that the information upon which the new contention is based "was not previously available," and is "materially different than information previously available"). Among the eight factors considered in section 2.309(c), the factor "accorded the greatest weight" is whether there was "good cause" for the failure to file a timely contention. *See Watts Bar,* CLI-10-12, 71 NRC at 323. Absent "good cause," there must be a "compelling showing on the remaining factors"; it is a "rare case where we would excuse a nontimely petition absent good cause." *See id.* Pilgrim Watch does not present a compelling case. *See generally* Petition at 9 n.9.

information revealed in the revised GALL Report or amended AMP, or otherwise could not have been raised at the outset of this proceeding. Because the claims in Cables Contention 2 do not stem from the changes Entergy made in the AMP, the amended AMP did not provide "good cause" for the late-filed contention.[70] We therefore discern no error in the Board's conclusion that the contention is late under both 10 C.F.R. §§ 2.309(c) and 2.326(a)(1)).

Indeed, Pilgrim Watch raised many of the same cable-related claims in an enforcement petition filed in July 2010, pursuant to 10 C.F.R. § 2.206.[71] The section 2.206 petition addresses both the current Pilgrim license term and the renewal term. In the petition, Pilgrim Watch states that it "did not learn about this [inaccessible cables] issue in time to file a contention or request reopening

---

[70] *See* 10 C.F.R. § 2.309(c); Petition at 9. Contrary to Pilgrim Watch's view (*see* Petition at 8), the Board did not misread our decisions in *Vermont Yankee* and *Oyster Creek. See* LBP-11-20, 74 NRC at 87 (citing *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 273-74 (2009) *aff'd, New Jersey Environmental Federation v. NRC,* 645 F.3d 220, 230 (3d Cir. 2011) ("the NRC reasonably determined that if AmerGen's enhanced monitoring program was insufficient, it must have been insufficient beforehand too"). *See also Vermont Yankee,* CLI-11-2, 73 NRC at 341-42. The point is not that contentions cannot be based on amended programs containing enhancements, but that new or amended contentions must be *based on new facts* not previously available. Here, Cables Contention 2 is not actually challenging the amendments — the enhancements — to the AMP, and therefore is not based on any new information.

While Judge Young (in a separate opinion) found the contention timely, she relies on a flawed reading of our decision in *Vermont Yankee. See* LBP-11-20, 74 NRC at 96-99 (Young, J., concurring in part and dissenting in part). Judge Young suggests that we found a cables-related contention untimely in *Vermont Yankee* because the petitioner had neither moved to reopen the record nor requested leave to amend its contention to challenge the licensee's updated and enhanced AMP for cables. Judge Young refers, however, to a portion of our decision focused not on timeliness, but on whether the Board caused prejudice to the intervenor by considering the licensee's supplement to the application, which contained the updated AMP. *See id.* at 97, 99. We concluded that there was no prejudice because the intervenor could have sought to amend its contention to respond to the supplement. *See Vermont Yankee,* CLI-11-2, 73 NRC at 345. Our point was only that if the intervenor believed that the application supplement actually presented some new or additional deficiency — some new harm to the intervenor — the intervenor could have filed an amended contention. Our statements addressing whether the Board's actions constituted prejudice in no way diminished the decision's clear conclusion on timeliness: "[t]he tardy filing of a contention may be excusable only where *the facts upon which the amended or new contention is based* were previously unavailable." *See id.* at 344 (emphasis added). We did not suggest that it is appropriate to file amended contentions only to raise claims that are not based on genuinely new information. Because the intervenor in the case did not submit an amended contention, we did not prejudge what the full content of such a contention might have been.

[71] *See* "Re: Pilgrim Watch 2.206 Petition Regarding Inadequacy of Entergy's Management of Non-Environmentally Qualified Inaccessible Cables & Wiring at Pilgrim Station" (July 19, 2010) (ADAMS Accession No. ML1020900241) (Pilgrim Watch Enforcement Petition). The 2.206 petition has been held in abeyance, pending the disposition of Pilgrim Watch's contentions on inaccessible cables. *See generally* McGinty, Timothy J., Office of Nuclear Reactor Regulation, NRC, Letter to Mary Lampert, Pilgrim Watch (May 31, 2011) (ADAMS Accession No. ML111160334) (NRC Letter Re: 2.206 Petition).

the hearing" in the license renewal proceeding.[72] At oral argument on the cables contentions, Pilgrim Watch's representative acknowledged the section 2.206 petition. She explained that although Pilgrim Watch has known about the submerged cables issue for some time, it "didn't bring [the issue] forward in 2006 . . . because there is only so much we could have dealt with," and that the various NRC actions taken over several years regarding the monitoring of inaccessible cables had given Pilgrim Watch the impression that the NRC "was going to actually regulate and make some requirements on something" the NRC had considered "for over a decade."[73]

Pilgrim Watch describes disappointment with Information Notice 2010-26 as the reason behind its filing of the cables contentions. Pilgrim Watch states that it had expected that the NRC would "require the industry" to take particular actions, but was disappointed that the Information Notice imposed no requirements.[74] But this is effectively a complaint that the NRC failed to take enforcement or other regulatory oversight action, a matter appropriate for a section 2.206 petition, which Pilgrim Watch has filed. Pilgrim Watch's dissatisfaction with the Information Notice does not render its contention timely.

Similarly, one of Pilgrim Watch's central assertions is that all cables that experience any submergence must be replaced with cables qualified for underwater use. While Pilgrim Watch argues that cable inspections "remain too infrequent," it appears more to be claiming that inspections are altogether inadequate and that the relevant cables must be replaced with environmentally qualified cables under 10 C.F.R. § 50.49.[75] It is Pilgrim Watch's claim that *right now* — not simply in the renewal term — there are submerged cables in violation of section 50.49. This claim of a current regulatory violation is a matter appropriately addressed by the Staff in the context of Pilgrim Watch's pending enforcement petition. If the Staff were to find any current violations of our safety regulations, such findings also would apply, as appropriate, to the license renewal term.[76]

---

[72] Pilgrim Watch Enforcement Petition at 7.

[73] *See* Tr. at 797-98, 877 (because NRC had addressed issue of submerged cables "over and over again in information notices," Pilgrim Watch expected NRC would impose new "requirements," but it "didn't happen"). *See also* Pilgrim Watch Reply to NRC Staff's Answer to Pilgrim Watch's Request for Review (Sept. 12, 2011) at 4 ("all of the papers that NRC Staff and Entergy cite to show why everyone should have known of this problem led Pilgrim Watch to assume that the NRC would seriously address the issue") (Reply to Staff).

[74] *See* Reply to Staff at 4. *See also* Reply to Entergy's and the NRC Staff's Oppositions to Pilgrim Watch's Request for Hearing on a New Contention (Feb. 24, 2011) at 8-10 (PW Reply to Entergy and Staff/Cables Contention 2).

[75] *See* Blanch Affidavit at 37 ("there is no technical justification for periodicity of inspections").

[76] The section 2.206 petition review process encompasses both "current or future safety issues." *See* NRC Letter Re: 2.206 Petition at 2.

D. Reopening Standards

For both the Cleanup Contention and Cables Contention 2, the Board additionally found that Pilgrim Watch had not satisfied the standards for reopening a closed record. Pilgrim Watch argues that the reopening standards did not apply to either contention, and that in any event, it satisfied those standards for Cables Contention 2.

Pilgrim Watch identifies no basis for revisiting the Board's conclusions. At the time that Pilgrim Watch filed the cleanup and cables contentions, the only matter before the Board was a limited issue from Contention 3 that we had remanded.[77] The Board earlier had dismissed Contention 3 on summary disposition, and then held a hearing on Contention 1, ultimately issuing a decision in favor of Entergy, and terminating the proceeding before it.[78] In short, when the Board declared the proceeding "terminated," there was no question that the Board considered the *entire* evidentiary case record closed.

Our later remand of a limited portion of Contention 3 to the Board did not have the effect of reopening the evidentiary case record to a host of unrelated new issues. We expressly confined the matters remanded to the Board; the evidentiary record otherwise had been closed.

Accepting Pilgrim Watch's arguments would mean that whenever we remand an issue to the Board — no matter how limited the issue and no matter how long since the Board resolved all other admitted matters — no party would ever need to file a motion to reopen the record, so long as it presented contentions raising completely new issues.[79] Such a conclusion does not square with the purpose of the reopening standard, which is intended to impose a "deliberately heavy" burden on parties seeking to supplement the evidentiary record at the 11th hour, after the record has closed.[80] Had we not remanded any matter to the Board, the full evidentiary record would have remained closed, just as it was closed pending our decision. Our limited remand did not have the broader, collateral effect of setting aside altogether the need to satisfy the reopening standards for seeking further hearings on entirely new contentions.

Pilgrim Watch's argument that the reopening standard only applies to matters previously admitted and not to contentions raising new issues is contradicted by

---

[77] *See* CLI-10-11, 71 NRC at 290 ("remanding Contention 3, as limited by today's ruling" to the Board).

[78] LBP-08-22, 68 NRC at 610.

[79] *See generally* Petition at 3-5.

[80] *See, e.g., Vermont Yankee,* CLI-11-2, 73 NRC at 338.

the reopening rule and its Statements of Consideration.[81] In rejecting a similar argument, the U.S. Court of Appeals for the Third Circuit recently stated that an exception for situations where parties "seek to add previously unlitigated material would effectively render the [reopening] regulation meaningless."[82] The purpose of the rule is to raise the threshold — increase the showing necessary — for last-minute claims for additional hearings. The rule provides no exception for previously unlitigated issues.

Pilgrim Watch goes on to argue that while it did not file a motion to reopen the record for either the Cleanup Contention or Cables Contention 2, the latter "in fact, meets the reopening standard, as argued by Judge Young in [her] separate statement."[83] But again, Pilgrim Watch identifies no error warranting review of LBP-11-20.

The standards for reopening the case record require the movant to show that the motion is timely, addresses a significant safety or environmental issue, and demonstrates that "a materially different result would be or would have been likely had the newly proffered evidence been considered initially."[84] The rule further requires an affidavit setting forth "the factual and/or technical bases" for the above criteria, each of which "must be separately addressed, with a specific explanation of why it has been met."[85] In submitting Cables Contention 2, Pilgrim Watch neither filed a motion to reopen the record, nor addressed the criteria in the reopening rule. Pilgrim Watch simply stated that the reopening rule did not apply.[86] Mr. Blanch's affidavit also did not address the reopening rule's criteria.

Pilgrim Watch argues that it nonetheless also had claimed, in the alternative, that its filing effectively provided sufficient information to satisfy the reopening standards.[87] But the majority ruled otherwise and we can discern no basis to

---

[81] *See* 10 C.F.R. § 2.326(d); Final Rule: "Criteria for Reopening Records in Formal Licensing Proceedings," 51 Fed. Reg. 19,535, 19,538-39 (May 30, 1986) (rejecting commenter's view that standard should only apply to "an issue already considered").

[82] *See N.J. Envt'l Fed'n,* 645 F.3d at 233.

[83] Petition at 2.

[84] *See* 10 C.F.R. § 2.326(a)(1)-(3). An untimely issue "may be considered in the discretion of the presiding officer" if the issue is "exceptionally grave." *See* 10 C.F.R. § 2.326(a)(1).

[85] 10 C.F.R. § 2.326(b).

[86] Cables Contention 2, at 58-59.

[87] *See* Petition at 7. Pilgrim Watch refers to its reply to Entergy and the Staff, in which Pilgrim Watch stated that its "request for hearing is *not* a motion to reopen, and even if it were[,] Pilgrim Watch's request meets the standards for reopening — it is timely and addresses a significant safety issue." PW Reply to Entergy and Staff/Cables Contention 2, at 2 (emphasis in original). The reply went on to stress, however, that Pilgrim Watch was not "attempt[ing] to show that a 'materially different result would be or would have been likely had the newly proffered evidence been considered'" because its

(Continued)

revisit that conclusion. One, the majority found the contention untimely under 10 C.F.R. § 2.326(a)(1), concluding that Pilgrim Watch's objections to the AMP did not actually stem from Entergy's amendments to the AMP, but raised matters that could and should have been raised years ago.[88] The majority acknowledged that the timeliness requirement in section 2.326(a)(1) provides an exception for matters deemed "exceptionally grave." But it found Mr. Blanch's statements on the gravity of the cables issue "simply conclusory" and "speculative."[89] The Board majority found no basis to conclude that Contention 2 presented an issue posing an "exceptionally grave" threat to public safety.[90] Pilgrim Watch gives us no reason to revisit these conclusions.

The exception for "exceptionally grave" safety matters is intended to be used "only in truly extraordinary circumstances."[91] Here, the Staff has found Entergy's amended AMP to be consistent with the NRC's revised GALL Report, a guidance document for license renewal.[92] The Staff revised the GALL Report's discussion of inaccessible cables based on its reviews of industry operating experience and cable failure data. Pilgrim Watch does not dispute that Entergy's amended AMP complies with the GALL Report — rather, it disputes the sufficiency of the GALL Report's recommendations. While compliance with the GALL Report does not shield the amended AMP from challenge, it is relevant to whether the amended AMP credibly may be so deficient that it presents an "exceptionally grave" safety threat to the public.[93] Further, a July 2010 NRC inspection report attached to the

---

claims did not relate to earlier admitted contentions. *See id.* at 3. To the extent that Pilgrim Watch now claims that it demonstrated to the Board the likelihood of a materially different result, Pilgrim Watch impermissibly raises a new argument for the first time on appeal.

[88] LBP-11-20, 74 NRC at 85-89.

[89] *Id.* at 89 n.125.

[90] *Id.*

[91] *See* Criteria for Reopening Records, 51 Fed. Reg. at 19,536.

[92] *See* Safety Evaluation Report, Related to the License Renewal of Pilgrim Nuclear Power Station, Supplement 2, Docket No. 50-293 (June 2011) at 3-4 (ADAMS Accession No. ML11147A036) (finding program consistent with GALL Report, current Staff recommendations, and industry operating experience).

[93] We have stated that a "license renewal applicant's use of an aging management program identified in the GALL Report constitutes reasonable assurance that it will manage the targeted aging effect during the renewal period." *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 468 (2008). *See also Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 37 (2010). Given that the GALL Report reflects agency guidance and is not a rule, this is merely a presumption; the sufficiency of an AMP that meets the GALL Report's recommendations can be challenged if the contention admissibility requirements are otherwise met.

contention found a performance deficiency of "very low safety significance" and identified no regulatory violation.[94]

"Reopening will only be allowed where the proponent presents material, probative evidence which either could not have been discovered before or could have been discovered but is so grave that, in the judgment of the presiding officer, it must be considered anyway."[95] These are the requirements reflected in section 2.326(a)(1). Based on the record before us, we discern no error in the Board's judgment that these requirements were not met, which by itself is sufficient to defeat an effort to reopen a hearing record.

While we need not reach any further element of the reopening rule, one point bears clarification. Pilgrim Watch, relying on Judge Young's separate opinion, argues that to demonstrate under section 2.326(a)(3) that a "materially different result" would have been likely, all that is necessary is to demonstrate that "there are genuine facts in dispute."[96] Pilgrim Watch then goes on to list "disputed material facts" regarding the sufficiency of the amended AMP, and therefore to claim that Pilgrim Watch showed that a "materially different result" would have been likely because "Pilgrim Watch . . . could defeat a motion for summary disposition."[97]

But the reopening standard is not the equivalent of a summary disposition standard. While we have said that the quality of the evidence presented for reopening must be at least of a level sufficient to withstand a motion for summary disposition,[98] we also have made clear that the reopening standard requires more.[99] The motion must "demonstrate that a materially different result would be . . . *likely* had the newly proffered evidence been considered initially."[100] The Statement of Considerations clarifies that reopening should not be granted where a Board merely "is uncertain whether or not the new evidence is important."[101] The proper inquiry under section 2.326(a)(3) goes to "the *likelihood* that a different result will be reached if the information is considered."[102] This appropriately requires the Board to consider the information in the submitted supporting affidavits. While the Board does not reach an ultimate decision on the merits of the contention, it nonetheless must apply its expertise and make a record-based judgment on the

---

[94] *See* Cables Contention 2, Attachment 4, NRC Integrated Inspection Report 05000293/2010003 (July 20, 2010).

[95] Criteria for Reopening Records, 51 Fed. Reg. at 19,538.

[96] *See* Petition at 14.

[97] *See id.* (quoting Judge Young's Separate Statement, LBP-11-20, 74 NRC at 112).

[98] *See, e.g., Vermont Yankee,* CLI-11-2, 73 NRC at 346-47.

[99] *See Oyster Creek,* CLI-08-28, 68 NRC at 673-74.

[100] *See* 10 C.F.R. § 2.326(a)(3) (emphasis added).

[101] Criteria for Reopening Records, 51 Fed. Reg. at 19,537.

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

evidence. The evidence must be sufficiently compelling to suggest a likelihood of materially affecting the ultimate results in the proceeding.[103] To meet the reopening standard, then, it is insufficient merely to point to disputed facts.

While we agree with Judge Young's admonition not to "elevate[ ] form over substance," it is not obvious to us from Pilgrim Watch's petition or the record before us that there is a likelihood that Pilgrim Watch would prevail on the merits of Cables Contention 2. Nor did Judge Young make such a finding. We therefore cannot say that the Board majority erred in its overall conclusion that Pilgrim Watch did not "supply the necessary substance" to satisfy the reopening standards, particularly when many of Mr. Blanch's statements in his affidavit are conclusory, lacking adequate references and support, and the attached Information Notice 2010-26 and July 2010 inspection report on their face are insufficient to suggest that Pilgrim Watch likely would prevail on the merits.[104]

E. Pilgrim Watch's Additional Memoranda

Pilgrim Watch additionally argues that that Board "failed to consider new, significant and material information from Fukushima and information regarding whether there are 'proven' tests to determine degradation in cable insulation."[105] Pilgrim Watch refers to several memoranda it filed before the Board after the oral argument on the cleanup and cables contentions. Two of the memoranda claimed that Entergy officials gave "incorrect and misleading information" regarding tests to detect cable insulation.[106] The other three memoranda referenced the Fukushima accident.[107]

---

[103] *See N.J. Envt'l Fed'n,* 645 F.3d at 234 (rejecting argument that it was impermissible for Board and Commission to weigh evidence in evaluating whether rule standards are met).

[104] We need not and do not reach whether the contention raises a "significant" safety issue, an additional element necessary for meeting the reopening standard. *See* 10 C.F.R. § 2.326(a)(2). We note only that a "significant"issue is not shown "merely by showing that a plant component performs safety functions." *See Oyster Creek,* CLI-08-28, 68 NRC at 672 (internal quotation and citation omitted).

[105] Petition at 2.

[106] *See* Pilgrim Watch Memorandum — Entergy's Incorrect and Misleading Information Regarding Proven Tests to Detect Cable Insulation Degradation (Apr. 11); Pilgrim Watch Memorandum — Entergy's Incorrect and Misleading Information Regarding Proven Tests to Detect Cable Insulation Degradation — Video Supplement (Apr. 12, 2011). Pilgrim Watch's petition additionally references Pilgrim Watch Memorandum — Submerged Cables (June 23, 2011), which we reviewed but consider of no relevance to today's decision.

[107] *See* Pilgrim Watch Memorandum Regarding Fukushima (Mar. 12, 2011); Pilgrim Watch Post-Hearing Memorandum (Mar. 28, 2011); Pilgrim Watch Request for Leave to Supplement Pilgrim Watch Request for Hearing on the Inadequacy of Entergy's Aging Management Program of Non-Environmentally Qualified Cables (Splices) at Pilgrim Station, filed on December 10, 2010 and January 20, 2011 (Aug. 8, 2011).

The Board briefly addressed the five memoranda, stating that none had any "bearing" on its conclusions.[108] More specifically, the Board found that none of the memoranda were sufficiently linked to, or otherwise provided grounds for admission of, either the Cleanup Contention or Cables Contention 2.[109]

Setting aside the fact that Pilgrim Watch's "memoranda" are not filings contemplated by our rules of practice, it is not apparent to us how any of the memoranda present "new, significant, and material information" directly supporting admission of Pilgrim Watch's contentions. The two memoranda asserting that Entergy officials gave incorrect information — a point Entergy disputes — do not render the cable contention timely, for example; nor are the memoranda sufficient to satisfy other contention admissibility requirements. If it is Pilgrim Watch's argument that Entergy has violated a regulation or enforcement action is necessary, such a claim can be pursued through an enforcement petition; as we earlier noted, Pilgrim Watch's enforcement petition relating to inaccessible cables is pending.

The memoranda on the Fukushima accident contain cursory, generalized statements that likewise present no obvious ground to admit either contention. That a "basic cause of the Fukushima disaster was the loss of offsite power, due to the Tsunami"[110] is undisputed, and does not by itself suggest that Entergy's AMP for inaccessible cables is deficient under our regulations. Nor do the memoranda provide any ground for redoing the Pilgrim SAMA analysis. Pilgrim Watch neither points to a specific genuine material dispute with the Pilgrim SAMA analysis, nor with Entergy's license renewal application.[111] We note, additionally, that Pilgrim Watch has had the opportunity to file, and has filed, new contentions based on the Fukushima accident.[112]

---

[108] *See* LBP-11-20, 74 NRC at 73-74 n.61.

[109] *Id.* at 81, 83.

[110] *See* March 28 Memorandum at 2.

[111] To the extent that Pilgrim Watch in its petition presents new claims not made in the memoranda, these claims are raised impermissibly for the first time on appeal given that the Board never had the opportunity to consider them. In any event, Pilgrim Watch's petition identifies no basis for admission of its contention or other agency action. *See* Petition at 20-21; Entergy Brief at 23 n.51.

[112] *See* Pilgrim Watch Request for Hearing on Post Fukushima SAMA Contention (May 12, 2011); Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima (June 1, 2011); Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima (Nov. 18, 2011). The Board recently concluded that these contentions failed to meet relevant agency standards. *See* LBP-11-23, 74 NRC 287 (2011), *petition for review denied,* CLI-12-3, 75 NRC 132 (2012); LBP-12-1, 75 NRC 1 (2012). Pilgrim Watch's petition for review of LBP-12-1 is pending before us.

After the Board issued LBP-11-20, Pilgrim Watch also filed a memorandum before us, a request to "supplement the record" with a report by Congressman Edward Markey. This filing and the referenced

(Continued)

Our general assessment of Pilgrim Watch's various memoranda in no way suggests that we do not take very seriously the events at Fukushima, particularly whether information arising from the accident may point to procedural or hardware changes that should be implemented at U.S. reactors. As we outlined earlier this year, we continue to comprehensively assess the accident at Fukushima, including a careful review of all recommendations outlined by the NRC's Task Force studying the accident.[113] This extensive review is likely to result in new regulations as well as orders to licensees; our regulatory processes provide opportunities for stakeholder input. For the license renewal safety review, it is not clear at this point "whether any enhancements or changes considered by the Task Force will bear on our *license renewal* regulations," which are focused more narrowly on the proper management of aging.[114] As for our NEPA-based evaluations, if "new and significant information comes to light" that is relevant to ongoing "application-specific NEPA documents," the NRC will evaluate the information as appropriate.[115] We will address any new information presenting "a seriously different picture of the environmental impact of the proposed project" than previously assessed.[116] At this stage, however, our review of the Fukushima accident events is ongoing and remains insufficient to conclude whether any aspects of the *Pilgrim* license renewal environmental analysis may warrant supplementation. We reaffirm that no information we have learned so far from the Fukushima accident puts into question the "continued safety of our currently operating regulated facilities, including reactors and spent fuel pools."[117]

III. CONCLUSION

For reasons given in LBP-11-20 and in this decision, we *deny* Pilgrim Watch's petition for review.

---

report also have no obvious bearing on the admissibility of either contention at issue here — the Markey Report relates to internal NRC governance. *See* Pilgrim Watch's Request to Supplement Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Requests for Hearing on Certain New Contentions) August 11, 2011 (Filed August 26, 2011) and Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Requests for Hearing on New Contentions Relating to Fukushima Accident) Sept. 8, 2011 (Filed September 23, 2011) (Dec. 12, 2011). More recently, Pilgrim Watch filed an additional "supplement" to the record, containing a news article on decontamination efforts in Japan. See Pilgrim Watch's Supplement to Pilgrim Watch Petition for Review of LBP-11-20 (Mar. 6, 2012). The supplement does not contain any information that might change the reasoning or conclusions in this decision.

[113] *See generally Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141 (2011).

[114] *See id.* at 164.

[115] *See id.* at 167.

[116] *See id.* at 167-68 (internal quotation and citation omitted).

[117] *See id.* at 161.

IT IS SO ORDERED.[118]

For the Commission

ANDREW L. BATES
Acting Secretary of the Commission

Dated at Rockville, Maryland,
this 30th day of March 2012.

[118] Commissioner Apostolakis did not participate in this matter.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

E. Roy Hawkens, Chairman
Dr. Michael F. Kennedy
Dr. William C. Burnett

In the Matter of **Docket Nos. 52-040-COL**
52-041-COL
(ASLBP No. 10-903-02-COL-BD01)

FLORIDA POWER & LIGHT COMPANY
(Turkey Point Nuclear Generating Plant, Units 6 and 7) **March 29, 2012**

RULES OF PRACTICE: NONTIMELY CONTENTIONS (GOOD CAUSE)

The "good cause" factor in 10 C.F.R. § 2.309(c)(1) is the "most important" and entitled to the most weight. *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 261 (2009). Where a petitioner fails to establish good cause, "petitioner's demonstration on the other factors must be particularly strong." *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 73 (1992). A petition that attempts to proffer a nontimely contention without addressing the balancing factors in section 2.309(c) may be summarily rejected. *See Oyster Creek,* CLI-09-7, 69 NRC at 260-61.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

The Commission has stressed that the standards governing contention admis-

sibility are "strict by design." *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001). Failure to comply with any of the admissibility criteria in section 2.309(f)(1) warrants rejection of a contention. *USEC Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 437 (2006).

NEPA: ENVIRONMENTAL REPORT; SCOPE OF ENVIRONMENTAL ANALYSIS (REQUIRED)

It is well established that an environmental report need only discuss reasonably foreseeable environmental impacts of a proposed action. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348-49 (2002).

RULES OF PRACTICE: REPLY BRIEFS

A petitioner may not, by design or neglect, fail to include critical admissibility-related information in its initial pleading, and then attempt to remedy that failure by including the information in a reply to which the respondent has no right of response. *See Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004) (the NRC's procedural rules do not allow "using reply briefs to provide, for the first time, the necessary threshold support for contentions," as that "would effectively bypass and eviscerate [its] rules governing timely filing, contention amendment, and submission of late-filed contentions"); *Nuclear Management Co.* (Palisades Nuclear Plant), CLI-06-17, 63 NRC 727, 732 (2006) (petitioner may not remediate deficient contention "by introducing in the reply documents that were available to it during the time frame for initially filing contentions").

MEMORANDUM AND ORDER

(Denying CASE's Motions to Admit Newly Proffered Contentions 9 and 10, and Dismissing CASE from This Proceeding)

An intervenor in this proceeding, Citizens Allied for Safe Energy, Inc. (CASE), submitted motions asking this Licensing Board to admit two newly proffered

contentions.[1] For the reasons discussed below, we deny CASE's motions. Additionally, because it no longer has a contention or an unresolved pleading pending before this Licensing Board, we dismiss CASE from this proceeding.

I. BACKGROUND

A. Relevant Events Leading to the Filing of CASE's Pending Motions

This proceeding arises from Florida Power & Light Company's (FPL's) combined license (COL) application for two new nuclear power reactors, Turkey Point Units 6 and 7, at its facility near Homestead, Florida.[2] On February 28, 2011, this Board granted CASE's hearing request opposing FPL's COL application. See LBP-11-6, 73 NRC 149, 251 (2011).[3]

In LBP-11-6, we, *inter alia,* admitted CASE's Contentions 6 and 7 for litigation.[4] Contention 6 was an environmental contention of omission that asserted FPL's Environmental Report (ER) improperly "fails to address environmental impacts in the event the applicant will need to manage Class B and Class C [low-level radioactive waste (LLRW)[5]] on the Turkey Point site for [more than

[1] *See* Motion for Leave for [CASE] to File a New Contention (dated Feb. 2, 2012, filed Feb. 3, 2012) [hereinafter CASE Motion to File New Contention 9]; Motion to File a Timely Contention in Response to New Information (Feb. 10, 2012) [hereinafter CASE Motion to File New Contention 10].

[2] *See* [FPL, COL] Application for the Turkey Point Units 6 & 7, Notice of Hearing, Opportunity to Petition for Leave to Intervene and Associated Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation, 75 Fed. Reg. 34,777 (June 18, 2010).

[3] We also granted a hearing request filed jointly by Mark Oncavage, Dan Kipnis, the Southern Alliance for Clean Energy, and the National Parks Conservation Association (hereinafter referred to collectively as Joint Intervenors), and we granted a request by the Village of Pinecrest to participate as an interested local governmental body. *See* LBP-11-6, 73 NRC at 251-52.

[4] In addition to admitting CASE's Contentions 6 and 7, we admitted Joint Intervenors' Contention 2.1, which was an environmental contention of omission. *See* LBP-11-6, 73 NRC at 190-94. We recently dismissed that contention, concluding that FPL's Revision 3 to its COL application rendered it moot. *See* Licensing Board Memorandum and Order (Granting FPL's Motions to Dismiss Joint Intervenors' Contention 2.1 and CASE's Contention 6 as Moot) (Jan. 26, 2012) at 6 (unpublished) [hereinafter January 26 Order]. Joint Intervenors have a request pending before this Board that seeks to admit a new contention challenging the adequacy of the measures taken by FPL to moot Contention 2.1.

[5] The NRC divides LLRW into three classes — A, B, and C (10 C.F.R. § 61.55(a)(2)) — based on the concentration and types of long-lived and short-lived radionuclides. *See id.* § 61.55(a)(1). As discussed in LBP-12-4, 75 NRC 213, 216 n.5 (2012), LLRW generated in a nuclear power plant includes reactor water resin beds, contaminated filters, protective clothing and shoe covers, cleaning rags, and tools.

2 years].” LBP-11-6, 73 NRC at 241.[6] Contention 7 was a safety contention asserting that, in the event FPL needs to manage Class B and Class C LLRW for an extended period of time, FPL’s COL application

> fails to provide information sufficient to enable the NRC to reach a final conclusion on safety matters regarding the means for controlling and limiting radioactive material and effluents and radiation exposures within the limits set forth in [10 C.F.R.] Part 20 and ALARA [as low as reasonably achievable, 10 C.F.R. Part 50, Appendix I].

Id. at 246.[7]

On December 16, 2011, FPL submitted to the NRC Revision 3 to its COL application for Turkey Point Units 6 and 7. *See* Letter from Mano K. Nazar, Executive Vice President and Chief Nuclear Officer, FPL, to U.S. Nuclear Regulatory Commission (Dec. 16, 2011) (ADAMS Accession No. ML11361A102).

On January 3, 2012, FPL filed two motions. One motion argued that Revision 3 to FPL’s COL application supplied information that cured the omission in Contention 6, rendering that contention moot.[8] The other motion claimed that, in light of Revision 3, the inadequacy alleged to exist in Contention 7 had been remedied and, accordingly, this Board should grant a favorable judgment to FPL on that contention as a matter of law.[9]

CASE filed a response stating that it “will not oppose [FPL’s January 3] motions.”[10] CASE said it would, however, “file new contentions in a timely

---

[6] As admitted, Contention 6 stated in full:

> Because there currently is no access to an offsite LLRW disposal facility for proposed Units 6 and 7, and because it is reasonably foreseeable that LLRW generated by normal operations will need to be stored at the proposed site for longer than the two-year period contemplated in FPL’s ER, the analysis in the ER is inadequate because it fails to address environmental impacts in the event the applicant will need to manage Class B and Class C LLRW on the Turkey Point site for a more extended period of time.

LBP-11-6, 73 NRC at 241.

[7] As admitted, Contention 7 stated in full:

> FPL’s COL [application] fails to provide information sufficient to enable the NRC to reach a final conclusion on safety matters regarding the means for controlling and limiting radioactive material and effluents and radiation exposures within the limits set forth in [10 C.F.R.] Part 20 and ALARA in the event FPL needs to manage Class B and Class C LLRW for an extended period.

LBP-11-6, 73 NRC at 246.

[8] *See* [FPL’s] Motion to Dismiss CASE Contention 6 as Moot (Jan. 3, 2012).

[9] *See* [FPL’s] Motion for Summary Disposition of CASE Contention 7 (Jan. 3, 2012).

[10] *See* [CASE] Response to FPL Motions to Dismiss Contention 6 as Moot and for Summary Disposition of CASE Contention 7 (Jan. 23, 2012) [hereinafter CASE January 23 Response]. The

(Continued)

manner based on new information provided in those filings as warranted." CASE January 23 Response at 1.

On January 26, 2012, this Board issued an order granting FPL's motion to dismiss Contention 6 as moot. *See* January 26 Order at 5-6. We observed that, as modified by Revision 3, FPL's ER included "measures like reducing the service run length of resin beds or mixing spent resins to limit radioactivity concentrations [that] will reduce the volume of LLRW produced at Turkey Point to be sufficiently bounded within the levels and environmental impacts described in 10 C.F.R. § 51.51, Table S-3." *Id.* (internal quotation marks omitted). Additionally, we observed that "FPL's ER Revision 3 states that any necessary facilities to temporarily store additional waste would be built consistent with NRC guidance documents, and any such facilities would have small environmental impacts in addition to yielding small radiological impacts." *Id.* at 6. In short, Revision 3 cured the omission identified in Contention 6. Although we dismissed Contention 6 as moot, we stated that CASE could move to file a new contention challenging the adequacy of FPL's curative action, but any such motion must be filed by February 10, 2012. *Id.* We emphasized that "the scope of any newly proffered contention is strictly limited to challenging the adequacy of the measures taken by FPL in curing the omission in CASE's Contention 6." *Id.* at 6 n.13.

Regarding Contention 7, on February 28, 2012, this Board issued an order in which — in light of FPL's Revision 3 to its Final Safety Analysis Report (FSAR) and the other filings in this proceeding, including CASE's failure to oppose FPL's request for summary disposition (*see* LBP-12-4, 75 NRC at 222) — we concluded that (1) there no longer existed a genuine dispute as to any material fact concerning Contention 7, and (2) FPL was entitled to a judgment in its favor on Contention 7 as a matter of law. *See id.* at 219-25. In particular, we determined that

> FPL's commitment . . . that it will — if necessary — design, construct, and operate a temporary onsite LLRW storage facility in accordance with the guidance in Appendix 11.4-A to NUREG-0800, coupled with FPL's plan in section 11.4 of the FSAR for controlling and limiting radioactive material and effluents and radiation exposures from LLRW, which incorporates by reference the corresponding section of Revision 19 of the [Design Control Document (DCD)], provides "sufficient [information] to enable the Commission to reach a final conclusion on all safety matters" regarding "the means" FPL will use to comply with radiation protection

---

NRC Staff filed responses supporting both of FPL's motions. *See* NRC Staff Answer to "[FPL's] Motion to Dismiss CASE Contention 6 as Moot" (Jan. 23, 2012); NRC Staff Answer to "[FPL's] Motion for Summary Disposition of CASE Contention 7" (Jan. 23, 2012).

requirements in 10 C.F.R. Part 20 (10 C.F.R. § 52.79(a)(3)), including LLRW handling and storage.

Id. at 224-25. We therefore granted FPL's motion for summary disposition of Contention 7. *Id.* at 225.

B. The Pleadings Under Consideration

1. CASE's Newly Proffered Contention 9

On February 3, 2012, CASE moved to admit newly proffered safety Contention 9, which CASE claims "is based on new information provided in FPL's [motion for summary disposition of Contention 7 filed on] January 3, 2012." *See* CASE Motion to File New Contention 9, at 2. Contention 9 claims that "[FPL's] revised [plan for the long-term, onsite handling of LLRW] from Turkey Point 6 and 7 is inadequate to protect public health and safety [in] all circumstances." *Id.,* Attach. 1, at (unnumbered) 1. CASE advances three arguments in support of Contention 9: (1) FPL's auxiliary onsite LLRW storage structures would "be inundated by water, either routinely due to sea level rise, or intermittently due to storm surge related to hurricanes" (*id.*); (2) FPL's revised FSAR does not address the issue of permanent onsite storage for LLRW even though "the availability of permanent storage elsewhere in the nation is not assured" (*id.*); and (3) FPL's COL application erroneously "assumes that the current emergency plans in place with Miami-Dade County for [Turkey Point Units] 3 & 4 is likewise sufficient for [Units] 6 & 7." *Id.* at (unnumbered) 4.

FPL and the NRC Staff filed answers opposing admission of Contention 9.[11]

2. CASE's Newly Proffered Contention 10

On February 10, 2012, CASE moved to admit newly proffered environmental Contention 10, which CASE claims "is based on new information provided in FPL's [motion to dismiss Contention 6 filed] on January 3, 2012." *See* CASE Motion to File New Contention 10, at (unnumbered) 3. Contention 10 asserts that "FPL's [ER] Revision 3 does not adequately address the impact of extended storage of all types of AP1000 [LLRW]." *Id.,* Attach. 1, Contention 10, at

[11] *See* [FPL's] Answer to CASE's Motion for Leave to File a New Contention and New Contention 9 (Feb. 28, 2012) [hereinafter FPL Answer Opposing Contention 9]; NRC Staff Answer to "Motion for Leave for [CASE] to File a New Contention" (Feb. 21, 2012) [hereinafter NRC Staff Answer Opposing Contention 9]. CASE filed replies to these answers. *See* [CASE] Reply to NRC Staff Opposition to Contention 9 (Feb. 29, 2012); [CASE] Reply to [FPL] Answer to CASE's Motion for Leave to File a New Contention and New Contention 9 (Mar. 7, 2012).

(unnumbered) 1 [hereinafter CASE Motion to File New Contention 10, Attach. 1]. In support of Contention 10, CASE argues that FPL's ER, as modified by Revision 3, fails adequately to discuss: (1) the "impact . . . of catastrophic climactic conditions with total site inundation" on LLRW (including used steam generators and contaminated soil) and "liquid pathways analysis" (*id.* at (unnumbered) 1-3, 5-6); (2) the unavailability of offsite storage for LLRW (*see id.* at (unnumbered) 6-7); and (3) the high level of LLRW radioactivity that will be stored onsite due to the need to replace defective steam generators. *See id.* at (unnumbered) 3-5.

FPL and the NRC Staff filed answers opposing admission of Contention 10.[12]

II. APPLICABLE LEGAL STANDARDS

To be admissible, a newly proffered contention must satisfy: (1) either the timeliness standards in 10 C.F.R. § 2.309(f)(2) for new and amended contentions, or the balancing test in 10 C.F.R. § 2.309(c) for nontimely contentions; *and* (2) the general contention admissibility criteria in 10 C.F.R. § 2.309(f)(1). We discuss those standards in turn.

A. Timeliness Standards in 10 C.F.R. § 2.309(f)(2)

A new or amended contention filed after the initial filing period has expired may be admitted as timely only with leave of the Licensing Board on a showing that:

> (i) The information upon which the amended or new contention is based was not previously available;
>
> (ii) The information upon which the amended or new contention is based is materially different than information previously available; and
>
> (iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.

10 C.F.R. § 2.309(f)(2).

[12] *See* [FPL's] Answer to CASE's Motion for Leave to File a New Contention and New Contention 10 (Feb. 27, 2012) [hereinafter FPL Answer Opposing Contention 10]; NRC Staff Answer to "Motion to File a Timely Contention in Response to New Information" (Feb. 27, 2012) [hereinafter NRC Staff Answer Opposing Contention 10]. CASE filed a reply to these answers. *See* [CASE] Reply to [FPL] and to NRC Staff Opposition to CASE Contention 10 Regarding Turkey Point Units 6 & 7 (Mar. 6, 2012) [hereinafter CASE Reply on Contention 10].

B. Balancing Test in 10 C.F.R. § 2.309(c) for Nontimely Contentions

A contention that fails to satisfy timeliness standards in section 2.309(f)(2) may still be admitted pursuant to a balancing test governing nontimely filings that weighs the following factors set forth in section 2.309(c):

> (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)(i)-(viii). The "good cause" factor is the "most important" and entitled to the most weight. *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 261 (2009). Where a petitioner fails to establish good cause, "petitioner's demonstration on the other factors must be particularly strong." *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 73 (1992). A petition that attempts to proffer a nontimely contention without addressing the balancing factors in section 2.309(c) may be summarily rejected. *See Oyster Creek,* CLI-09-7, 69 NRC at 260-61.

C. Admissibility Criteria In 10 C.F.R. § 2.309(f)(1)

In addition to satisfying the timeliness standards in 10 C.F.R. § 2.309(f)(2) or the balancing test in 10 C.F.R. § 2.309(c), a newly proffered contention must satisfy the admissibility criteria in 10 C.F.R. § 2.309(f)(1), which require that a contention:

> (i) Provide a specific statement of the issue of law or fact to be raised or controverted . . . ;
> (ii) Provide a brief explanation of the basis for the contention;
> (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;

> (iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
>
> (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; and
>
> (vi) [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 . . . 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). The Commission has stressed that the standards governing contention admissibility are "strict by design." *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001). Failure to comply with any of the admissibility criteria in section 2.309(f)(1) warrants rejection of a contention. *USEC Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 437 (2006).

III. ANALYSIS

A. Newly Proffered Contention 9 Is Not Admitted

1. Contention 9, Which Is Effectively an Opposition to FPL's Request for Summary Disposition of Contention 7, Is Unjustifiably Late

In Contention 9, CASE asserts that "[FPL's] revised [plan for the long-term, onsite handling of LLRW] from Turkey Point 6 and 7 is inadequate to protect public health and safety [in] all circumstances." CASE Motion to File New Contention 9, Attach. 1, at (unnumbered) 1. This is precisely the issue that, *without opposition from CASE,* we adjudicated in FPL's favor in LBP-12-4.

As discussed *supra* Part I.A, on January 3, 2012, FPL moved for summary disposition of Contention 7, arguing that its COL application, as supplemented by Revision 3, contained sufficient information to enable the NRC to reach a conclusion on safety matters regarding the means by which FPL would handle long-term onsite LLRW storage. FPL therefore claimed that it was entitled to a favorable judgment on Contention 7 as a matter of law. *See* LBP-12-4, 75 NRC at 220, 222-23.

Pursuant to 10 C.F.R. § 2.1205(b), CASE had 20 days from FPL's filing of its motion, or until January 23, 2012, to oppose FPL's request for summary

disposition. CASE filed a timely response in which it waived its right to contest FPL's motion, stating explicitly that it "will not oppose" summary disposition of Contention 7. *See* CASE January 23 Response at 1.

Informed by FPL's pleadings and filings, and relying on CASE's non-opposition to FPL's motion (*see* LBP-12-4, 75 NRC at 223), this Board granted summary disposition of Contention 7 in favor of FPL on February 28, 2012. *See id.* at 225.

Now, in its motion to admit Contention 9, CASE proffers a contention that is substantially identical to former Contention 7 and is supported by arguments that, in effect, assert that — contrary to FPL's arguments in its summary disposition motion — Revision 3 did not remedy the alleged inadequacies in Contention 7. But CASE allowed the January 23 deadline for challenging FPL's summary disposition motion to lapse without filing an opposition. We will not permit CASE to raise a belated challenge to FPL's summary disposition motion in the guise of seeking to admit a newly proffered contention. If we were to rule otherwise, we would be allowing CASE — in derogation of section 2.1205(b) — to submit an unjustifiably late filing, thereby condoning CASE's cunctation. This we decline to do.[13]

2. Contention 9 Also Fails to Satisfy the Admissibility Criteria in 10 C.F.R. § 2.309(f)(1)

We also conclude that Contention 9 must be rejected for the alternative reason that it fails to satisfy the admissibility criteria in 10 C.F.R. § 2.309(f)(1). In its first argument underlying Contention 9, CASE asserts (CASE Motion to File New Contention 9, Attach. 1, at (unnumbered) 1) that FPL's auxiliary onsite LLRW storage structures would "be inundated by water, either routinely due to sea level rise, or intermittently due to storm surge related to hurricanes." CASE argues that water-level calculations should be determined from mean high tide, but that FPL improperly "starts with mean low tide." *Id.* at (unnumbered) 3-4. However,

[13] CASE asserts that Contention 9 is timely because it "is based on new information provided in FPL's [summary disposition motion] of January 3, 2012." CASE Motion to File New Contention 9, at 2. But as the NRC Staff correctly explains (*see* NRC Staff Answer Opposing Contention 9, at 10-12), CASE fails to show that the three arguments underlying Contention 9 are based on new and materially different information, as required by 10 C.F.R. § 2.309(f)(2)(i)-(ii). Rather, CASE's arguments regarding water inundation, lack of offsite LLRW storage, and inadequate emergency planning replicate old arguments this "Board has heard and rejected three times" (*id.* at 10), leaving us to conclude that — even assuming *arguendo* that Contention 9 is not effectively a late-filed opposition to FPL's summary disposition motion — it is nonetheless nontimely in derogation of section 2.309(f)(2). *See supra* Part II.A. And CASE's failure to show (or even attempt to show) that this Board should consider this nontimely contention pursuant to the balancing test in 10 C.F.R. § 2.309(c) provides a basis for summarily rejecting Contention 9 as inexcusably nontimely. *See Oyster Creek,* CLI-09-7, 69 NRC at 260-61; *supra* Part II.B.

CASE's motion fails to reference a specific portion of FPL's COL application that calculates the water level in the manner alleged, much less demonstrates how CASE's assertion ultimately controverts a particular analysis or conclusion in the application. Because CASE's motion fails to "include references to specific portions" of the COL application that it disputes (10 C.F.R. § 2.309(f)(1)(vi)), Contention 9, as supported by the water inundation argument, is not admissible. *See* FPL Answer Opposing Contention 9, at 12-18; NRC Staff Answer Opposing Contention 9, at 13-14.

Nor is Contention 9 admissible pursuant to CASE's second argument, which alleges (CASE Motion to File New Contention 9, Attach. 1, at (unnumbered) 1) that FPL's revised FSAR does not address the issue of permanent onsite storage for LLRW even though "permanent storage elsewhere in the nation is not assured." CASE's argument ignores that FPL's revised LLRW management plan provides that in the event offsite storage is not available, LLRW will be stored onsite in a facility that "would be designed, constructed, and operated in accordance with the design guidance provided in NUREG-0800, Standard Review Plan 11.4, Appendix 11.4-A." Turkey Point Units 6 & 7, COL Application, Part 2 — FSAR Rev. 3, at 11.4-3 (Dec. 2011) [hereinafter FSAR Rev. 3]. In granting FPL's motion for summary disposition of Contention 7 in LBP-12-4, we held that FPL's commitment that it will — if necessary — construct and operate an onsite LLRW storage facility in accordance with the relevant NRC guidance document, coupled with FPL's plan in section 11.4 of its FSAR for controlling radiation exposures from LLRW, "provides sufficient [information] to enable the Commission to reach a final conclusion on all safety matters regarding the means FPL will use . . . [regarding onsite] LLRW handling and storage." LBP-12-4, 75 NRC at 224-25 (internal quotation marks omitted). In light of this prior holding, Contention 9, as supported by CASE's second argument, is not admissible pursuant to 10 C.F.R. § 2.309(f)(1)(vi), because it fails to show a genuine dispute exists with FPL's COL application on a material issue of law or fact. *See generally* FPL Answer Opposing Contention 9, at 8-12; NRC Staff Answer Opposing Contention 9, at 14.

Finally, Contention 9 is not admissible pursuant to CASE's third argument, which alleges (CASE Motion to File New Contention 9, Attach. 1, at (unnumbered) 4) that FPL's COL application improperly "assumes that the current emergency plans in place with Miami-Dade County for [Turkey Point Units] 3 & 4 is likewise sufficient for [Units] 6 & 7." We reject this argument for precisely the same reason we rejected it last year in our decision in LBP-11-6; namely, "CASE's attempt to challenge FPL's current emergency plan on file with Miami-Dade County . . . fails to raise a genuine dispute of material fact under section 2.309(f)(1)(vi) with FPL's [COL application], because there is no indication the extant plan on file with Miami-Dade County is encompassed in

FPL's [COL application]." LBP-11-6, 73 NRC at 228 n.91 (internal quotation marks omitted).[14]

Newly proffered Contention 9 is therefore not admitted.

B. Newly Proffered Contention 10 Is Not Admitted

1. Contention 10 Is Inexcusably Nontimely

In Contention 10, CASE asserts that "FPL's [ER] Revision 3 does not adequately address the impact of extended storage of all types of AP1000 [LLRW]." CASE Motion to File New Contention 10, Attach. 1, at (unnumbered) 1. In support of this contention, CASE argues that FPL's ER fails adequately to discuss: (1) the "impact . . . of catastrophic climactic conditions with total site inundation" on stored LLRW (including used steam generators and contaminated soil) and on "liquid pathways analysis" (*id.* at (unnumbered) 1-3, 5-6); (2) the unavailability of offsite storage for LLRW (*see id.* at (unnumbered) 6-7); and (3) the high level of LLRW radioactivity that will be stored onsite due to the need to replace defective steam generators. *See id.* at (unnumbered) 3-5.

CASE asserts that Contention 10 is timely (CASE Motion to File New Contention 10, at (unnumbered) 2) because it "is based on new information provided in FPL's [motion to dismiss Contention 6 as moot] of January 3, 2012." *Id.* at (unnumbered) 3. We disagree. We conclude that Contention 10 must be rejected, because its underlying arguments are inexcusably nontimely.

In its first argument in support of Contention 10, CASE asserts that the ER fails adequately to consider the impact of total site inundation on stored LLRW (including used steam generators and contaminated soil) and on liquid pathways analysis. *See* CASE Motion to File New Contention 10, Attach. 1, at (unnumbered) 1-3, 5-6. This argument is nontimely, because the concern on which it is predicated — i.e., that the Turkey Point site will become flooded — is not based on new and materially different information. *Cf. supra* note 13 (rejecting as nontimely the site-inundation argument underlying Contention 9). CASE concedes that it previously and repeatedly has endeavored, without success, to raise contentions based on the possibility of site inundation. *See, e.g.,* CASE Motion to File New Contention 10, Attach. 1, at (unnumbered) 1 ("CASE has, in many filings in this intervention, presented the matter of climate change and tropical storm impact . . . ."). Because CASE fails to (1) show that the possibility of site inundation is based on new and materially different information added to the ER as part of FPL's revised LLRW management plan, or (2) identify any

[14] Contention 9, as supported by CASE's third argument, is also inadmissible for failing to "include references to specific portions" of FPL's COL application that CASE disputes. *See* 10 C.F.R. § 2.309(f)(1)(vi).

new and materially different information on which its site-inundation argument is based, this argument is nontimely pursuant to 10 C.F.R. § 2.309(f)(2)(i) and (ii). *See* FPL Answer Opposing Contention 10, at 7-9; NRC Staff Answer Opposing Contention 10, at 8-11.[15]

CASE's second argument in support of Contention 10 — which asserts that FPL's revised ER fails adequately to consider the unavailability of offsite storage for LLRW (*see* CASE Motion to File New Contention 10, Attach. 1, at (unnumbered) 6-7) — is likewise nontimely. *Cf. supra* note 13 (rejecting as nontimely the argument alleging the unavailability of offsite LLRW storage underlying Contention 9). This argument is based on a statement in the ER regarding a waste-disposal facility in Clive, Utah, that CASE asserts is "only partially true." CASE Motion to File New Contention 10, Attach. 1, at (unnumbered) 7. But the statement that CASE finds objectionable is not new. CASE raised an identical objection to this statement in the intervention petition it filed in August 2010. *See* [CASE Revised] Petition to Intervene and Request for a Hearing, Declaration of Diane D'Arrigo in Support of [CASE] at 4 (dated Aug. 17, 2010). Because CASE's argument regarding the unavailability of offsite LLRW storage is based on information that was available to CASE over 18 months ago, it is nontimely. *See* FPL Answer Opposing Contention 10, at 10; NRC Staff Answer Opposing Contention 10, at 11-12.

CASE's third argument in support of Contention 10 flows from the following syllogism: (1) the Westinghouse steam generators that will be used for proposed Units 6 and 7 are defectively designed and will need to be replaced during the life of the plant; (2) because no offsite LLRW storage will be available, the defective steam generators will be stored onsite when they are replaced, and they will be especially radioactive; and accordingly (3) the projected source term of the LLRW that is stored onsite will be greater than is anticipated in FPL's COL application. *See* CASE Motion to File New Contention 10, Attach. 1, at (unnumbered) 3-5. Each of the three prongs of this syllogism is based on information that has long been available and, accordingly, CASE's argument is nontimely for the following three, independent reasons. First, the information on which CASE bases its claim that the Westinghouse steam generator design is defective is at least 7 years old (from a 2005 Bechtel report), and some of it is 17 years old (from a 1995

[15] FPL states (FPL Answer Opposing Contention 10, at 11) that CASE's first argument in support of Contention 10 is timely to the extent it asserts that "FPL's ER revision failed to address the potential inundation of the contingent [LLRW] storage facilities." In LBP-11-6, however, we concluded that CASE "ha[d] not demonstrated that FPL's unchallenged sea level rise analysis in the FSAR must be supplemented with an analysis in the ER." LBP-11-6, 73 NRC at 236 n.103. CASE fails to present any new or materially different information regarding the possibility of site flooding that changes our conclusion. Even assuming *arguendo* that FPL is correct that one aspect of CASE's first argument is timely (*but see* NRC Staff Answer Opposing Contention 10. at 8), Contention 10 still fails to satisfy the admissibility criteria of 10 C.F.R. § 2.309(f)(1). *See infra* Part III.B.2.a.

Department of Energy report). *See* FPL Answer Opposing Contention 10, at 7-8; NRC Staff Answer Opposing Contention 10, at 12-13. Second, the information on which CASE bases its claim that the replaced steam generators will be especially radioactive was available over 18 months ago, in September 2010. *See* FPL Answer Opposing Contention 10, at 8; NRC Staff Answer Opposing Contention 10, at 13. Finally, CASE attacks "the source terms described in the DCD Table 11.2-7" (CASE Motion to File New Contention 10, Attach. 1, at (unnumbered) 3), asserting that the table fails to account for the radiation from defective steam generators that will be stored onsite. *See id.* at (unnumbered) 3-5. But FPL's revised LLRW management plan did not change the DCD table, nor did it change the ER's discussion of that table in sections 3.5.1.2 and 5.4.1.1. The source term information challenged by CASE therefore constitutes neither new nor materially different information. *See* NRC Staff Answer Opposing Contention 10, at 12.

Contention 10 is thus nontimely because it is grounded on information that fails to satisfy the timeliness standards in 10 C.F.R. § 2.309(f)(2). Further, CASE makes no attempt to show that this nontimely contention satisfies the balancing test in 10 C.F.R. § 2.309(c), thus rendering Contention 10 inexcusably late and mandating its rejection.

2. Contention 10 Also Fails to Satisfy the Admissibility Criteria in 10 C.F.R. § 2.309(f)(1)

Based on our examination of the three arguments CASE advances in support of Contention 10, we conclude the contention must also be rejected for the alternative reason that it fails to satisfy the admissibility criteria in section 2.309(f)(1).

a. Site Inundation

First, CASE argues that FPL's ER fails adequately to discuss the impact of total site inundation on FPL's contingent LLRW storage facility. *See* CASE Motion to File New Contention 10, Attach. 1, at (unnumbered) 1-3, 5-6. More specifically, CASE asserts that the ER "does not describe . . . elevat[ing] the auxiliary extended waste storage structures" to prevent radiation dispersal that would result from the impact of sea level rise and site inundation on LLRW. *Id.* at (unnumbered) 2.

But it is well established that an ER need only discuss reasonably foreseeable environmental impacts of a proposed action. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348-49 (2002). Here, CASE does not raise a genuine issue as to whether the dispersal of radiation due to the inundation of FPL's contingent LLRW storage facility is reasonably foreseeable. In LBP-11-6, we rejected a substantially identical argument advanced by CASE:

> [R]egarding Contention 6's concern with FPL's failure to consider the impact of projected sea level rise, storm surge, and site inundations that could result in the dispersal of LLRW off the Turkey Point site . . . , we conclude CASE fails to explain why such a scenario is plausible, much less reasonably foreseeable. *See Private Fuel Storage,* CLI-02-25, 56 NRC at 348-49 (ER need only consider environmental impacts that are "reasonably foreseeable") . . . .

LBP-11-6, 73 NRC at 239. Because CASE provides no new information that would bolster a conclusion that a genuine issue exists as to whether radiation dispersal due to site inundation is reasonably foreseeable, we believe the above rationale applies here and mandates a conclusion that FPL's ER need not have addressed the possibility of radiation dispersal due to site inundation. CASE thus fails to demonstrate, contrary to 10 C.F.R. § 2.309(f)(1)(iv), that the issue of radiation dispersal due to site inundation "is material to the findings the NRC must make to support" approving FPL's COL application. *See* FPL Answer Opposing Contention 10, at 14, 16; NRC Staff Answer Opposing Contention 10, at 14-15.

Moreover, CASE's motion fails to dispute with specificity FPL's analysis of sea level rise and storm surge in the COL application in FSAR § 2.4.5. In LBP-11-6, we ruled that CASE's "fail[ure] directly to controvert FPL's sea level rise analysis . . . [rendered] Contention 5 . . . inadmissible for failing to raise a genuine dispute of material fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi)." LBP-11-6, 73 NRC at 237. That rationale applies here and mandates rejection of Contention 10 pursuant to section 2.309(f)(1)(vi). *See* FPL Answer Opposing Contention 10, at 15-16; NRC Staff Answer Opposing Contention 10, at 15.[16]

Finally, to the extent CASE asserts that FPL's COL application fails to account for "elevat[ing]" auxiliary LLRW storage facilities to protect LLRW from

[16] In its reply pleading, CASE: (1) identifies for the first time a specific portion of FPL's COL application that it claims is deficient (*see* CASE Reply on Contention 10, at 7); (2) offers a new (and nontimely) argument about sea level rise (*see id.* at 8-10); and (3) supports its new argument with a 191-page master's thesis written in June 2009. *See id.,* Attach. 1. These actions by CASE were procedurally improper. A petitioner may not, by design or neglect, fail to include critical admissibility-related information in its initial pleading, and then attempt to remedy that failure by including the information in a reply to which the respondent has no right of response. *See Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004) (the NRC's procedural rules do not allow "using reply briefs to provide, for the first time, the necessary threshold support for contentions," as that "would effectively bypass and eviscerate [its] rules governing timely filing, contention amendment, and submission of late-filed contentions"); *Nuclear Management Co.* (Palisades Nuclear Plant), CLI-06-17, 63 NRC 727, 732 (2006) (petitioner may not remediate deficient contention "by introducing in the reply documents that were available to it during the time frame for initially filing contentions"). If we overlooked these procedural improprieties (*but see infra* Part IV), CASE's litigation position would not be enhanced, because even with this material, CASE fails to "[p]rovide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact." 10 C.F.R. § 2.309(f)(1)(vi).

flooding (CASE Motion to File New Contention 10, Attach. 1, at (unnumbered) 2), CASE ignores that FPL's FSAR, as supplemented by Revision 3, makes clear that FPL would not build a supplemental onsite LLRW storage facility without considering sea level rise and storm surge. FPL has committed itself to constructing any such facility in accordance with NUREG-0800 (*see* FPL Answer Opposing Contention 10, at 15 (citing FSAR Rev. 3, at 11.4-3; Turkey Point Unit 6 & 7 COL Application, Part 3 — [ER] Rev. 3, at 3.5-15 (Dec. 2011) [hereinafter ER Rev. 3])), which calls for a flood protection analysis to assure radiological consequences do not exceed a small portion of regulatory limits. *See* NUREG-0800, Standard Review Plan 11.4, Appendix 11.4-A, at 11.4-25 ("Facility design and operation should assure that radiological consequences of design basis events (e.g., fire, tornado, seismic occurrence, and flood) do not exceed a small fraction (10 percent) of 10 C.F.R. Part 100 dose limits . . . ."). By failing to acknowledge, much less challenge with specificity, the safety and environmental evaluations that FPL will perform prior to construction and operation of a supplemental onsite LLRW storage facility, Contention 10 fails to demonstrate the existence of a genuine dispute with the COL application on a material issue of law or fact, in contravention of 10 C.F.R. § 2.309(f)(1)(vi).

b. Unavailability of an Offsite LLRW Storage Facility

CASE's second argument in support of Contention 10 is that FPL's ER fails adequately to discuss the unavailability of offsite storage for LLRW. *See* CASE Motion to File New Contention 10, Attach. 1, at (unnumbered) 6-7.

The NRC Staff states that Contention 10, as supported by CASE's second argument, fails to satisfy 10 C.F.R. § 2.309(f)(1). *See* NRC Staff Answer Opposing Contention 10, at 16. We agree.

In its revised LLRW management plan, FPL committed itself to storing LLRW onsite in accordance with NRC guidance and regulations in the event that offsite storage is unavailable. *See* LBP-12-4, 75 NRC at 224 (citing FSAR Rev. 3, at 11.4-1, 11.4-3). Additionally, FPL's ER concludes that environmental impacts resulting from the "construction and operation of any additional onsite [LLRW] storage facilities" would be "small." ER Rev. 3, at 5.7-7.

CASE fails to explain why — in light of FPL's conclusion that the impacts of onsite LLRW storage would be small — the unavailability of offsite LLRW storage facilities is an environmental concern that is "material to the findings the NRC must make to support" approving FPL's COL application. 10 C.F.R. § 2.309(f)(1)(iv). Nor does CASE provide "sufficient information to show that a genuine dispute exists" with FPL's conclusion. *Id.* § 2.309(f)(1)(vi). This aspect of Contention 10 is therefore not admissible.

c. Increased Onsite Radioactivity

The third argument advanced by CASE in support of Contention 10 is that FPL's ER fails adequately to discuss the high level of onsite LLRW radioactivity that will result from the need to replace what CASE alleges will be defective steam generators. *See* CASE Motion to File New Contention 10, Attach. 1, at (unnumbered) 3-5.

FPL and the NRC Staff argue that Contention 10, as supported by CASE's third argument, fails to satisfy 10 C.F.R. § 2.309(f)(1). *See* FPL Answer Opposing Contention 10, at 7-8; NRC Staff Answer Opposing Contention 10, at 16-18. We agree.

Contrary to 10 C.F.R. § 2.309(f)(1)(v), CASE fails to provide alleged facts or expert opinions to support its assertion that the steam generators that will be used at proposed Turkey Point Units 6 and 7 will be defective and need to be replaced. In its attempt to show that such steam generators will need early replacement, CASE references a list of steam generators that Bechtel Power Corporation (Bechtel) replaced between 1982 and 2010. *See* CASE Motion to File New Contention 10, Attach. 1, at (unnumbered) 3. But CASE fails to explain how the mere fact that Bechtel previously replaced some steam generators supports CASE's claim that steam generators are defective in general, much less that the specific steam generators to be used in proposed Turkey Point Units 6 and 7 will be defective. Indeed, one of the articles on which CASE relies (id., Attach. 2, Kenneth Chuck Wade, *Steam Generator Degradation and Its Impact on Continued Operation of Pressurized Water Reactors in the United States,* Elec. Power Monthly (Energy Info. Admin.), Aug. 1995, at xiii, xix, xxi [hereinafter CASE Motion to File Contention 10, Attach. 2]) points in the opposite direction, predicting that, due to operational, material, and chemistry advances, the degradation of steam generators in the future will decrease. Notably, this prediction is supported by the fact that the list of planned steam generator replacements does not include previously replaced steam generators. *See id.* at xvi. Moreover, one of CASE's supporting attachments shows that the steam generators for Turkey Point Units 3 and 4 were replaced in the early 1980s. After approximately 30 years of service, it appears that neither of these steam generators has required replacement. *See id.,* Attach. 3 (labeled as "Attachment 1, Steam Generator Replacements in the U.S., compiled 01/07/2012").

In sum, contrary to section 2.309(f)(1)(v), CASE fails to provide sufficient alleged facts or expert opinions to support its argument that the steam generators at proposed Turkey Point Units 6 and 7 will be defective and require early

replacement. Contention 10, as supported by CASE's third argument, is thus not admissible.[17]

Newly proffered Contention 10 is therefore not admitted.

IV. FPL's MOTION TO STRIKE

On March 15, 2012, FPL filed a motion to (1) strike as untimely CASE's replies for Contentions 9 and 10, or alternatively (2) strike from CASE's reply for Contention 10 a new argument regarding the age of FPL's sea level rise data, as well as the 191-page master's thesis attached to that reply. *See* [FPL's] Motion to Strike CASE's Replies to Responses to CASE Proposed Contentions 9 and 10 (Mar. 15, 2012) at 7 [hereinafter FPL Motion to Strike].[18]

FPL is correct in asserting that CASE's replies were untimely. CASE itself concedes that neither was filed within the 7-day period prescribed in 10 C.F.R. § 2.309(h)(2). *See* [CASE] Answer to [FPL's] Motion to Strike CASE's Replies to Responses to CASE Proposed Contentions 9 and 10 (Mar. 22, 2012) at 3.[19] Mindful that CASE has exhibited a pattern of failing to comply with the Commission's procedural rules (*see, e.g.,* FPL Motion to Strike at 3 n.4), we grant FPL's motion to strike CASE's replies for Contentions 9 and 10.

Although we grant FPL's motion to strike CASE's replies, we nevertheless reviewed those replies, and we found nothing in them that alters our conclusion that newly proffered Contentions 9 and 10 must be rejected.

V. CONCLUSION

For the foregoing reasons, we (1) *deny* CASE's motions to admit newly proffered Contentions 9 and 10, and (2) *grant* FPL's motion to strike CASE's replies. Because it no longer has a contention or an unresolved pleading pending before this Licensing Board, we *dismiss* CASE from this proceeding.

---

[17] Further, CASE's documents do not provide sufficient alleged facts or expert opinions to support a claim that defects in a steam generator will perforce require that a steam generator be replaced. Rather, the article cited by CASE explains that steam generators are constructed with a surfeit of heat exchange tubes, which allows operators to plug numerous defective tubes (up to 20 percent) before steam generator replacement is necessary. *See* CASE Motion to File New Contention 10, Attach. 2, at xiii. The article also discusses additional strategies that have been developed to prolong steam generator life. *See id.* at xiii-xv.

[18] FPL represents (FPL Motion to Strike at 8) that the "NRC Staff does not oppose the motion" to strike CASE's replies.

[19] FPL is also correct that CASE's reply for Contention 10 contains an argument and an attachment that should not have been included. *See* FPL Motion to Strike at 5-6; *supra* note 16.

In accordance with 10 C.F.R. § 2.341(b), a party may file a petition for Commission review within fifteen (15) days after service of this decision. Within ten (10) days after service of such a petition, any other party may file an answer supporting or opposing Commission review. *See* 10 C.F.R. § 2.341(b)(3). Unless otherwise authorized by law, a party must file a petition for Commission review before seeking judicial review of an agency action. *See id.* § 2.341(b)(1).

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

E. Roy Hawkens, Chairman
ADMINISTRATIVE JUDGE

Dr. Michael F. Kennedy
ADMINISTRATIVE JUDGE

Dr. William C. Burnett
ADMINISTRATIVE JUDGE

Rockville, Maryland
March 29, 2012

Cite as 75 NRC 523 (2012) **CLI-12-11**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of **Docket Nos. 52-025-COL**
52-026-COL

SOUTHERN NUCLEAR
OPERATING COMPANY
(Vogtle Electric Generating Plant,
Units 3 and 4) **April 16, 2012**

COMBINED OPERATING LICENSE (MANDATORY HEARING)

In addition to contested hearings where interested members of the public have the right to participate and air their concerns, uncontested safety and environmental issues are considered in a so-called "mandatory" hearing. The mandatory hearing, which is required by section 189a of the AEA, does not involve public participation — regardless of whether a contested hearing with public participation has occurred. The purpose of a mandatory hearing is to determine whether the Staff's review of the application has been adequate to support the required regulatory findings.

STAY

Although we have no specific rule governing stays of agency action pending judicial review, federal law requires parties seeking such stays in court to come to the agency first, and we traditionally have entertained such motions.

JUDICIAL REVIEW

Only final NRC action is subject to judicial review. Neither the Board's decision denying reopening nor the Commission's decision refusing to suspend proceedings amounts to final agency action.

STAY

In deciding motions seeking a stay of agency action pending judicial review, we look to the same four-part test that governs stays of licensing board decisions pending Commission review (10 C.F.R. § 2.342(e)). Of these factors, irreparable injury is the most important. Specifically, "[a] party seeking a stay must show it faces imminent, irreparable harm that is both 'certain and great.'" Without a showing of irreparable injury, Petitioners must make "an overwhelming showing" of likely success on the merits. This has also been referred to as a demonstration of "virtual certainty." And if a movant makes neither of these first two showings, then we need not consider the remaining factors.

STAY (IMMEDIATE AND IRREPARABLE INJURY)

To qualify as "irreparable harm" justifying a stay, the asserted harm must be related to the underlying claim.

SUPPLEMENTAL EIS

For new information to be sufficiently "significant" to merit the preparation of a supplemental FEIS, the information "must paint a seriously different picture of the environmental landscape." Also, NEPA case law requires EIS supplementation only where new information identifies a "previously unknown" environmental concern, but not where the new information "amounts to mere additional evidence supporting one side or the other of a disputed environmental effect."

JUDICIAL REVIEW

Because Petitioners did not participate in the mandatory hearing, and were not parties to it, they may not challenge the mandatory hearing decision, as such, in court.

MEMORANDUM AND ORDER

The Southern Alliance for Clean Energy (SACE), Blue Ridge Environmental Defense League (BREDL), Center for a Sustainable Coast, Citizens Allied for Safe Energy, and Georgia Women's Action for New Directions (Georgia WAND)

(collectively, Petitioners) seek to stay the effectiveness of our recent decision in this matter (CLI-12-2),[1] pending judicial review.[2] In CLI-12-2, we authorized the issuance of two combined licenses (COLs) entitling Southern Nuclear Operating Company (Southern) to construct and operate two new nuclear power reactors at its Vogtle Electric Generating Plant (Vogtle).[3] Petitioners argue that, prior to approving the Vogtle COLs, the NRC Staff should have prepared a "supplemental [environmental impact statement (EIS)]" addressing the environmental implications of the Fukushima Dai-ichi nuclear accident and considering the recommendations of the NRC's Fukushima Task Force.[4] Southern and the Staff oppose the Stay Motion.[5] As discussed below, we decline to stay the effectiveness of CLI-12-2.

I. BACKGROUND

Pursuant to 10 C.F.R. Part 52, Subpart C, Southern submitted an application in 2008 seeking our approval to construct and operate two new nuclear reactors at its

---

[1] 75 NRC 63 (2012).

[2] Petitioners' Motion to Stay the Effectiveness of the Combined License for Vogtle Electric Generating Plant Units 3 and 4 Pending Judicial Review (Feb. 16, 2012) (Stay Motion). Petitioners offer a Declaration by Dr. Arjun Makhijani in support of their Stay Motion. Declaration of Dr. Arjun Makhijani in Support of Motion to Stay Effectiveness of Vogtle COL Approval (Feb. 16, 2012) (Makhijani Declaration), appended to the stay motion as Attachment A. Savannah Riverkeeper joined the current four Petitioners in challenging the COL application in the contested hearing (*see* CLI-12-2, 75 NRC at 69), but did not join them in filing the Stay Motion that we address today.

[3] Petitioners have sought judicial review of CLI-12-2 in the United States Court of Appeals for the District of Columbia Circuit. *See Blue Ridge Environmental Defense League v. NRC,* No. 12-1151 (D.C. Cir. filed Mar. 20, 2012). Separately, Petitioners, along with five other organizations, have asked the same court to review the NRC's recent approval of the AP1000 design, which is the design for the two new reactors at the Vogtle facility. *See Blue Ridge Environmental Defense League v. NRC,* No. 12-1106 (D.C. Cir. filed Feb. 16, 2012). Both petitions for review are attached to the Stay Motion as Appendix B.

[4] Stay Motion at 2 (referring to "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) (ADAMS Accession No. ML112510271) (Near-Term Report) (transmitted to the Commission via "Near-Term Report and Recommendations for Agency Actions Following the Events in Japan," Commission Paper SECY-11-0093 (ADAMS Accession No. ML112310021) (package))). *See also* Stay Motion at 11.

[5] NRC Staff Answer to Petitioners' Motion to Stay the Vogtle Units 3 and 4 Combined Licenses Pending Judicial Review (Feb. 27, 2012) (Staff Answer); Southern Nuclear Operating Company's Response to Motion to Stay (Feb. 27, 2012) (Southern Answer). Southern, in support of its opposition, appends to its answer both an Affidavit from Joseph A. Miller, Southern's Executive Vice President for Nuclear Development, and a letter from Georgia State Senator Jesse Stone. Affidavit of Joseph A. "Buzz" Miller (Feb. 27, 2012); Stone, Jesse, Georgia State Senator, Letter to Joseph A. Miller, Georgia Power Company (Feb. 27, 2012).

Vogtle site.[6] Petitioners sought and were granted a "contested hearing" pursuant to the Atomic Energy Act (AEA) and our procedural rules,[7] which provide members of the public an opportunity to petition to intervene before a three-judge panel of our Atomic Safety and Licensing Board. Although the initial contested proceeding ended in June 2010,[8] a second Licensing Board was established in August 2010 after three of today's Petitioners sought to reopen the record and litigate a new contention (related to the safety of the proposed new reactors' containment). The second Board denied the request, and we affirmed the Board's decision.[9]

Petitioners subsequently filed motions to reopen the record, this time proposing a contention that the final supplemental environmental impact statement (FSEIS) prepared in conjunction with the *Vogtle* COL application had failed to satisfy the National Environmental Policy Act (NEPA)[10] because it did not account for the environmental implications stemming from the findings and recommendations included in the NRC's Near-Term Report on the Fukushima-Dai-ichi accident.[11] The Board denied Petitioners' motions,[12] and we recently affirmed the Board's decision.[13]

---

[6] *See* Southern Nuclear Operating Co., "Vogtle Electric Generating Plant, Units 3 and 4; COL Application," Rev. 0, Docket Nos. 52-025-COL & 52-026-COL (Mar. 31, 2008), attached as a CD to Miller, Joseph A., Southern Nuclear Operating Co., to NRC (Mar. 28, 2008) (ADAMS Accession No. ML081050133).

[7] AEA § 189a(1)(A), 42 U.S.C. § 2239(a)(1)(A); 10 C.F.R. §§ 2.309, 52.85.

[8] LBP-10-8, 71 NRC 433 (2010).

[9] LBP-10-21, 72 NRC 616 (2010), *aff'd,* CLI-11-8, 74 NRC 214 (2011).

[10] 42 U.S.C. §§ 4321 *et seq.*

[11] *See* Motion to Reopen the Record and Admit Contention Regarding the Safety and Environmental Implications of the Nuclear Regulatory Commission Task Force Report on the Fukushima Dai-ichi Accident (filed on Aug. 11, 2011 by Center for a Sustainable Coast, Georgia WAND, and SACE) (Petitioner Motion to Reopen); Motion to Reopen the Record and Admit Contention Regarding the Safety and Environmental Implications of the Nuclear Regulatory Commission Task Force Report on the Fukushima Dai-ichi Accident, and a separately paginated Contention Regarding NEPA Requirement to Address Safety and Environmental Implications of the Fukushima Task Force Report (filed on Aug. 11, 2011 by BREDL) (BREDL Motion to Reopen).

[12] *PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), LBP-11-27, 74 NRC 591 (2011) (rejecting motions regarding five plants, including Vogtle), *corrected* Memorandum (Corrections regarding LBP-11-27) (Oct. 20, 2011) (unpublished). Shortly thereafter, Petitioners filed motions to reinstate and supplement the basis for the rejected contention, prior to appealing LBP-11-27. *See* Motion to Reinstate and Supplement the Basis for Fukushima Task Force Report Contention (substantively identical motions filed by BREDL, and separately, by Center for a Sustainable Coast, Georgia WAND, and SACE on Oct. 28, 2011). The Board rejected these requests. *See Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), LBP-11-36, 74 NRC 768 (2011).

[13] *See Luminant Generation Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379 (2012). This decision ruled on petitions for review filed in four matters, including this one.

In addition to contested hearings where interested members of the public have the right to participate and air their concerns, uncontested safety and environmental issues are considered in a so-called "mandatory" hearing.[14] We conducted the mandatory hearing for the proposed new Vogtle reactors on September 27-28, 2011.[15] Both the Staff and Southern participated in the mandatory hearing[16] but Petitioners did not.[17] A portion of the mandatory hearing focused upon the COL FSEIS that the Staff had issued on March 18, 2011.[18]

Following the mandatory hearing, we issued CLI-12-2, where we concluded that the "Staff's review of the safety and environmental issues related to Southern's combined license and limited work authorization applications was sufficient to support the findings . . . for each of the combined licenses to be issued, and [likewise sufficient to support] the findings . . . with respect to the limited work authorizations."[19] In that decision, we authorized the Director of the Office of New Reactors "to issue the limited work authorizations" (permitting Southern to engage in certain construction activities in connection with proposed Units 3 and 4) and also to issue "appropriate licenses authorizing construction and operation of . . . Units 3 and 4."[20] On February 10, 2012, the Staff issued the COLs and LWAs for those two units.[21]

Petitioners now seek to stay the effectiveness of CLI-12-2 and the issuance of both the COLs and LWAs. Given that the NRC has already issued the COLs and

---

[14] *See* AEA §§ 185b, 189a, 42 U.S.C. §§ 2235(b), 2239(a). *See also* Notice of Hearing, Southern Nuclear Operating Co., et al.; Combined Licenses for Vogtle Electric Generating Plant, Units 3 and 4, and Limited Work Authorizations, 76 Fed. Reg. 50,767, 50,768 (Aug. 16, 2011).

[15] We set forth the procedural history of the mandatory hearing in CLI-12-2, 75 NRC at 71-74, and therefore do not repeat it here.

[16] *See id.,* 75 NRC at 73.

[17] The mandatory hearing, which is required by section 189a of the AEA, does not involve public participation — regardless of whether a contested hearing with public participation has occurred. *See Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 49 (2005) ("The scope of the Intervenors' participation in adjudications is limited to their admitted contentions, i.e., they are barred from participating in the uncontested portion of the hearing. Any other result would contravene the objectives of our 'contention' requirements.").

[18] *See* Southern Nuclear Operating Company, Inc.; Notice of Availability of the Final Supplemental Environmental Impact Statement for Vogtle Electric Generating Plant Units 3 and 4; Combined License Application Review, 76 Fed. Reg. 16,645 (Mar. 24, 2011).

[19] CLI-12-2, 74 NRC at 121-22. The purpose of a mandatory hearing is to determine whether the Staff's review of the application has been adequate to support the required regulatory findings. *See id.,* 75 NRC at 74, 75.

[20] *Id.,* 74 NRC at 122.

[21] *See* Matthews, David B., Office of New Reactors, NRC, Letter to Joseph A. "Buzz" Miller, Southern Nuclear Operating Co., "Issuance of Combined Licenses and Limited Work Authorizations for Vogtle Electric Generating Plant (VEGP) Units 3 and 4" (Feb. 10, 2012) (ADAMS Accession No. ML113360395).

LWAs, we construe the Stay Motion as a request that we stay the *effectiveness* of the COLs and LWAs. As noted above, Petitioners assert that, prior to approving the Vogtle COLs, the NRC should have prepared a supplement to the COL FSEIS addressing the environmental implications of the Fukushima events and considering the recommendations of the Fukushima Near-Term Task Force.[22]

II. DISCUSSION

A. Stay Standards

The Commission considers requests for stays of Licensing Board decisions under 10 C.F.R. § 2.342. This regulation, however, does not apply to requests for stays of Commission decisions pending judicial review.[23] While we have no specific rule governing stays of agency action pending judicial review, federal law requires parties seeking such stays in court to come to the agency first,[24] and we traditionally have entertained such motions.[25] We exercise our discretion here to consider Petitioners' motion.[26]

In deciding motions seeking a stay of agency action pending judicial review, we look to the same four-part test that governs stays of licensing board decisions

---

[22] Stay Motion at 1-2, 11. Previously, we had declined to suspend ongoing licensing proceedings, including the *Vogtle* proceeding, pending our agency's ongoing Fukushima review. *See Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141 (2011).

[23] *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-11, 37 NRC 251, 263 (1993). *See also Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-8, 33 NRC 461, 468 (1991) (requests to stay effectiveness of future licensing action pending judicial appeal more appropriately styled "motion to reconsider" and "motion to hold in abeyance").

[24] *See* Fed. R. App. P. 18(a)(1).

[25] *See Shieldalloy Metallurgical Corp.* (Decommissioning of the Newfield, New Jersey Site), CLI-10-8, 71 NRC 142, 147 & n.25 (2010); *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-11, 37 NRC 251, 263-65 (1993); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-92-4, 35 NRC 69, 80-82 (1992). *See generally David Geisen,* CLI-09-23, 70 NRC 935, 936 (2009).

[26] Because 10 C.F.R. § 2.342 does not apply to Petitioners' motion, we do not address Southern's request that we strike the motion because it exceeds that rule's 10-page limit. *See* Southern Nuclear Operating Company's Motion to Strike or, in the Alternative, Request for Page Limit Extension (Feb. 22, 2012). *See also Shoreham,* CLI-91-8, 33 NRC at 468 n.2. Southern also makes another procedural argument — that Petitioners' Stay Motion is too late because their motion, and an accompanying lawsuit, should have been filed months ago in the wake of either the Board's decision denying reopening (LBP-11-27) or our decision declining to suspend NRC licensing proceedings pending completion of the agency's review of the Fukushima accident (CLI-11-5). We find that argument unpersuasive because only *final* NRC action is subject to judicial review. *See* 28 U.S.C. § 2342. Neither the Board's decision denying reopening nor the Commission's decision refusing to suspend proceedings amounted to final agency action.

pending Commission review, set forth in 10 C.F.R. § 2.342(e). Thus, in deciding whether to grant a stay, we weigh and balance the following equitable factors:

> (1) Whether the moving party has made a strong showing that it is likely to prevail on the merits;
> (2) Whether th[at] party will be irreparably injured unless a stay is granted;
> (3) Whether the granting of a stay would harm the other parties; and
> (4) Where the public interest lies.[27]

Of these factors, irreparable injury is the most important.[28] Specifically, "[a] party seeking a stay must show it faces imminent, irreparable harm that is both 'certain and great.'"[29] Without a showing of irreparable injury, Petitioners must make "an overwhelming showing" of likely success on the merits.[30] (This has also been referred to as a demonstration of "virtual certainty."[31]) And if a movant makes neither of these first two showings, then we need not consider the remaining factors.[32]

B. Analysis of the Four Stay Factors

1. Immediate and Irreparable Injury

Petitioners claim that "they will be irreparably harmed if construction of the Vogtle 3&4 reactors is allowed to proceed."[33] They consider the "commitment of resources involved in building Vogtle 3&4" to be "significant," and "the impacts of construction activities to air, soil, and water, including the project's carbon footprint" to be both "significant and irreversible."[34] According to Petitioners,

---

[27] 10 C.F.R. § 2.342(e). *See also Shieldalloy,* CLI-10-8, 71 NRC at 150-51.

[28] *Shieldalloy,* CLI-10-8, 71 NRC at 151; *Geisen,* CLI-09-23, 70 NRC at 936 & n.4.

[29] *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-06-8, 63 NRC 235, 237 (2006).

[30] *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-13, 67 NRC 396, 400 (2008); *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-9, 40 NRC 1, 7 (1994); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-8, 29 NRC 399, 412 (1989).

[31] *Shieldalloy,* CLI-10-8, 71 NRC at 154; *Geisen,* CLI-09-23, 70 NRC at 937; *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-13, 67 NRC 396, 400 (2008); *Kerr-McGee Chemical Corp.* (West Chicago Rare Earths Facility), ALAB-928, 31 NRC 263, 269 (1990) ("movant must demonstrate that the reversal of the licensing board is a 'virtual certainty'").

[32] *Shieldalloy,* CLI-10-8, 71 NRC at 163 ("Shieldalloy's failure to satisfy the first two stay factors renders it unnecessary to make determinations on the two remaining factors: harm to other parties and where the public interest lies") (footnote omitted); *Oyster Creek,* CLI-08-13, 67 NRC at 400, 401.

[33] Stay Motion at 2. *See also* Makhijani Declaration at 4-5.

[34] Stay Motion at 2.

"the failure to issue a stay would cause irreparable harm to Petitioners and the environment by irretrievably committing a large amount of natural resources and generating significant emissions of carbon to the environment."[35]

We find Petitioners' arguments unpersuasive for two reasons. First, we see no "imminent, irreparable harm that is both 'certain and great.'"[36] The NRC's FEIS for the Early Site Permit (ESP) phase of the Vogtle licensing process expressly addressed the air and water pollution that would result from construction and related activities, and found the effects "small."[37] Later, the NRC's FSEIS for the COL application made a similar finding.[38] Petitioners offer no explanation of what change in circumstances calls for us now to view the effects of construction at the Vogtle site as "great" rather than "small." Indeed, Petitioners do not argue that the findings in the ESP FEIS and COL FSEIS have changed. Nor do Petitioners acknowledge or address the NRC's exhaustive consideration of construction impacts on the environment. Consequently, Petitioners have failed to show that "certain and great" harm would result from a denial of their request that the NRC prepare a supplement to the COL FSEIS addressing the Task Force Report Recommendations.

Second, the "irreparable harm" on which Petitioners rely — alleged environmental impacts of construction — is unrelated to the Fukushima-driven challenge raised in their petition for judicial review. That challenge relates to alleged risks and environmental effects of *operating* the new Vogtle reactors, not constructing them. To qualify as "irreparable harm" justifying a stay, the asserted harm "must

---

[35] *Id.* at 16. *See also* Makhijani Declaration at 4-5. For examples, see Stay Motion at 16-17; Makhijani Declaration at 5.

[36] *Vermont Yankee,* CLI-06-8, 63 NRC at 237.

[37] *See, e.g.,* "Final Environmental Impact Statement for an Early Site Permit (ESP) at the Vogtle Electric Generating Plant Site — Final Report, Main Report," NUREG-1872, Vol. 1 (Aug. 2008) (Cover through Chapter 4: ADAMS Accession No. ML090760332; Chapters 5 through 11: ADAMS Accession No. ML090760333). For specific examples, *see id.* § 3.2.4.3, at 3-16 (hydrocarbons emitted from diesel generators), § 4.1.1, at 4-2 to 4-3 (impacts on land use), § 4.2.1, at 4-5 to 4-6 (impacts on air quality), § 4.2.2, at 4-6 to 4-7 (impacts on air quality due to increased traffic), §§ 4.3 to 4.3.2, at 4-7 to 4-13 (water-related impacts, generally), § 4.3.3, at 4-13 (water quality impacts), § 4.4.2.2, at 4-28 to 4-29 (impacts to ponds and streams onsite from site-preparation and construction activities), § 4.5.4.1, at 4-46 to 4-49 (impacts due to increased traffic), § 4.7.1.1, at 4-58 to 4-59 (impacts on soil), § 4.7.1.2, at 4-59 (impacts on water), § 4.7.1.3, at 4-59 (impacts on air), § 4.8.1.1, at 4-62 (impacts on air quality), § 5.2.2, at 5-4 (hydrocarbons emitted from diesel generators).

[38] *See, e.g.,* "Final Supplemental Environmental Impact Statement for Combined Licenses (COLs) for Vogtle Electric Generating Plant Units 3 and 4 — Final Report," NUREG-1947 (Mar. 2011), at Chapter 4 (NUREG-1947) (ADAMS Accession No. ML11270A216). For specific examples, *see id.* § 4.2, at 4-4 (impacts on air pollution due to increased traffic), § 4.3, at 4-4 to 4-5 (impacts on water), § 4.4.1, at 4-6 to 4-13 (impact on land resources), § 4.4.3, at 4-14 to 4-16 (impacts on aquatic ecosystem), § 4.8.2, at 4-24 to 4-26 (impacts of transporting construction material and personnel to construction site).

be related" to the underlying claim.[39] Here, Petitioners claim that significant construction impacts at Vogtle Units 3 and 4, if site activities are not stayed, will constitute irreparable harm. Yet in the contested proceeding for Vogtle Units 3 and 4, Petitioners raised only one contention challenging the adequacy of the COL FSEIS as regards construction impacts, and the asserted harm to which that contention alludes (related to the Savannah River) is not mentioned in the Stay Motion.[40]

As noted above, the Staff addressed the issue of construction impacts in both the COL FSEIS and the ESP FEIS, so Petitioners had ample opportunity to proffer their construction-impacts arguments at both the ESP hearing and the COL contested hearing. Petitioners failed to take advantage of these opportunities.[41] Petitioners, in short, did not exhaust available agency remedies on the issue of construction impacts. We therefore see no basis for a claim of irreparable harm

---

[39] *United States v. Green Acres Enterprises, Inc.,* 86 F.3d 130, 133 (8th Cir. 1996). *See also National Football League v. McBee & Bruno's, Inc.,* 792 F.2d 726, 733 (8th Cir. 1986) (injury that had "never been the focus of" the lawsuit was insufficient to find irreparable harm). Put differently, where the claimant "has not shown a sufficient causal connection" between the alleged irreparable harm and the underlying claim, relief will be denied. *Perfect 10, Inc. v. Google, Inc.,* 653 F.3d 976, 982 (9th Cir. 2011).

[40] Joint Intervenors' Motion to Admit New Contention (July 23, 2009), at 2:

> Channel maintenance . . . of the Savannah River Federal Navigation Channel . . . , to support movement of heavy equipment and components for the construction of Units 3 and 4 at the Vogtle Electric Generating Plant has potentially significant environmental impacts that have not been fully evaluated. . . . NEPA requires the staff to conduct an impacts analysis on this channel maintenance.

Petitioners' only other proffered environmental contention in this proceeding did not relate to construction. Petitioner Motion to Reopen at 1 ("the [COL FSEIS] fails to address the extraordinary environmental and safety implications of the findings and recommendations raised by the Nuclear Regulatory Commission's Fukushima Task Force . . . in its report"); BREDL Motion to Reopen at 1 (same).

Similarly, the declarations Petitioners filed during the contested portion of this proceeding in support of their representational standing mention Vogtle-specific injuries related to only the operation (but not construction) of the two new units: (i) the inability of the Savannah River to provide sufficient cooling water for the new reactors, (ii) the effects of releasing heated water into the river, (iii) the effects of the facility drawing too much water from the river, and (iv) routine releases of radioactive substances into the air and water. *See generally* declarations in support of Petitioners' representational standing (appended to Petition for Intervention) (Nov. 17, 2008) (ADAMS Accession No. ML083230453).

[41] *See* COL contentions set forth in Petitioners' Motion to Reopen at 1; BREDL Motion to Reopen at 1; Proposed New Contention by Joint Intervenors Regarding the Inadequacy of Applicant's Containment/Coating Inspection Program (Aug. 12, 2010) at 1; Joint Intervenors' Motion to Amend Contention Safety-1 (Oct. 23, 2009), at 2-3; Joint Intervenors' Motion to Admit New Contention (July 23, 2009) at 2; Petition for Intervention at 8, 1, 14. *See also* contentions set forth in the ESP proceeding: Docket No. 52-011-ESP, Jnt [sic] Supplement to Petition for Intervention (Dec. 27, 2006) at 2 (ADAMS Accession No. ML070080349); Petition for Intervention (Dec. 11, 2006) at 5-38 (ADAMS Accession No. ML063470165).

arising from construction impacts that were fully identified and discussed in the FEIS for the ESP and the FSEIS for the COLs, but are unrelated to any contention proposed by Petitioners.

2. Likelihood of Success on the Merits

Petitioners argue that there is a "a strong likelihood of [their] prevailing on their claim that the NRC violated the National Environmental Policy Act ('NEPA') by refusing to address the environmental implications of the catastrophic nuclear reactor accident at Fukushima Dai-ichi in a supplemental environmental impact statement . . . for the licensing of Vogtle 3&4."[42] According to Petitioners, our adoption of the Near-Term Task Force's recommendations for improving the NRC's regulatory system "established, as a matter of law, that the Fukushima accident and the Task Force's report regarding its implications for U.S. reactors constitute 'new and significant information' that should have been addressed in a supplemental EIS"[43] (referring to a supplement to the COL FSEIS). Petitioners refer generally to NEPA and specifically to section 51.92(a) of our rules,[44] arguing that the duty to supplement the FSEIS is mandatory, is not avoidable through findings of compliance with the agency's safety regulations, and is waivable only where the consequences are "remote and highly improbable."[45]

As noted above, proponents of a stay who fail to demonstrate irreparable injury will not prevail unless they demonstrate that their success on the merits is a "virtual certainty."[46] Petitioners fail to meet this high standard.[47] In the *Vogtle* proceeding's "contested" phase, where Petitioners *were* parties, we declined to overturn a Licensing Board decision refusing to reopen the record to consider Petitioners' Fukushima-related arguments — arguments nearly identical to those they raise in the current stay motion.[48] We addressed Petitioners' requests that we reopen the contested proceeding to consider whether the Staff's environmental review took into account the "new and significant environmental implications

---

[42] Stay Motion at 1. *See also id.* at 11.

[43] *Id.* at 2. *See also id.* at 12; Makhijani Declaration at 2-3.

[44] Stay Motion at 12 (quoting 10 C.F.R. § 51.92(a)).

[45] *Id.* (citation omitted).

[46] *See* note 31 and associated text, *supra.*

[47] We initially observe that the petition for judicial review, as it is currently framed, purports to challenge our mandatory hearing decision (CLI-12-2). But because Petitioners did not participate in the mandatory hearing, and were not parties to it, they may not challenge the mandatory hearing decision, as such, in court. *See* 28 U.S.C. § 2342 (only a "*party* aggrieved" can seek judicial review). Petitioners may, however, seek judicial review of our final licensing action — the COLs and LWAs themselves — which would include prior agency adjudicatory decisions on contested issues.

[48] *See Comanche Peak,* CLI-12-7, 75 NRC at 381, 392.

stemming from . . . the Near-Term Report."[49] We declined to do so, concluding generally that "Petitioners ha[d] not identified environmental effects from the Fukushima . . . events that can be concretely evaluated at this time, or identified specific new information challenging the site-specific environmental assessments in the captioned matters."[50] We also concluded, specific to *Vogtle,* that "an application-specific NEPA review represents a 'snapshot' in time," and that while "NEPA requires that we conduct our environmental review with the best information available today[, i]t does not require that we wait until inchoate information matures into something that later might affect our review."[51] Finally, we found Petitioners' proposed Fukushima contention "too vague" for hearing under the Commission's contention-admissibility rules and, as pled, lacking the kind of "'significance' and potential for a 'different result' that under our reopening rule would justify restarting already-closed hearings."[52]

We conclude that Petitioners are unlikely to obtain judicial relief, for the same reasons we rejected Petitioners' Fukushima-based contention. Petitioners assume that our review of NRC regulations in light of the Fukushima events constitutes "new and significant" information requiring a supplement to the COL FSEIS.[53] But Petitioners have not demonstrated that the Fukushima events or any regulatory response to those events would raise environmental impacts that differ significantly from the impacts that the NRC has already reviewed and addressed in the ESP FEIS or the COL FSEIS for Vogtle. Specifically, the NRC's FEIS for Vogtle's ESP examined the environmental impacts of constructing the two new reactors — including the potential impacts from design-basis accidents and severe accidents — and concluded that those impacts would be small.[54] The COL FSEIS subsequently confirmed that this conclusion still remains valid.[55] Petitioners' stay

---

[49] *Id.* at 383 (footnote omitted).

[50] *Id.* at 388.

[51] *Id.* at 391-92 (footnotes omitted).

[52] *Id.* at 391 & n.47. *See* 10 C.F.R. § 2.326(a) (reopening standards).

[53] For new information to be sufficiently "significant" to merit the preparation of a supplemental FEIS, the information "must paint a *seriously* different picture of the environmental landscape." *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-06-3, 63 NRC 19, 28 (2006) (emphasis in original; citation and internal quotation marks omitted). Also, NEPA case law requires EIS supplementation only where new information identifies a "previously unknown" environmental concern, but not where the new information "amounts to mere additional evidence supporting one side or the other of a disputed environmental effect." *Id.*

[54] ESP FEIS § 5.10.1, at 5-80 (design-basis accidents), § 5.10.2, at 5-89 (severe accidents), § 5.10.4, at 5-91 (summary). *See* CLI-12-2, 75 NRC at 115.

[55] COL FSEIS § 5.10.1, at p. 5-17 (design-basis accidents), § 5.10.2, at 5-19 (severe accidents), § 5.10.4, at 5-20 (summary).

motion never even refers to the analyses in the ESP FEIS and the COL FSEIS.[56] Petitioners simply have not shown, from a NEPA perspective, that the Fukushima events or our potential regulatory responses to those events reveal environmental impacts that differ significantly from those the NRC has already studied.

Separately, Petitioners point to our mandatory hearing decision, CLI-12-2, and argue that we have disregarded the Near-Term Task Force's recommendations and that we consider a Fukushima-like accident "too unlikely to warrant consideration."[57] Even assuming that nonparties to the mandatory hearing may challenge its result, Petitioners' characterization of our approach is incorrect. The record shows that we recognized the Staff's examination of potential severe accidents in both its ESP FEIS and its COL FSEIS, and we considered at length the possibility of severe accidents,[58] including those "like the accident at Fukushima."[59] At the evidentiary hearing, we "asked a series of questions about whether the severe accident analysis conducted as part of the ESP [F]EIS considered accidents involving multiple units at the site in disaster scenarios analogous to the multilayer disaster that occurred at Fukushima."[60] We considered Southern's answers indicating that Southern's environmental analysis assumed multiple concurrent accidents (though from independent causes).[61] And at the evidentiary hearing, we also took into account one Staff witness's statement that:

> [A]fter the Fukushima accident, the staff examined the task force report and noted that [it] emphasized that a Fukushima[-]like event is unlikely in the U.S. and the staff determined that this did not represent new and significant information for the Vogtle Review. Additionally, for the purpose of the environmental analysis accident consequences[,] the staff draws its key inputs from the design basis accidents in the [probabilistic risk assessment] reference and design certification and the COL safety side analysis. Because those have not changed following the Fukushima event, this further supports the determination there is no currently new and significant information that would change the staff's conclusion in the [F]SEIS.[62]

---

[56] Petitioners argue merely that "[e]ven where the impacts of a proposed licensing action have been studied and reported in an EIS, NEPA requires the agency to supplement that EIS by considering the implications of any new information that could significantly affect the action or its impacts." Stay Motion at 12.

[57] *Id.* at 15.

[58] CLI-12-2, 75 NRC at 114-15.

[59] *Id.* at 115.

[60] *Id.* at 114.

[61] *Id.* We also considered the fact that Staff's environmental analysis did not consider concurrent accidents at multiple Vogtle units. *Id.*

[62] Corrected Transcript of Evidentiary Hearing (Sept. 27, 2011) (Tr.) at 63-64 (Hatchett), attached as Appendix B to Order (Adopting Proposed Transcript Corrections, Admitting Post-Hearing Responses, and Closing the Record of the Proceeding) (Nov. 1, 2011) (unpublished). *See also* Tr. at 80 (Hatchett).

We ultimately accepted the Staff's position that our regulatory approach and our regulated plants' capabilities "allow the Task Force to conclude that a sequence of events like the Fukushima accident is unlikely to occur in the United States and . . . . [that] continued operation and continued licensing activities do not pose an imminent threat to public health and safety."[63]

Given the specific consideration we gave to the Fukushima events, we disagree with Petitioners' conclusion that we consider severe accidents such as Fukushima "too unlikely" to be considered in an EIS. What we instead concluded was that the Staff's analysis of the proposed action in *Vogtle* already properly accounts for severe accidents generally, and appropriately concludes, more specifically, that the Fukushima events did not alter the Staff's conclusion that severe accident risks at Vogtle remain small.[64]

Likewise, we wish to emphasize that our denial of a stay today in no way diminishes the seriousness with which we and our Staff continue to take the Fukushima events and their potential ramifications for our own regulations of nuclear power plants. As we explained in CLI-12-2, "our review of recommended actions associated with lessons learned from the Fukushima . . . events is ongoing,"[65] we will "continue[ ] to develop the technical basis for Fukushima-related requirements,"[66] and we will impose those new requirements "when the justifica-

---

[63] CLI-12-2, 75 NRC at 80-81.

[64] CLI-12-2, 75 NRC at 89, 115. *See also* Staff Answer at 10. None of this is to say that we consider the Fukushima events anything less than "significant" as that word is colloquially used. We considered Fukushima-related arguments at the mandatory hearing (*see* Tr. at 63-64, 79-82, 296-97, 303, 326-30, 355-56), in CLI-12-2, and throughout CLI-11-5. Further, we have undertaken a significant effort, through the Fukushima Task Force's Near-Term Report and other Staff activities associated with lessons learned from the events, to develop an appropriate regulatory response. *See generally* "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) (transmitted to the Commission via SECY-11-0093, "Near- Term Report and Recommendations for Agency Actions Following the Events in Japan" (July 12, 2011) (ADAMS Accession No. ML11186A950 (package)); Staff Requirements — SECY-11-0093 — Near-Term Report and Recommendations for Agency Actions Following the Events in Japan (Aug. 19, 2011) (ADAMS Accession No. ML112310021); "Recommended Actions to Be Taken Without Delay from the Near-Term Task Force Report," Commission Paper SECY-11-0124 (Sept. 9, 2011) (ADAMS Accession No. ML11245A127); Staff Requirements — SECY-11-0124 — Recommended Actions to Be Taken Without Delay from the Near-Term Task Force Report (Oct. 18, 2011) (ADAMS Accession No. ML112911571); "Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned," Commission Paper SECY-11-0137 (Oct. 3, 2011) (ADAMS Accession No. ML11269A204); Staff Requirements — SECY-11-0137 — Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned (Dec. 15, 2011) (ADAMS Accession No. ML113490055); Staff Requirements — SECY-12-0010 — Engagement of Stakeholders Regarding the Events in Japan (Mar. 21, 2012) (ADAMS Accession No. ML120820056).

[65] CLI-12-2, 75 NRC at 119.

[66] *Id.* at 121.

tion is fully developed and we evaluate the Staff's bases" for those requirements.[67] Indeed, we recently issued orders applicable to the *Vogtle* COLs and to other NRC licenses.[68]

3. Injury to Other Parties, and the Public Interest

Because we have concluded that Petitioners failed to demonstrate either irreparable injury or a likelihood of success on the merits of their appeal to the D.C. Circuit, we need not consider the remaining two "stay" factors — injury to other parties and the public interest.[69] We nonetheless have briefly examined them. Petitioners maintain that if the NRC ultimately imposes new and costly Fukushima-driven requirements, ratepayers or taxpayers may ultimately pay the consequences. Southern argues that delaying construction at the Vogtle site to await judicial review on Petitioners' NEPA claims could degrade safety, would lead to job losses in the short term, and might cause higher construction costs in the long term. The competing arguments do not tip the balance in Petitioners' favor.

III. CONCLUSION

For the foregoing reasons, we *deny* Petitioners' Stay Motion.

---

[67] *Id.* at 120.

[68] *See* All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status (Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Effective Immediately)), No. EA-12-049 (Mar. 12, 2012) (ADAMS Accession No. ML12054A735) and, particularly, Att. 3 ("Requirements for Mitigation Strategies for Beyond-Design-Basis External Events at COL Holder Reactor Sites (Vogtle Units 3 and 4)"); 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), No. EA-12-051 (Mar. 12, 2012) (ADAMS Accession No. ML12054A679), and, particularly, Att. 3 ("Requirements for Reliable Spent Fuel Pool Level Instrumentation at Combined License Holder Reactor Sites" (specific to Vogtle)).

[69] *See* text associated with note 32, *supra.*

IT IS SO ORDERED.[70]

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 16th day of April 2012.

[70] Petitioners also have sought a housekeeping stay to enable them to prepare a request that the D.C. Circuit stay the effectiveness of CLI-12-2. That motion is denied. There is no emergency warranting any kind of stay in this proceeding.

Chairman Jaczko's Opinion, Concurring

I did not support the Commission decision authorizing the Vogtle licenses because they did not include a binding obligation to implement all Fukushima-related safety enhancements. Nonetheless, given that these licenses have been issued, I concur with the general analysis of my colleagues that Petitioners have not satisfied the standard for obtaining a stay of a Commission decision.

Cite as 75 NRC 539 (2012) **LBP-12-8**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

William J. Froehlich, Chairman
Dr. Michael F. Kennedy
Dr. William E. Kastenberg

In the Matter of **Docket Nos. 50-352-LR**
50-353-LR
(ASLBP No. 12-916-04-LR-BD01)

EXELON GENERATION COMPANY, LLC
(Limerick Generating Station, Units 1 and 2) **April 4, 2012**

In this proceeding under 10 C.F.R. Part 54 regarding the application of Exelon Generation Co., LLC, to renew the operating licenses for Limerick Generating Station, Units 1 and 2, the Licensing Board concludes that petitioner Natural Resources Defense Council (NRDC) has established standing and has proffered at one contention that is admissible in part pursuant to 10 C.F.R. § 2.309(f)(1). In accordance with 10 C.F.R. § 2.309(a), we therefore grant the request for public hearing and admit NRDC as a party to this proceeding.

RULES OF PRACTICE: STANDING TO INTERVENE

It is well established that the NRC applies "contemporaneous judicial concepts of standing." *See, e.g., Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915 (2009) (quotation omitted). In other words, "a petitioner must demonstrate that (1) it has suffered a distinct and palpable harm that constitutes injury-in-fact within the zone of

interests arguably protected by the governing statute; (2) that the injury can fairly be traced to the challenged action; and (3) that the injury is likely to be redressed by a favorable decision." *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996).

RULES OF PRACTICE: STANDING TO INTERVENE; PRESUMPTION OF GEOGRAPHIC PROXIMITY

The Commission has found that geographic proximity to a facility (i.e., living or working within 50 miles) is presumptively sufficient to meet these traditional standing requirements in certain types of proceedings, including operating license renewal proceedings. *See Calvert Cliffs 3,* CLI-09-20, 70 NRC at 915 n.15 (citing with approval *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 150 (2001), *aff'd on other grounds,* CLI-01-17, 54 NRC 3 (2001) (applying proximity presumption in reactor operating license renewal proceeding)). This is because a license renewal allows operation of a reactor over an additional period of time during which the reactor could be subject to the same equipment failures and personnel errors as during operations over the original period of the license. *See Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), LBP-98-33, 48 NRC 381, 385 n.1 (1998).

RULES OF PRACTICE: STANDING TO INTERVENE; ORGANIZATIONAL AND REPRESENTATIONAL STANDING

When the petitioner is an organization rather than an individual (as is the case here), it must demonstrate organizational or representational standing. "An organization may base its standing on either immediate or threatened injury to its organizational interests, or to the interests of identified members. To derive standing from a member, the organization must demonstrate that the individual member has standing to participate, and has authorized the organization to represent his or her interests." *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995) (citations omitted).

RULES OF PRACTICE: CONTENTION ADMISSIBILITY

To intervene in a proceeding, a petitioner must not only demonstrate that it has standing, but it must also put forward at least one admissible contention. Section 2.309(f)(1) of 10 C.F.R. requires that each proffered contention must meet all of the following requirements: (i) provide a specific statement of the issue of law or fact 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 that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (vi) show that a genuine dispute exists on a material issue of law or fact. 10 C.F.R. § 2.309(f)(1)(i)-(vi).

NEPA: ENVIRONMENTAL REPORT

NRC regulations in 10 C.F.R. § 51.53 require a license renewal application to include an Environmental Report (ER) to assist the NRC Staff in preparing its EIS. *See* 10 C.F.R. § 51.53(c)(1). The ER must address both the impacts of the proposed renewal and alternatives to those impacts. *See id.* § 51.53(c)(2). Applicants are further subject to the requirements of 10 C.F.R. § 51.53(c)(3), which lists the issues that an applicant must address in the ER, as well as those that it need not address.

NEPA: ENVIRONMENTAL REPORT; NEW AND SIGNIFICANT INFORMATION

A license renewal applicant's ER is further required to consider any "new and significant" information that might alter previous environmental conclusions. 10 C.F.R. § 51.53(c)(3)(iv). NEPA requires the agency to reevaluate any prior analysis if it is presented any new and significant information which would cast doubt on a previous environmental analysis. *Marsh v. Oregon Natural Resources Council, Inc.,* 490 U.S. 360, 374 (1989).

NEPA: ENVIRONMENTAL IMPACT STATEMENT; CATEGORY 1 AND CATEGORY 2 ISSUES

Part 51 of 10 C.F.R. divides the environmental requirements for license renewal into Category 1 and Category 2 issues. *See* 10 C.F.R. Part 51, Subpart A, App. B, tbl. B-1. Category 1 issues are those resolved generically by the Generic Environmental Impact Statement (GEIS) and need not be addressed as part of license renewal. Category 2 issues require plant-specific review. *See* 61 Fed. Reg. at 28,467; *see also* 10 C.F.R. Part 51, Subpart A, App. B, tbl. B-1 n.2. For each license renewal application, Part 51 requires that the NRC Staff prepare a plant-specific supplement to the GEIS that adopts applicable generic impact findings from the GEIS and analyzes site-specific impacts. *See* 10 C.F.R. §§ 51.95(c), 51.71(d).

NEPA: ENVIRONMENTAL IMPACT STATEMENT; ANALYSIS OF SEVERE ACCIDENT MITIGATION ALTERNATIVES

NEPA requires the NRC to take a "hard look" at alternatives, including Severe Accident Mitigation Alternatives (SAMAs), and to provide a rational basis for rejecting alternatives that are cost-effective. *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 350 (1989); *accord Limerick Ecology Action, Inc. v. NRC,* 869 F.2d 719, 737 (3d Cir. 1989).

NEPA: ENVIRONMENTAL IMPACT STATEMENT; ANALYSIS OF SEVERE ACCIDENT MITIGATION ALTERNATIVES; CATEGORY 1 AND CATEGORY 2 ISSUES

NRC regulations clearly specify that the SAMA analysis is a Category 2 issue. Table B-1 of 10 C.F.R. Part 51 "summarizes the Commission's findings on the scope and magnitude of environmental impacts of renewing the operating license for a nuclear power plant." 10 C.F.R. Part 51, Subpart A, App. B. Acknowledging that the risks posed by severe accidents are small for all plants, Table B-1 declares that "severe accidents" are a Category 2 issue, and provides that SAMAs "must be considered for all plants that have not considered such alternatives," repeating the admonition in 10 C.F.R. § 51.53(c)(3)(ii)(L). *Id.* Part 51, Subpart A, App. B, tbl. B-1 (Postulated Accidents).

NEPA: ENVIRONMENTAL IMPACT STATEMENT; ANALYSIS OF SEVERE ACCIDENT MITIGATION ALTERNATIVES; CATEGORY 1 AND CATEGORY 2 ISSUES

We reject the proposition that 10 C.F.R. § 51.53(c)(3)(ii)(L) converts the Category 2 (site-specific) issue of SAMAs into a Category 1 issue. If the Commission intended SAMAs to be a Category 1 issue for Limerick and other plants that had previously considered SAMAs or SAMDAs, it would have said so explicitly. It is, of course, within the Commission's authority to declare an issue to be Category 1 for all plants or a subset of plants. However, this Board is unaware of any provision in our governing regulations that would transform an issue listed as a Category 2 issue into a Category 1 issue absent an *explicit* statement from the Commission.

NEPA: ENVIRONMENTAL REPORT; NEW AND SIGNIFICANT INFORMATION; ANALYSIS OF SEVERE ACCIDENT MITIGATION ALTERNATIVES

Determining whether information regarding SAMAs is "new" and "significant"

does not involve the same analysis as performing an entirely new SAMA analysis, as the Applicant suggests. Insofar as this contention challenges the ER's lack of consideration of new and significant information regarding potentially new, previously unanalyzed SAMAs, it is admissible.

NEPA: ENVIRONMENTAL IMPACT STATEMENT; ANALYSIS OF SEVERE ACCIDENT MITIGATION ALTERNATIVES; 10 C.F.R. § 51.53(c)(3)(ii)(L)

This Board finds that the intent of the Commission in promulgating 10 C.F.R. § 51.53(c)(3)(ii)(L) is clear — to exempt applicants from being required to submit SAMA analyses in the license renewal proceedings for Limerick, Watts Bar, and Comanche Peak.

TABLE OF CONTENTS

I. PROCEDURAL BACKGROUND 544

II. STANDING 546
- A. Standards Governing Standing 546
- B. Ruling on Standing 547

III. CONTENTION ADMISSIBILITY 548
- A. Standards Governing Contention Admissibility 548
- B. Relevant Regulatory Standards 549
- C. Contention 1-E 550
  - 1. Litigability of New and Significant Information 550
  - 2. Admissibility Under 10 C.F.R. § 2.309(f)(1) 554
    - a. New Population Data 554
    - b. Other Mitigation Alternatives 555
    - c. Core Damage Frequency 558
    - d. Economic Consequences 559
    - e. Human Environment 561
  - 3. Conclusion Regarding Contention 1-E 561
- D. Contention 2-E 562
- E. Contention 3-E 564
- F. Contention 4-E 566

IV. MOTIONS TO STRIKE 570

V. CONCLUSION 570

MEMORANDUM AND ORDER
(Ruling on Petition to Intervene and Request for Hearing)

Before this Atomic Safety and Licensing Board (Board) is a petition to intervene and request for a hearing (Petition) filed by the Natural Resources Defense Council (NRDC or Petitioner).[1] NRDC challenges the application filed by Exelon Generation Company, LLC (Exelon or Applicant) to renew its nuclear power reactor operating licenses for the Limerick Generating Station, Units 1 and 2 (Limerick) for an additional 20 years (i.e., until October 26, 2044, for Unit 1, and June 22, 2049, for Unit 2).[2] Limerick is a dual-unit nuclear power facility that is located on the east bank of the Schuylkill River in Limerick Township, Montgomery County, Pennsylvania, approximately 4 river miles downriver from Pottstown, 35 river miles upriver from Philadelphia, and 49 river miles above the confluence of the Schuylkill with the Delaware River.[3]

NRDC has proffered four contentions. While Exelon and the NRC Staff concede that NRDC has established standing, they both assert that all of NRDC's four proposed contentions are inadmissible.

The Board finds that NRDC has established standing and has proffered at least one contention that is admissible pursuant to 10 C.F.R. § 2.309(f)(1). In accordance with 10 C.F.R. § 2.309(a), we therefore grant the request for public hearing and admit NRDC as a party to this proceeding. As limited by the Board, the adjudicatory proceeding for the admitted contention will be conducted under the procedures set forth in 10 C.F.R. Part 2, Subpart L.

I. PROCEDURAL BACKGROUND

Exelon filed its license renewal application (LRA), which included an environmental report (ER) on June 22, 2011.[4] A notice was published in the *Federal Register* on August 24, 2011, stating that any person whose interests may be affected by this proceeding, and who wishes to participate as a party, must file a petition for leave to intervene within 60 days of the notice (i.e., by October 24,

---

[1] Natural Resources Defense Council Petition to Intervene and Notice of Intention to Participate (Nov. 22, 2011) [hereinafter Petition].

[2] *See* 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 Co., LLC, Limerick Generating Station, 76 Fed. Reg. 52,992, 52,992 (Aug. 24, 2011) [hereinafter Application Notice].

[3] Applicant's Environmental Report — Operating License Renewal Stage, Limerick Generating Station, Units 1 and 2, at 2-3 (June 2011) (ADAMS Accession No. ML11179A104) [hereinafter ER].

[4] *See* Application Notice.

2011) in accordance with 10 C.F.R. § 2.309.[5] On September 22, 2011, NRDC requested an extension of time for filing a Petition to Intervene until November 22, 2011.[6] On October 17, 2011, the Secretary of the Commission granted this request.[7]

On November 22, 2011, NRDC timely filed its Petition, proffering four contentions.[8] The Petition was supported by two Declarations — one jointly submitted by Thomas B. Cochran, Ph.D., Matthew G. McKinzie, Ph.D., and Christopher J. Weaver, Ph.D. (Joint Declaration),[9] and the second submitted by Christopher Paine (Paine Declaration).[10] Contention 1-E alleges that the Environmental Report (ER) supporting license renewal has not adequately considered new and significant information relating to severe accident mitigation alternatives (SAMAs).[11] Contention 2-E alleges that in relying on a Severe Accident Mitigation Design Alternatives (SAMDA) analysis from 1989, Exelon has failed to provide an adequate analysis of alternatives.[12] Contention 3-E alleges that Exelon is not legally entitled to claim an exemption under 10 C.F.R. § 51.53(c)(3)(ii)(L) from the requirement to conduct a SAMA analysis, and that the ER is therefore inadequate for failure to include such an analysis.[13] Contention 4-E claims that the ER is deficient for its failure to provide an adequate analysis of a "no-action" alternative.[14]

---

[5] *Id.* at 52,993.

[6] NRDC Request for Extension of Time for Opportunity to Request a Hearing and Petition for Leave to Intervene in the NRC's Notice of Opportunity for Hearing Regarding Renewal of Facility Operating License Nos. NPF-39 and NPF-85 for an Additional 20-Year Period (Sept. 22, 2011).

[7] Commission Order (Granting Extension of Time) (Oct. 17, 2011) (unpublished).

[8] *See* Petition at 16-24.

[9] *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) [hereinafter Joint Declaration].

[10] *See* Declaration of Christopher E. Paine of the Natural Resources Defense Council (Nov. 22, 2011) [hereinafter Paine Declaration].

[11] Petition at 16. We use the term SAMA to refer to an additional feature or action that could prevent or mitigate the consequences of serious accidents. SAMA analysis includes consideration of (i) hardware modifications, procedure changes, and training program improvements; (ii) SAMAs that could prevent core damage as well as SAMAs that could mitigate severe accident consequences; and (iii) the full scope of potential accidents (meaning both internal and external events). In 1989, the NRC Staff performed a severe accident mitigation alternatives analysis in a Supplement to the Final Environmental Statement which it referred to as a SAMDA analysis. *See* Final Environmental Statement Related to the Operation of Limerick Generating Station, Units 1 and 2, NUREG-0974 Supplement (Aug. 1989) (ADAMS Accession No. ML11221A204) [hereinafter 1989 SAMDA Analysis].

[12] Petition at 19.

[13] *Id.* at 21.

[14] *Id.* at 23.

On December 20, 2011, Exelon filed an answer opposing NRDC's Petition.[15] On December 21, 2011, the NRC Staff filed an answer opposing the Petition.[16] Although Exelon and the NRC Staff concede that NRDC has standing, both claim that none of NRDC's four proffered contentions is admissible.[17] NRDC filed a combined reply to the Exelon and the NRC Staff answers on January 6, 2012.[18] On January 17, 2012, Exelon and NRC Staff each filed motions to strike portions of NRDC's combined reply.[19] NRDC filed a brief in opposition of these motions on January 27, 2012.[20]

This Board heard oral argument on the petition to intervene and the motions to strike in Norristown, Pennsylvania, on February 21, 2012.[21]

II. STANDING

A. Standards Governing Standing

As noted above, neither Exelon nor NRC Staff has challenged NRDC's assertion that it has standing to intervene in this proceeding.[22] However, NRC regulations state that "the Atomic Safety and Licensing Board designated to rule on the request for hearing and/or petition for leave to intervene, will grant the request/petition if it determines that the requestor/petitioner has standing . . . and has proposed at least one admissible contention."[23] As such, we proceed with an independent analysis of standing despite the lack of disagreement on the subject.

It is well established that the NRC applies "contemporaneous judicial concepts of standing."[24] In other words, "a petitioner must demonstrate that (1) it has suffered a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute; (2) that the injury

---

[15] Exelon Answer Opposing NRDC's Petition to Intervene (Dec. 20, 2011) [hereinafter Exelon Answer].

[16] NRC Staff's Answer to Natural Resources Defense Council's Petition to Intervene and Notice of Intention to Participate (Dec. 21, 2011) [hereinafter NRC Answer].

[17] Exelon Answer at 1; NRC Answer at 1.

[18] Natural Resources Defense Council ("NRDC") Combined Reply to Exelon and NRC Staff Answers to Petition to Intervene (Jan. 6, 2012) [hereinafter NRDC Reply].

[19] Exelon's Motion to Strike Portions of NRDC's Reply (Jan. 17, 2012) [hereinafter Exelon Motion to Strike]; NRC Staff's Motion to Strike Impermissible New Claims in Natural Resources Defense Council's Reply Brief (Jan. 17, 2012) [hereinafter NRC Motion to Strike].

[20] [NRDC] Combined Opposition to Motions to Strike (Jan. 27, 2012).

[21] *See* Tr. at 1-269.

[22] Exelon Answer at 1; NRC Answer at 1.

[23] 10 C.F.R. § 2.309(a).

[24] *See, e.g., Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915 (2009) (quotation marks omitted).

can fairly be traced to the challenged action; and (3) that the injury is likely to be redressed by a favorable decision."[25] The Commission has found that geographic proximity to a facility (i.e., living or working within 50 miles) is presumptively sufficient to meet these traditional standing requirements in certain types of proceedings, including operating license renewal proceedings.[26] This is because a license renewal allows operation of a reactor over an additional period of time during which the reactor could be subject to the same equipment failures and personnel errors as during operations over the original period of the license.[27]

When the petitioner is an organization rather than an individual (as is the case here), it must demonstrate organizational or representational standing.

> An organization may base its standing on either immediate or threatened injury to its organizational interests, or to the interests of identified members. To derive standing from a member, the organization must demonstrate that the individual member has standing to participate, and has authorized the organization to represent his or her interests.[28]

B. Ruling on Standing

In its Petition, NRDC claims that it has the right to intervene "on behalf of [its] members";[29] in other words, NRDC asserts representational standing. NRDC states it represents the interests of three of its members in this proceeding — Suzanne Day, Charles W. Elliott, and William P. White.[30] For NRDC to be granted representational standing, one or more of its members must individually have standing, and must have authorized NRDC to represent them.[31]

Ms. Day, Mr. Elliott, and Mr. White have each submitted declarations indicating that they are members of NRDC, and that they live within 50 miles of

---

[25] *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996).

[26] *See Calvert Cliffs 3,* CLI-09-20, 70 NRC at 915 n.15 (citing with approval *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 150 (2001), *aff'd on other grounds,* CLI-01-17, 54 NRC 3 (2001) (applying proximity presumption in reactor operating license renewal proceeding)).

[27] *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), LBP-98-33, 48 NRC 381, 385 n.1 (1998).

[28] *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995) (citations omitted).

[29] Petition at 5.

[30] Petition at 6; *see also* Declaration of Suzanne Day (Nov. 18, 2011) [hereinafter Day Declaration]; Declaration of Charles W. Elliott (Nov. 17, 2011) [hereinafter Elliott Declaration]; Declaration of William P. White (Nov. 16, 2011) [hereinafter White Declaration].

[31] *Ga. Tech Research Reactor,* CLI-95-12, 42 NRC at 115.

Limerick.[32] As such, each would be able to claim individual standing to intervene in this proceeding based on the proximity presumption. In addition, each authorized NRDC to act on their behalf in this proceeding.[33] We therefore find that NRDC has met the elements required for representational standing.

III. CONTENTION ADMISSIBILITY

A. Standards Governing Contention Admissibility

To intervene in a proceeding, a petitioner must not only demonstrate that it has standing, but it must also put forward at least one admissible contention. Section 2.309(f)(1) of 10 C.F.R. requires that each proffered contention must meet all of the following requirements: (i) provide a specific statement of the issue of law or fact 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 that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (vi) show that a genuine dispute exists on a material issue of law or fact.[34]

Although "[m]ere 'notice pleading' is insufficient" in NRC proceedings,[35] a petitioner need not prove its contentions at the admissibility stage,[36] and we do not adjudicate disputed facts at this juncture.[37] The Commission has recently reiterated that "contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by some alleged fact or facts demonstrating a genuine material dispute" with the applicant.[38] The factual support required to render a proposed contention admissible is "a minimal showing that material facts are in dispute."[39]

---

[32] Day Declaration at 1, 2 (stating she lives 35 miles from Limerick); Elliott Declaration at 1 (stating he lives 30 miles from Limerick); White Declaration at 1 (stating he lives 38 miles from Limerick).

[33] Day Declaration at 4; Elliott Declaration at 5; White Declaration at 4.

[34] 10 C.F.R. § 2.309(f)(1)(i)-(vi).

[35] *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003).

[36] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004).

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

[38] *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 396 (2012) (citing *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 335 (1995)).

[39] *Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 51 (1994) (quotation marks omitted).

B. Relevant Regulatory Standards

The National Environmental Policy Act (NEPA) requires all federal agencies, including the NRC, to prepare an Environmental Impact Statement (EIS) for every major federal action that may significantly affect the quality of the human environment.[40] The issuance of a renewed operating license for a nuclear power reactor is a major federal action under NEPA.[41] NEPA requires the NRC to take a "hard look" at alternatives, including SAMAs, and to provide a rational basis for rejecting alternatives that are cost-effective.[42]

NRC regulations in 10 C.F.R. § 51.53 require a license renewal application to include an Environmental Report (ER) to assist the NRC Staff in preparing its EIS.[43] The ER must address both the impacts of the proposed renewal and alternatives to those impacts.[44] Applicants are further subject to the requirements of 10 C.F.R. § 51.53(c)(3), which lists the issues that an applicant must address in the ER, as well as those that it need not address.

In 1996, the NRC issued NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS).[45] The NRC also amended its environmental regulations in 10 C.F.R. Part 51 to reflect certain findings in the GEIS.[46] Part 51 divides the environmental requirements for license renewal into Category 1 and Category 2 issues.[47] Category 1 issues are those resolved generically by the GEIS and need not be addressed as part of license renewal. Category 2 issues require plant-specific review.[48] For each license renewal application, Part 51 requires that the NRC Staff prepare a plant-specific supplement to the GEIS that adopts applicable generic impact findings from the GEIS and analyzes site-specific impacts.[49]

A license renewal applicant's ER is further required to consider any "new and significant" information that might alter previous environmental conclusions.[50] NEPA requires the agency to reevaluate any prior analysis if it is presented any

---

[40] *See* 42 U.S.C. § 4332(2)(C).

[41] *See New York v. NRC,* 589 F.3d 551, 553 (2d Cir. 2009).

[42] *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 350 (1989); *accord Limerick Ecology Action, Inc. v. NRC,* 869 F.2d 719, 737 (3d Cir. 1989).

[43] *See* 10 C.F.R. § 51.53(c)(1).

[44] *See id.* § 51.53(c)(2).

[45] Generic Environmental Impact Statement for License Renewal of Nuclear Plants, NUREG-1437, Vol. 1 (May 1996) (ADAMS Accession No. ML040690705) [hereinafter GEIS].

[46] *See* Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 28,467 (June 5, 1996).

[47] *See* 10 C.F.R. Part 51, Subpart A, App. B, tbl. B-1.

[48] *See* 61 Fed. Reg. at 28,467; *see also* 10 C.F.R. Part 51, Subpart A, App. B, tbl. B-1 n.2.

[49] *See* 10 C.F.R. §§ 51.95(c), 51.71(d).

[50] *Id.* § 51.53(c)(3)(iv).

new and significant information which would cast doubt on a previous environmental analysis.[51] With this background in mind, we consider the admissibility of each of NRDC's four contentions.

C. Contention 1-E

NRDC's proposed Contention 1-E reads as follows:

> Applicant's Environmental Report (§ 5.3) erroneously concludes that new information related to its severe accident mitigation design alternatives ("SAMDA") analysis is not significant, in violation of 10 C.F.R. § 51.53(c)(3)(iv), and thus the ER fails to present a legally sufficient analysis of severe accident mitigation alternatives.[52]

NRDC presents two distinct but related claims in this contention. First, NRDC asserts that Exelon has considered certain new information for its significance, but that it has done so inadequately. Second, NRDC contends that Exelon has omitted other new information that NRDC believes is significant.[53] NRDC's argument is predicated on 10 C.F.R. § 51.53(c)(3)(iv), which requires Exelon to consider any "new and significant" information that might alter a previously conducted SAMA analysis.[54] While Exelon and the NRC Staff seem to concede that Exelon is required to consider new information for its significance,[55] both argue that NRDC may not challenge that consideration.[56] We consider, and ultimately reject, this argument below.

1. Litigability of New and Significant Information

Exelon makes the blanket assertion that its consideration of new and significant information is "not challengeable in [this] license renewal proceeding."[57] The NRC Staff agrees with this position, with the caveat that NRDC could challenge Exelon's analysis if NRDC sought a waiver from the Commission.[58] We first analyze this argument challenging the "litigability" of new and significant infor-

---

[51] *Marsh v. Oregon Natural Resources Council,* 490 U.S. 360, 374 (1989).
[52] Petition at 16.
[53] *See id.* at 16-17.
[54] *Id.* at 3; 10 C.F.R. § 51.53(c)(3)(iv).
[55] *See* Exelon Answer at 26; NRC Staff Answer at 16.
[56] *See* Exelon Answer at 26-27; NRC Staff Answer at 16-17.
[57] Tr. at 43-44.
[58] *Id.* at 52.

mation before turning to the contention admissibility requirements of 10 C.F.R. § 2.309(f)(1).

Exelon and the NRC Staff contend that SAMAs are a "Category 1 issue," or should be treated as such, for Limerick, and as such they may not be challenged absent a waiver from the Commission.[59] Exelon and the NRC Staff base their position on the Commission's holding that "[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."[60] In other words, a petitioner may not challenge in an adjudicatory proceeding an applicant's alleged failure to consider new and significant information relevant to a Category 1 issue, without seeking a waiver. The question before the Board is whether, as Exelon and the NRC Staff claim, SAMAs are a Category 1 issue for Limerick.

As an initial matter, the regulations clearly specify that the SAMA analysis is a Category 2 issue. Table B-1 of 10 C.F.R. Part 51 "summarizes the Commission's findings on the scope and magnitude of environmental impacts of renewing the operating license for a nuclear power plant."[61] Acknowledging that the risks posed by severe accidents are small for all plants, Table B-1 declares that "severe accidents" are a Category 2 issue, and provides that SAMAs "must be considered for all plants that have not considered such alternatives."[62] Exelon and NRC Staff would have it that these last six words ("that have not considered such alternatives"), which repeat the admonition in 10 C.F.R. § 51.53(c)(3)(ii)(L), transform SAMAs into a Category 1 issue for Limerick.[63]

In support of this argument, Exelon cites to rulings by two Licensing Boards in the *Vermont Yankee* and *Pilgrim* license renewal proceedings (and the affirmance of those decisions by the Commission).[64] In both of these proceedings, the Attorney General of Massachusetts challenged the applicant's failure to consider new and significant information about a possible severe spent fuel pool fire.[65]

---

[59] *See* Exelon Answer at 27; NRC Staff Answer at 16-17.

[60] *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 21 (2007).

[61] 10 C.F.R. Part 51, Subpart A, App. B.

[62] *Id.* Part 51, Subpart A, App. B, tbl. B-1 (Postulated Accidents).

[63] Exelon Answer at 28; NRC Answer at 16.

[64] *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257 (2006); *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131 (2006); *Vt. Yankee,* CLI-07-3, 65 NRC 13. We note also that Exelon relies on a decision of the United States Court of Appeals for the First Circuit upholding the Commission's decision in these proceedings. *See Massachusetts v. United States,* 522 F.3d 115 (1st Cir. 2008). While we ultimately find this line of decisions inapplicable to the proceedings now before the Board for reasons explained below, it is also worth noting that Limerick is located within the Third Circuit, and as such, decisions of the First Circuit Court of Appeals have no binding authority in this proceeding.

[65] *Pilgrim,* LBP-06-23, 64 NRC at 280; *Vt. Yankee,* LBP-06-20, 64 NRC at 152.

Exelon also relies on the Commission's decision in the *Turkey Point* license renewal proceeding.[66] There, the Commission ruled on an appeal of a Licensing Board order denying a petition to intervene that presented contentions concerning release of radiological, chemical, and herbicidal materials and storage of spent fuel.[67]

It is readily apparent that the *Pilgrim, Vermont Yankee,* and *Turkey Point* decisions are inapplicable to the instant proceeding. All three of these cases involved petitioners submitting contentions regarding issues — spent fuel storage and the release of radiological, chemical, and herbicidal materials — that Part 51 explicitly declares Category 1.[68] In contrast, the contention in this proceeding, challenging an analysis of new and significant information regarding SAMAs, raises a Category 2 issue. For this Board to be bound by these decisions, Exelon or the NRC Staff would need to establish that SAMAs are, indeed, Category 1 issues for Limerick. In an attempt to do just that, Exelon analogizes SAMAs for Limerick to the treatment afforded groundwater quality in license renewal proceeding environmental analyses:

> [C]onsider Section 51.53(c)(3)(ii)(D), which provides that a license renewal ER must include, "[i]f the applicant's plant is located at an inland site and utilizes cooling ponds, an assessment of the impact of the proposed action on groundwater quality." Because the South Texas and Turkey Point plants have cooling ponds in salt marshes, they are not subject to the requirements of Section 51.53(c)(3)(ii)(D). The GEIS is explicit that for these plants, "this is a Category 1 issue."[69]

And indeed, Table B-1 bears this out — groundwater quality degradation for cooling ponds in salt marshes is a Category 1 issue.[70] But Exelon's argument merely serves to highlight the failure of its reasoning. The Commission was *explicit* in both the GEIS and Table B-1 that groundwater quality degradation for plants with cooling ponds in salt marshes was to be considered a Category 1 issue. In this case, however, Exelon requests that we find that the Commission *implicitly* intended SAMAs to be a Category 1 issue for those sites that had already performed an analysis.[71] We reject the proposition that 10 C.F.R. § 51.53(c)(3)(ii)(L) converts this Category 2 (site-specific) issue into a Category 1

---

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

[67] *Id.* at 5-6.

[68] *See* 10 C.F.R. Part 51, Subpart A, App. B, tbl. B-1.

[69] Exelon Answer at 28 (citations omitted).

[70] 10 C.F.R. Part 51, Subpart A, App. B, tbl. B-1 (Ground-water Use and Quality); *see* GEIS at 4-122.

[71] *See* Exelon Answer at 33.

issue. If the Commission intended SAMAs to be a Category 1 issue for Limerick and other plants that had previously considered SAMAs or SAMDAs, it would have said so *explicitly,* as it did when it found groundwater degradation to be a Category 1 issue for the South Texas and Turkey Point facilities. In addition, in *Turkey Point,* the Commission recognized that site-specific environmental issues are Category 2 issues, and made no suggestion that this was not the case for any specific plants.[72]

It is, of course, within the Commission's authority to declare an issue to be Category 1 for all plants or a subset of plants. However, this Board is unaware of any provision in our governing regulations that would transform an issue listed as a Category 2 issue into a Category 1 issue absent an *explicit* statement from the Commission.

Exelon has expressed concern that allowing a petitioner to challenge the analysis of new and significant information relevant to the 1989 SAMDA would "eviscerate" 10 C.F.R. § 51.53(c)(3)(ii)(L).[73] However, Exelon and NRC Staff concede that Exelon is required by regulation to consider new information relevant to the 1989 SAMDA for its significance.[74] This analysis of new and significant information is intended to help the NRC Staff in its preparation of an EIS.[75] Yet, at this stage of a proceeding, a petitioner must challenge the ER, which "acts as a surrogate for the EIS during the early stages of a relicensing proceeding."[76] Challenging the ER preserves the petitioner's right to challenge the EIS at a later stage of the proceedings.[77]

The Board's ruling recognizes the premise that when a petitioner identifies an omission in or a portion of an applicant's application with which it disagrees and meets the requirements of 10 C.F.R. § 2.309(f)(1), that petitioner shall be allowed to litigate its disagreement. Accordingly, we reject that claim of Exelon and the NRC Staff that SAMAs are a Category 1 issue and hence that NRDC's challenge to Exelon's consideration of new and significant information is not litigable. There is nothing in the NRC regulations or case precedent that leads us to any other conclusion. Indeed, beyond the Commission regulations is the obligation imposed by NEPA. Regulations cannot trump statutory mandates.[78]

---

[72] *Turkey Point,* CLI-01-17, 54 NRC at 11.

[73] Exelon Answer at 26; Tr. at 48, 106.

[74] *See* Tr. at 46, 50-51; ER at 5-4; NRC Staff Answer at 16.

[75] *See* ER at 5-2; Tr. at 51.

[76] *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), LBP-08-26, 68 NRC 905, 931 (2008).

[77] *See Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 88 (2009), *aff'd in part and rev'd in part on other grounds,* CLI-10-2, 71 NRC 27 (2010).

[78] *See Ramadan v. Chase Manhattan Corp.,* 229 F.3d 194, 201 (3d Cir. 2000).

"NEPA requires that [the Commission] conduct [its] environmental review with the best information available today."[79]

Therefore, relying upon Part 51, Subpart A, Appendix B, we find that SAMAs are a Category 2 issue and are not transformed into a Category 1 issue for sites such as Limerick for which a SAMA analysis has been previously performed. Exelon has argued, though, that even if we conclude SAMAs are not a Category 1 issue for Limerick, we should still find that its analysis of new and significant information relevant to SAMAs is not litigable in this proceeding.[80] Exelon argues that 10 C.F.R. § 51.53(c)(2)(iii)(L) exempts Limerick from performing a SAMA, and that this regulatory exception requires that SAMAs be treated as a Category 1 issue, even if they are categorized as a Category 2 issue.[81] We find no regulatory basis for such a wide-ranging argument. SAMAs are listed as Category 2 issues,[82] and we must treat them as such.

2. Admissibility Under 10 C.F.R. § 2.309(f)(1)

Our ruling that SAMAs are not a Category 1 issue for Limerick does not settle the admissibility of Contention 1-E. In order to be admitted, contentions must meet the requirements of 10 C.F.R. § 2.309(f)(1)(i)-(vi). NRDC has alleged facts and provided declarations to support the admissibility of Contention 1-E. We find that most of Contention 1-E fails to satisfy one or more of the requirements of section 2.309(f)(1), for the reasons stated below.

a. New Population Data

NRDC argues that Exelon's ER "misinterprets and/or misuses new information regarding increased population in the area within 10 miles of the plant and thus fails to account for the significant increase in total person-rems of exposure that could occur in the event of a severe accident."[83] NRDC continues, "This population was substantially underestimated in the 1989 SAMDA analysis upon which the Applicant continues to rely."[84] Moreover, NRDC makes essentially the same claims regarding Exelon's treatment of population within 50 miles of the plant.[85]

---

[79] *Luminant Energy Co. LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 391-92 (2012).

[80] *See* Exelon Answer at 33; Tr. at 48.

[81] *See* Tr. at 48.

[82] 10 C.F.R. Part 51, Subpart A, App. B, tbl. B-1 (Postulated Accidents).

[83] Petition at 16.

[84] *Id.*

[85] *See id.* at 17.

Exelon contends first that the 1989 SAMDA is "simply not at issue in this proceeding," and therefore Contention 1-E is inadmissible as outside the scope of the proceeding insofar as it challenges that analysis.[86] We agree. While Exelon has pointed to the existence of the 1989 SAMDA to show that it meets a regulation exempting it from filing a new SAMA in its license renewal ER, the 1989 SAMDA is not part of the ER, nor is it incorporated by reference.[87] Therefore, any challenge to the 1989 SAMDA necessarily does not frame an appropriate challenge to Exelon's license renewal application because any challenge to the particulars of the 1989 SAMDA is outside the scope of this proceeding, thereby contravening 10 C.F.R. § 2.309(f)(1)(iii).[88]

NRDC also challenges Exelon's consideration of new post-1989 information regarding population data. NRDC argues that Exelon should have considered population estimates up to the year 2049 — when the license for Unit 2 would expire if Exelon succeeds in renewing its operating licenses — rather than 2030, as Exelon did in its ER.[89] While NRDC demonstrates that other plants have included population estimates in SAMAs up to the license expiration date,[90] Exelon notes that NRDC has not provided "any legal or technical support for its suggestion that population projections to the end of the license term are required."[91]

In this, Exelon is correct, as we find no legal requirement that an applicant consider such data. However, a petitioner could succeed in raising such a contention if it demonstrated that considering such data would be material to the proceeding.[92] NRDC has not demonstrated how consideration of population data through 2049 would change Exelon's analysis of new and significant information. As such, this aspect of Contention 1-E lacks the support required by 10 C.F.R. § 2.309(f)(1)(v)[93] and seeks to raise questions that have not been shown to be material to the findings the NRC must make.[94] It is therefore inadmissible.

b. Other Mitigation Alternatives

Next, NRDC argues that Exelon "ignores new and significant information regarding potential mitigation alternatives that have been considered for other BWR Mark II containment reactors that were not considered in the original

---

[86] Exelon Answer at 36.
[87] *Id.*
[88] 10 C.F.R. § 2.309(f)(1)(iii).
[89] Joint Declaration ¶ 27.
[90] *Id.*
[91] Exelon Answer at 37.
[92] *See* 10 C.F.R. § 2.309(f)(1)(iv).
[93] *Id.* § 2.309(f)(1)(v).
[94] *Id.* § 2.309(f)(1)(iv).

SAMDA analysis and ignores new and significant information regarding additional plausible severe accident scenarios."[95]

Exelon responds that it need not consider "new" severe accident mitigation alternatives because 10 C.F.R. § 51.53(c)(3)(ii)(L) grants it an exemption from submitting a SAMA analysis in its ER.[96] Essentially, Exelon argues that considering new mitigation alternatives in the context of a new and significant information analysis is fundamentally the same as performing an entirely new SAMA analysis, which it argues it is not required by law to perform.[97]

We do not agree. Determining whether information regarding SAMAs is "new" and "significant" does not involve the same analysis as performing an entirely new SAMA analysis, as Exelon suggests. Using a screening technique similar to the one performed in the 1989 Supplement to the Final Environmental Statement,[98] Exelon can determine the "significance" of new mitigation alternatives without performing a "new SAMA analysis." The NRC Staff performed such a screening in the preparation of the 1989 Supplement to the Final Environmental Statement,[99] and Exelon did so with regard to other new information in section 5.3 of the ER (Significance of New Information).[100] To the extent that this aspect of Contention 1-E is a direct challenge to the 1989 SAMDA,[101] it is inadmissible. But, insofar as this contention challenges the ER's lack of consideration of new and significant information regarding potentially new, previously unanalyzed SAMAs, it is admissible.

NRDC states that the Limerick ER "fails to consider more than a very narrow group of mitigation measures identified in the 1989 SAMDA analysis."[102] NRDC continues that the ER "ignores new and significant information regarding potential mitigation alternatives that have been considered for other BWR Mark II containment reactors that were not considered in the original SAMDA analysis."[103]

NRDC has provided a specific statement, as well as an adequate basis, for the proffered contention.[104] Given that NRDC is challenging an omission in Exelon's ER of material that NRDC alleges is required to be there under 10 C.F.R.

---

[95] Petition at 17.

[96] We consider Exelon's arguments regarding subsection (L) in depth in our analysis of Contention 3-E, below. *See infra* pp. 564-66.

[97] *See* Tr. at 106.

[98] *See* 1989 SAMDA Analysis at v.

[99] *Id.*

[100] *See* ER at 5-7 to 5-9.

[101] *See, e.g.,* Joint Declaration ¶¶ 7, 8.

[102] Petition at 17.

[103] *Id.*

[104] 10 C.F.R § 2.309(f)(1)(i)-(ii).

§ 51.53(c)(3)(iv), this issue is within the scope of the proceeding.[105] Further, NRDC's Joint Declaration adequately demonstrates that this issue is material to the NRC's licensing decision, supported by alleged facts and expert opinion, and has raised a genuine dispute with Exelon.[106] NRDC's Declarant, Dr. Matthew G. McKinzie,[107] points out that the 1989 SAMDA considered a cost-benefit analysis for only seven mitigation alternatives.[108] In comparison, "the cohort of 27 U.S. BWR units at 18 sites that are undergoing license renewal reviews, or that have recently been granted license renewal, have on average considered 175 Phase I SAMA candidates and 35 Phase II SAMA candidates."[109] Given this information, we find that NRDC has provided adequate support under 10 C.F.R. § 2.309(f)(1)(v) for its claim that there exists new information that Exelon has not considered. NRDC has shown there are numerous new SAMA candidates which should be evaluated for their significance.

In advancing this contention, NRDC has alleged facts and provided expert testimony that other plants seeking license renewal have considered these "new" SAMA candidates and have found certain candidates to be cost-beneficial.[110] NRDC has demonstrated that among recent BWR applications for license renewal, applicants have found between two and eleven SAMA candidates to be cost-beneficial or potentially cost-beneficial.[111] NRDC has meticulously listed which SAMA candidates these plants found to be cost-beneficial.[112] This suggests to us that this contention is material, as consideration of new information regarding SAMA candidates could very well lead to a conclusion that this information is significant.[113] Further, we find that NRDC's analysis of recently performed SAMAs at other plants provides support for its argument that the information that Exelon has failed to consider is not only new, but also significant.[114]

NRDC argues also that Exelon must consider "additional plausible severe accident scenarios."[115] Looking to NRDC's Joint Declaration, however, it is clear that NRDC is alleging that Exelon must consider information related to the

---

[105] *Id.* § 2.309(f)(1)(iii).

[106] *Id.* § 2.309(f)(1)(iv)-(vi).

[107] Exelon and the NRC Staff have not challenged the bona fides of Dr. McKinzie, who received a Ph.D. in Physics from the University of Pennsylvania and a B.A. in Physics from Bard College. Joint Declaration, Attachment B, Curriculum Vitae for Matthew G. McKinzie.

[108] Joint Declaration ¶ 7.

[109] *Id.* ¶ 9.

[110] *See id.* ¶ 13.

[111] *Id.*

[112] *Id.*

[113] 10 C.F.R. § 2.309(f)(1)(iv).

[114] *Id.* § 2.309(f)(1)(v).

[115] Petition at 17.

March 11, 2011 events at Fukushima, Japan.[116] The Commission has stated, "we do not know today the full implications of the Japan events for U.S. facilities. Therefore, any generic NEPA duty — if one were appropriate at all — does not accrue now."[117] The Commission has also affirmed a Licensing Board's rejection of a contention in a license renewal proceeding based on an applicant's failure to consider alleged "new and significant information" arising from NRC's Fukushima Task Force Report.[118] Therefore, in the context of this proceeding, the events at Fukushima, and the ensuing NRC response, are not, at this point, to be considered "new and significant information" under NEPA.[119] Accordingly, we conclude that this aspect of Contention 1-E is inadmissible as beyond the scope of this proceeding.[120]

c. Core Damage Frequency

NRDC alleges that Exelon's analysis of new and significant information is based on a flawed core damage frequency (CDF).[121] NRDC argues that using "historical data" to calculate CDF lead to a higher value than the "theoretical value calculated by the applicant."[122] Essentially, NRDC calculates core damage frequency by looking at actual core damage events that have occurred at Three Mile Island Unit 2, Greifswald Unit 5, and Fukushima Units 1, 2, and 3.[123] However, NRDC goes on to note that "we do not argue that any of [these] CDF estimates based on the historical evidence represent the most accurate CDFs for Limerick Units 1 and 2."[124]

This aspect of Contention 1-E is inadmissible. NRDC has not provided any alleged facts or expert opinion to support its position that the use of historical data is more appropriate than the plant-specific CDF calculated for Limerick.[125] Therefore, this aspect of Contention 1-E does not meet 10 C.F.R. § 2.309(f)(1)(v).

---

[116] *See* Joint Declaration ¶¶ 16-17.

[117] *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 167 (2011).

[118] *Comanche Peak,* CLI-12-7, 75 NRC at 392.

[119] *Callaway,* CLI-11-5, 74 NRC at 167.

[120] 10 C.F.R. § 2.309(f)(1)(iii).

[121] Petition at 18.

[122] Joint Declaration ¶¶ 19-20.

[123] *Id.* ¶ 19.

[124] *Id.* ¶ 21.

[125] Indeed, NRDC has admitted that a CDF calculated with these historical data is likely inaccurate. Joint Declaration ¶ 21.

d. Economic Consequences

NRDC argues that in its analysis of new and significant SAMA-related information the ER "fails to evaluate the impact of a properly conducted economic analysis on the assessment of the environmental consequences of a severe accident at Limerick" by relying on data from an analysis conducted at Three Mile Island (TMI), "a site that involves a markedly different and less economically developed area than the area within 50 miles of Limerick."[126] NRDC also argues that Exelon's economic analysis is inadequate because it "ignores new and significant information regarding the likely cost of cleanup from a severe accident in a metropolitan area like Philadelphia."[127]

Exelon responds that what NRDC has put forth is a contention of omission that is inadmissible because in its ER, Exelon "did evaluate whether off-site economic cost risks qualified as new and significant information," by looking at data from TMI.[128] While NRDC argues in part that Exelon's ER "does not remedy the lack of economic risk assessment in the 1989 SAMDA,"[129] this aspect of Contention 1-E challenges the adequacy of Exelon's consideration of new and significant information. NRDC states, "[Exelon] commits errors in the 2011 [ER] in an effort to claim that economic risk is not significant new information."[130] NRDC alleges further that Exelon's use of data from TMI is inappropriate because "the ratio of economic cost risk to exposure cost risk exhibits a wide variation," and because "TMI is a Pressurized Water Reactor (PWR) rather than a BWR, with correspondingly different accident scenario source terms, and Harrisburg near TMI is [a] smaller and less urban economic center than Philadelphia near Limerick."[131] NRDC has also provided a table showing the ratio of economic cost risk to exposure cost for nine recently renewed BWRs.[132]

These arguments and the alleged facts discussed above support NRDC's claim that Exelon's reliance on data from TMI was inappropriate in an analysis of economic cost risk for Limerick. NRC regulations require a petitioner to provide "a concise statement of the alleged facts or expert opinions which support" its position.[133] NRDC has done this, as its Joint Declaration provides a set of alleged facts regarding the ratio of economic cost risk to exposure cost risk at other BWR facilities. Dr. McKinzie submitted a declaration in which he challenges

---

[126] Petition at 18.

[127] *Id.*

[128] Exelon Answer at 48; *see* ER at 5-8.

[129] Joint Declaration ¶ 32.

[130] *Id.*

[131] *Id.* ¶ 33.

[132] *Id.* ¶ 34.

[133] 10 C.F.R. § 2.309(f)(1)(v).

the appropriateness of using TMI data to analyze economic consequences for Limerick.[134] NRC regulations also require a petitioner to make reference to "specific sources and documents" on which it intends to rely.[135] NRDC has done this, as well, as it has drawn its analysis from and cited to SAMAs performed for other BWRs seeking license renewal.[136] NRDC has met its burden and provided the alleged facts and expert opinion required by 10 C.F.R. § 2.309(f)(1)(v).

We find also that the other requirements of section 2.309(f)(1) are satisfied. NRDC raises a specific challenge to Exelon's use of TMI data. It provides a brief description of its basis by explaining the reasons why use of those data was inappropriate.[137] This constitutes a genuine dispute on a material issue because Exelon claims that its use of TMI data is appropriate[138] and NRDC has provided arguments to the contrary.[139] Lastly, we find that this aspect of Contention 1-E is within the scope of this proceeding because it challenges the adequacy of the ER. Thus, it satisfies section 2.309(f)(1)(iii).

To the extent that Contention 1-E challenges Exelon's reliance on data from TMI to evaluate the significance of economic cost risks, it is admissible. In other words, we admit the following issue for hearing: whether Exelon's use of data from TMI in its analysis provides an adequate consideration of new and significant information regarding economic cost risk. However, to the extent the contention directly challenges the contents of the 1989 SAMDA, this portion of Contention 1-E is inadmissible.

Further, in the context of this contention we find that NRDC's assertion that Exelon must consider new information regarding cleanup costs does not meet the standards in 10 C.F.R. § 2.309(f)(1). NRDC simply notes that cleanup costs in Philadelphia "could be significantly larger on a per capita basis than previously estimated."[140] This claim is not adequately supported, as required by 10 C.F.R. § 2.309(f)(1)(v), to warrant admission.[141] It contains no alleged facts or expert opinion that supports the petitioner's position. As such, Contention 1-E is denied insofar as it challenges Exelon's consideration of new and significant information regarding cleanup costs.

---

[134] Joint Declaration ¶¶ 32-34.
[135] 10 C.F.R. § 2.309(f)(1)(v).
[136] Joint Declaration ¶ 34.
[137] 10 C.F.R. § 2.309(f)(1)(i)-(ii); Joint Declaration ¶ 33.
[138] Exelon Answer at 48.
[139] 10 C.F.R. § 2.309(f)(1)(iv), (vi); Joint Declaration ¶ 33.
[140] Joint Declaration ¶ 39.
[141] *See* 10 C.F.R. § 2.309(f)(1)(v).

e. Human Environment

NRDC asserts that "[t]he ER fails to include an analysis of the impacts to the quality of the human environment."[142] NRDC provides as examples of such impacts, "loss of family homestead, possessions, abandonment of livestock and domestic animals, pain and suffering, including that associated with loss of one's job or possessions, and uncertainties associated with the safety of the food supply."[143]

As Exelon points out, "[t]he Declarations attached to the Petition are silent on these issues."[144] As the Commission has directed in *Oconee,* "contentions shall not be admitted if at the outset they . . . are not supported by 'some alleged fact or facts' demonstrating a genuine material dispute."[145] Because NRDC and its Declarations do not include any legal or technical support for this statement, we find that this aspect of Contention 1-E is inadmissible for failure to satisfy 10 C.F.R. § 2.309(f)(1)(v).[146]

3. Conclusion Regarding Contention 1-E

For the foregoing reasons, we admit that portion of Contention 1-E that challenges Exelon's failure to consider as part of its new and significant information analysis new severe accident mitigation alternatives not previously analyzed in the 1989 SAMDA for the facility. We also admit that portion of Contention 1-E that challenges Exelon's use of data from TMI in evaluating the significance of information regarding economic cost impacts. Contention 1-E thus is admitted, but is limited as follows:

> Applicant's Environmental Report (§ 5.3) erroneously concludes that new information related to its severe accident mitigation design alternatives ("SAMDA") analysis is not significant, in violation of 10 C.F.R. § 51.53(c)(3)(iv), and thus the ER fails to present a legally sufficient analysis in that:
>
> 1. Exelon has omitted from its ER a required analysis of new and significant information regarding potential new severe accident mitigation alternatives previously considered for other BWR Mark II Containment reactors.
>
> 2. Exelon's reliance on data from TMI in its analysis of the significance of new

---

[142] Petition at 19.

[143] *Id.*

[144] Exelon Answer at 50.

[145] *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999); *see also NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 307 (2012).

[146] 10 C.F.R. § 2.309(f)(1)(v).

information regarding economic cost risk constitutes an inadequate analysis of new and significant information.

In all other respects, we find that Contention 1-E is inadmissible.

D. Contention 2-E

NRDC's proposed Contention 2-E reads as follows:

> Applicant's Environmental Report (§ 5.3) in relying on a SAMDA analysis from 1989 fails to comply with 10 C.F.R. §§ 51.45, 51.53(c)(2) and 51.53(c)(3)(iii) because it does not include an accurate or complete analysis of "alternatives available for reducing or avoiding adverse environmental effects," does not "contain sufficient data to aid the commission in its development of an independent analysis" of alternatives and does not contain an adequate "consideration of alternatives for reducing adverse impacts . . . for all Category 2 license renewal issues."[147]

This contention alleges that the 1989 SAMDA analysis relies on inadequate and outdated data and methodologies, and as a result, the Limerick ER "fails to provide a reliable basis for the conclusion that there are no cost-beneficial SAMAs."[148] NRDC alleges that the Limerick ER does not comply with 10 C.F.R. §§ 51.45, 51.53(c)(2), and 51.53(c)(3)(iii).[149] These sections require an applicant to provide in its ER an analysis of "alternatives to the proposed action" that is "sufficiently complete to aid the Commission in developing and exploring" its own set of alternatives[150] and "an analysis that considers and balances the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects."[151] NRDC maintains that this contention is within the scope of this proceeding because Exelon has "incorporate[d] and adopt[ed the 1989 SAMDA] as [its] analysis of alternatives to mitigate impacts of severe accidents at Limerick."[152]

Exelon and NRC Staff argue that this contention is not admissible.[153] NRC Staff asserts that "the 1989 Limerick SAMDA Analysis, and any claimed deficiencies in that analysis, is outside the scope of this proceeding . . . [because] the Applicant's

---

[147] Petition at 19.
[148] *Id.* at 21.
[149] *Id.* at 19-21.
[150] 10 C.F.R. § 51.45(b)(3).
[151] *Id.* § 51.45(c).
[152] Petition at 19 n.6.
[153] *See* Exelon Answer at 50-56; NRC Staff Answer at 19-20.

ER does not incorporate and adopt the 1989 Limerick SAMDA Analyses as its analysis of severe accident mitigation alternatives."[154] Exelon concurs that Contention 2-E is outside the scope of this proceeding,[155] and argues further that 10 C.F.R. § 51.53(c)(3)(ii)(L) trumps the regulations cited by NRDC in this contention.[156]

NRDC responds by arguing that Exelon has adopted and incorporated the 1989 SAMDA as part of its license renewal ER,[157] and that section 51.53(c)(3)(ii)(L) does not trump the regulations cited by NRDC.[158] NRDC claims that Exelon effectively adopted the 1989 SAMDA in its consideration of new information for significance in section 5.3 of its ER.[159]

It is not necessary to interpret section 51.53(c)(3)(ii)(L) in order to determine the admissibility of this contention.[160] Indeed, we find that this contention can be disposed of by looking solely to the ER.

Section 4.20 of the ER, entitled "Severe Accident Mitigation Alternatives (SAMA)," states that "no analysis of SAMAs for [Limerick] is provided in this License Renewal Environmental Report as none is required as a matter of law."[161] Exelon relies upon the exemption provided by 10 C.F.R. § 51.53(c)(3)(ii)(L).[162] Section 5.3 of the ER addresses new and significant information relating to severe accident mitigation.[163] Throughout section 5.3 of the ER, Exelon makes reference to the 1989 SAMDA.[164] Because of these references, NRDC argues that Exelon has incorporated the 1989 SAMDA by reference.[165] This Board does not find this argument persuasive. As Exelon states in section 5.1 of the ER, it has identified new information relating to severe accident mitigation because it is required to do so by 10 C.F.R. § 51.53(c)(3)(iv), and because doing so "alert[s] NRC staff to such information, so the staff can determine whether to seek the Commission's approval to waive or suspend application of the rule with respect to the affected generic analysis."[166] By complying with 10 C.F.R. § 51.53(c)(3)(iv), Exelon has

---

[154] NRC Staff Answer at 19.

[155] Exelon Answer at 52.

[156] *Id.* at 51.

[157] Petition at 19 n.6.

[158] *See* Tr. at 139.

[159] Petition at 19 n.6; *see also* ER at 5-4 to 5-9.

[160] Contention 3-E presents this issue more clearly, so we withhold judgment at this juncture on the proper interpretation of subsection (L).

[161] ER at 4-49.

[162] *Id.*

[163] *Id.* at 5-4 to 5-9.

[164] *Id.*

[165] Petition at 19 n.6.

[166] ER at 5-2.

not submitted or resubmitted the 1989 SAMDA to the NRC Staff nor has it sought a determination by the NRC Staff that it satisfies the subsection (L) exemption. Exelon has stated that it has operated under the assumption that it need not provide a SAMA analysis with its ER — either a new SAMA or the 1989 SAMDA.

Unlike most portions of Contention 1-E, which challenges Exelon's analysis of new and significant information, this contention is a direct attack on the 1989 SAMDA. The 1989 SAMDA is not a part of the Limerick license renewal ER. Therefore, Contention 2-E is inadmissible because NRDC has not raised a dispute with Exelon's application, contravening 10 C.F.R. § 2.309(f)(1)(vi), and because it is outside the scope of this proceeding.[167]

E. Contention 3-E

NRDC's proposed Contention 3-E reads as follows:

> Applicant's Environmental Report erroneously concludes that the SAMDA analysis conducted in 1989 is a SAMA analysis within the meaning of 10 C.F.R. § 51.53(c)(3)(ii)(L) and thus the ER is deficient for its failure to include a SAMA analysis.[168]

Section 51.53(c) sets forth requirements for environmental reports as part of license renewal. Applicants must submit "a consideration of alternatives to mitigate severe accidents."[169] However, this regulation provides that such consideration need only be provided "[i]f the staff has not previously considered severe accident mitigation alternatives for the applicant's plant in an environmental impact statement or related supplement or in an environmental assessment."[170] In other words, a license renewal applicant need not provide an analysis of SAMAs in its ER if the Staff has already considered a SAMA analysis for that applicant's plant. NRDC argues that, while NRC Staff considered a 1989 document that it called a "SAMDA," this document was not a SAMA within the meaning of 10 C.F.R. § 51.53(c)(3)(ii)(L), and thus this exception would not apply to Exelon.[171]

Exelon and the NRC Staff oppose admission of this contention. Exelon maintains that the Commission clearly had Limerick in mind during the 10 C.F.R.

---

[167] 10 C.F.R. § 2.309(f)(1)(iii), (vi).

[168] Petition at 21.

[169] 10 C.F.R. § 51.53(c)(3)(ii)(L).

[170] *Id.*

[171] *See* Petition at 21-22; *see also* Tr. at 19, 126.

§ 51.53(c)(3)(ii)(L) rulemaking,[172] and that NRDC's contention amounts to a direct challenge to this regulation.[173] The NRC Staff concurs in these arguments.[174]

A brief history of 10 C.F.R. § 51.53(c)(3)(ii)(L) would be useful at this juncture. In 1974, Philadelphia Electric Company (PECO) was granted a license to construct Limerick Units 1 and 2.[175] In 1981, PECO applied to the NRC for a license under 10 C.F.R. Part 50 to begin operating Unit 1. A group called Limerick Ecology Action, Inc. (LEA) intervened in that proceeding and put forward a number of contentions regarding, among other topics not relevant here, severe accident risks.[176] Ultimately, PECO received its operating license, and LEA appealed the licensing decision to the United States Court of Appeals for the Third Circuit.[177] Part of LEA's appeal was a challenge to NRC's failure to consider SAMDAs in the Limerick operating license proceeding. Among other findings, the court ruled that careful consideration of SAMDAs is required under NEPA, and that the NRC's failure to consider SAMDAs was a violation of that Act.[178] Thus, in August 1989, the NRC Staff issued a Supplement to the Final Environmental Statement for Limerick containing a SAMDA analysis.[179]

In 1996, the Commission issued a final rule amending its regulations regarding license renewal.[180] These amendments were intended to streamline the license renewal process by setting forth a number of generic findings that would apply to all plants.[181] Among these was a finding that the risk of severe accidents is small for all plants.[182] The amendments also included the requirement that applicants perform a SAMA analysis, unless the NRC Staff had already considered one for that plant.[183]

In the Statement of Consideration accompanying this rulemaking, the Commission provided further explanation of this requirement. It noted:

> [i]n response to the [Third Circuit's] decision, an NRC staff consideration of SAMDAs was specifically included in the Final Environmental Impact Statement

---

[172] Exelon Answer at 18-19.

[173] *Id.* at 19-20.

[174] NRC Staff Answer at 32, 34.

[175] PECO became a part of Exelon Corporation in 2000.

[176] *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), LBP-84-31, 20 NRC 446, 550-72 (1984).

[177] *See Limerick Ecology Action,* 869 F.2d 719.

[178] *Id.* at 741.

[179] *See* 1989 SAMDA Analysis.

[180] *See* Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 28,467 (June 5, 1996).

[181] *Id.* at 28,467-68.

[182] *See* 10 C.F.R. Part 51, Subpart A, App. B, Tbl. B-1 (Postulated Accidents).

[183] *Id.*

> for the Limerick 1 and 2 and Comanche Peak 1 and 2 operating license reviews, and in the Watts Bar Supplemental Final Environmental Statement for an operating license.[184]

The Commission continued:

> a site-specific consideration of severe accident mitigation alternatives is required at license renewal for those plants for which this consideration has not been performed . . . . NRC staff considerations of severe accident mitigation alternatives have already been completed and included in an EIS or supplemental EIS for Limerick, Comanche Peak, and Watts Bar. Therefore, severe accident mitigation alternatives need not be reconsidered for these plants for license renewal.[185]

Despite this language, NRDC argues that the 1989 SAMDA does not qualify for the exception referenced in the quotation above and codified in 10 C.F.R. § 51.53(c)(3)(ii)(L).[186] This Board finds, however, that the intent of the Commission in promulgating 10 C.F.R. § 51.53(c)(3)(ii)(L) is clear — to exempt applicants from being required to submit SAMA analyses in the license renewal proceedings for Limerick, Watts Bar, and Comanche Peak. Because subsection (L) cannot reasonably be construed any other way, Contention 3-E is not admissible for two reasons.

First, insofar as it asserts that Exelon must provide a SAMA analysis as part of its ER, Contention 3-E amounts to a direct challenge to subsection (L), and is thus outside the scope of this proceeding. Section 2.335(a) states that "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding subject to this part."[187] Second, while a disagreement over the proper interpretation of NRC regulations may give rise to an admissible contention, NRDC's proposed interpretation of 10 C.F.R. § 51.53(c)(3)(ii)(L) is in direct conflict with the plain meaning of the regulation and its Statement of Consideration. We therefore find that NRDC has failed to present a genuine dispute of fact or law with Exelon, as required by NRC regulations.[188]

For these reasons, we find that Contention 3-E is not admissible.

F. Contention 4-E

NRDC's proposed Contention 4-E reads as follows:

---

[184] 61 Fed. Reg. at 28,481.

[185] *Id.*

[186] Petition at 21-22.

[187] 10 C.F.R. § 2.335(a).

[188] *See id.* § 2.309(f)(1)(vi).

> Applicant's Environmental Report (§ 7.2) fails to adequately consider the no action alternative in violation of 10 C.F.R. §§ 51.45(c), 51.53(c)(2) and 51.53(c)(iii).[189]

NRDC alleges that "[t]he ER violates 10 C.F.R. § 51.45(c) because it omits an analysis that 'considers and balances the environmental effects of the proposed action' and the alternative of No Action."[190] While this sounds like it is raising a contention of omission, NRDC goes on to argue that Exelon's discussion of the no-action alternative is inadequate because it "unreasonably and arbitrarily limits its analysis of the No Action alternative in a manner that fails, 'to the fullest extent practicable, [to] quantify the various factors considered' and neglects discussion of 'important qualitative considerations or factors that cannot be quantified.'"[191] NRDC further argues that Exelon's ER is inadequate because it limits its discussion of the no-action alternative to "decommissioning impacts" and single-source power generation alternatives, and because it fails to consider "growth in demand side management and renewable energy sources."[192]

Exelon and the NRC Staff argue that this contention is inadmissible.[193] Exelon contends first that Contention 4-E is too vague and unsupported to pass muster under the NRC's contention admissibility rules.[194] Moreover, Exelon states that its ER does contain the exact information that NRDC claims is missing.[195] The NRC Staff agrees that Contention 4-E is fatally unsupported[196] and that Exelon's ER sufficiently addresses the no-action alternative.[197]

Before proceeding, we think it appropriate to outline exactly what the no-action alternative is. As a general matter, NRC regulations require that a license renewal applicant in its ER "shall discuss . . . the environmental impacts of alternatives."[198] An ER's "discussion of alternatives shall be sufficiently complete to aid the Commission in developing and exploring" its own set of alternatives in its EIS,[199] and NRC regulations require an EIS to consider the "alternative of no action."[200] Therefore, to satisfy the requirements of 10 C.F.R. § 51.45(b)(3), an applicant must provide a discussion of the no-action alternative in its ER.

---

[189] Petition at 23.
[190] *Id.*
[191] *Id.*
[192] *Id.* at 23-24.
[193] Exelon Answer at 57-70; NRC Staff Answer at 40-53.
[194] Exelon Answer at 61.
[195] *Id.* at 62.
[196] NRC Staff Answer at 45-51.
[197] *Id.* at 46.
[198] 10 C.F.R. § 51.53(c)(2).
[199] *Id.* § 51.45(b)(3).
[200] *Id.* Part 51, Subpart A, App. A.

But, the question remains, what is the no-action alternative? The agency's regulations appear to be silent on this matter, but NRC's GEIS discusses the issue. The GEIS states that the purpose of the no-action alternative is to enable the agency to consider "the environmental consequences of taking no action at all."[201] It goes on to state:

> The no-action alternative is the denial of a renewed license. In general, if a renewed license were denied, a plant would be decommissioned and other electric generating sources would be pursued if power were still needed. It is important to note that NRC's consideration of the no-action alternative does not involve the determination of whether any power is needed or should be generated. The decision to generate power and the determination of how much power is needed are at the discretion of state and utility officials.[202]

In essence, the no-action alternative is an analysis of what would be reasonably likely to happen were the Commission to deny the requested license renewal.

We note that Exelon's ER contains a section entitled "No-Action Alternative."[203] NRDC contends that this analysis is inadequate because it does not adequately consider "expected growth in demand side management and renewable energy sources,"[204] fails to "quantify the various factors considered,"[205] and omits a discussion of "important qualitative considerations or factors that cannot be quantified."[206] NRDC further argues that Exelon:

> improperly and illogically narrow[ed its] discussion of the No Action alternative to consideration of (1) decommissioning impacts and (2) power generation alternatives that would 'equivalently satisfy the purpose and need for the proposed action' by 'replacing the generating capacity of [Limerick]' with 'single discrete generation sources.'[207]

NRDC's support for this contention is the Paine Declaration.[208] It cites no regulations or case law that require Exelon to explore the no-action alternative in the way Contention 4-E would require.[209] Exelon, citing the Commission's decisions in *Hydro Resources* and *Louisiana Energy Services,* has shown that

---

[201] GEIS at 8-1.
[202] *Id.*
[203] ER at 7-3.
[204] Petition at 24.
[205] *Id.* at 23.
[206] *Id.*
[207] *Id.* at 23-24, *quoting* Paine Declaration ¶¶ 5-7.
[208] *See generally* Paine Declaration.
[209] *See* Exelon Answer at 60; NRC Staff Answer at 46.

the Commission requires only a brief discussion of the no-action alternative.[210] The Commission has stated, "[f]or the 'no action' alternative, there need not be much discussion. It is most simply viewed as maintaining the status quo."[211] The Commission has also held that "[t]he extent of the 'no-action' discussion is governed by a 'rule of reason.' It is clear that the discussion 'need not be exhaustive or inordinately detailed.'"[212]

As noted above, Exelon discusses the no-action alternative in section 7.1 of its ER.[213] In this section, Exelon discusses the impacts of decommissioning and cross-references a discussion of alternative means of providing energy along with their environmental impacts.[214] Exelon then discusses the environmental impacts of energy sources that could replace Limerick in the event that license renewal is denied, including gas-fired generation,[215] coal-fired generation,[216] purchased power,[217] new nuclear generation,[218] wind energy,[219] solar energy,[220] a combination of wind energy, solar energy, and gas-fired combined-cycle generation,[221] and a combination of wind energy and compressed air energy storage.[222] While NRDC would like to have seen a discussion of "Demand Side Management (DSM),[223] waste heat cogeneration, combined heat and power, and distributed renewable energy resources,"[224] given the Commission's holdings that the no-action alternative discussion "need not be exhaustive,"[225] and need only include "feasible, non-speculative alternatives,"[226] we conclude that NRDC has provided

---

[210] *See* Exelon Answer at 59 n.298.

[211] *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 54 (2001) (citations omitted).

[212] *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 97 (1998) (citations omitted).

[213] *See* ER at 7-3.

[214] *Id.*; *see also* ER § 7.2.2.

[215] *Id.* § 7.2.2.1.

[216] *Id.* § 7.2.2.2.

[217] *Id.* § 7.2.2.3.

[218] *Id.* § 7.2.2.4.

[219] *Id.* § 7.2.2.5.

[220] *Id.* § 7.2.2.6.

[221] *Id.* § 7.2.2.7.

[222] *Id.* § 7.2.2.8.

[223] We note that the ER does discuss DSM and determines that it is not a reasonable alternative. *See* ER at 7-16. Exelon noted at oral argument that it cross-referenced the impacts of DSM into its analysis of the no-action alternative. *See* Tr. at 180.

[224] Paine Declaration ¶ 7.

[225] *Claiborne,* CLI-98-3, 47 NRC at 97.

[226] *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 71 (1991) (quoting *Piedmont Heights Social Club, Inc. v. Moreland,* 637 F.2d 430, 436 (5th Cir. 1981)).

us with no support for the notion that Exelon's analysis of the no-action alternative is unreasonable under NEPA. Contention 4-E is inadmissible because it fails to provide "a concise statement of the alleged facts or expert opinions which support the petitioner's position on the issue."[227]

IV. MOTIONS TO STRIKE

Exelon and the NRC Staff filed motions to strike portions of NRDC's reply brief for allegedly proffering arguments beyond the scope of NRDC's initial petition and the answers. The Commission has stated, "[w]e have long held that a reply may not contain new information that was not raised in either the petition or answers, but we have not precluded arguments that respond to the petition or answers, whether they are offered in rebuttal or in support."[228] Exelon and the NRC Staff assert that NRDC has raised new arguments or provided new factual support for its contentions in its reply,[229] while NRDC claims that it has merely responded to arguments made by either Exelon or the NRC Staff.[230]

Our review of the table attached to Exelon's motion to strike and NRC Staff's "List of Statements to Be Stricken or Not Considered" reveals no "entirely new arguments, references or factual claims." It appears that NRDC's reply responds to arguments raised by the NRC Staff and Exelon in their answers. This approach is permissible and consistent with the Commission's decision in *Indian Point.*[231]

Because we have based our decision primarily on information presented in NRDC's petition to intervene, Exelon's answer, and the NRC Staff's answer, and because we find little overreaching in NRDC's reply brief, we deny the motions to strike.

V. CONCLUSION

For the foregoing reasons, it is determined:

A. NRDC has demonstrated standing and submitted at least one admissible contention. NRDC is admitted as a party to this proceeding.

B. NRDC's Contention 1-E is admitted in part, as limited and reworded by the Board as follows:

---

[227] 10 C.F.R. § 2.309(f)(1)(v).

[228] *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-11-14, 74 NRC 801, 809 (2011).

[229] Exelon Motion to Strike at 2; NRC Motion to Strike at 1-2.

[230] [NRDC] Combined Opposition to Motions to Strike at 2.

[231] *Indian Point,* CLI-11-14, 74 NRC at 809.

> Applicant's Environmental Report (§ 5.3) erroneously concludes that new information related to its severe accident mitigation design alternatives ("SAMDA") analysis is not significant, in violation of 10 C.F.R. § 51.53(c)(3)(iv), and thus the ER fails to present a legally sufficient analysis in that:
>
> 1. Exelon has omitted from its ER a required analysis of new and significant information regarding potential new severe accident mitigation alternatives previously considered for other BWR Mark II Containment reactors.
>
> 2. Exelon's reliance on data from TMI in its analysis of the significance of new information regarding economic cost risk constitutes an inadequate analysis of new and significant information.

C. In all other respects, we find Contention 1-E is inadmissible.

D. Contentions 2-E, 3-E and 4-E are not admitted.

E. Exelon's and the NRC Staff's motions to strike are denied.

F. A Subpart L hearing is granted with respect to the above-admitted Contention 1-E.

G. The Licensing Board will hold a telephone conference with the parties in which we will discuss a schedule of further proceedings in this matter.

H. This Order is subject to appeal to the Commission in accordance with the provisions of 10 C.F.R. § 2.311. Any petitions for review meeting applicable requirements set forth in that section must be filed within ten (10) days of service of this Memorandum and Order.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

William J. Froehlich, Chairman
ADMINISTRATIVE JUDGE

Dr. Michael F. Kennedy
ADMINISTRATIVE JUDGE

Dr. William E. Kastenberg
ADMINISTRATIVE JUDGE

Rockville, Maryland
April 4, 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) **April 26, 2012**

By letter dated September 8, 2011, and supplements, Thomas Saporito (the Petitioner) filed a 10 C.F.R. 2.206 petition. The Petitioner requested that the NRC take the following actions: (1) take escalated enforcement action against Virginia Electric and Power Company (the Licensee) and suspend, or revoke, the operating licenses for North Anna Power Station, Units 1 and 2 (North Anna 1 and 2), (2) issue a notice of violation against the Licensee with a proposed civil penalty in the amount of 1 million dollars, and (3) issue an order to the Licensee requiring the Licensee to keep North Anna 1 and 2, in a "cold shutdown" mode of operation until such time as a series of actions described in the petition are completed.

The final Director's Decision (DD) on this petition was issued on April 26, 2012.The final DD addresses the Petitioner's requested actions as follows: (1) With respect to the first two requests, the evaluations of two NRC inspection teams as documented in inspection reports dated October 31, 2011, and November 30, 2011, did not find any violation of NRC regulations that would merit such enforcement actions. (2) With respect to the Petitioner's third 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 Director's Decision as concerns 1, 2, 3, 5, 6, 7, and 8, 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 third request for enforcement action described in the petition. Issues in the petition, identified and discussed in the Director's Decision as concerns 4 and 9, were evaluated by the NRC Staff before restart of North Anna 1 and 2, but disposition of these concerns by the NRC Staff differs from the course of action requested in the petition. In that respect, these aspects of the petition were denied.

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

I. INTRODUCTION

By letter dated September 8, 2011, Thomas Saporito (the Petitioner) filed a petition pursuant to Title 10 of the *Code of Federal Regulations* (10 C.F.R.), section 2.206, "Requests for Action Under This Subpart." The Petitioner requested in his petition that the U.S. Nuclear Regulatory Commission (NRC, the Commission) do the following: (1) take escalated enforcement action against Virginia Electric and Power Company (the Licensee) and suspend, or revoke, the operating licenses for North Anna Power Station, Units 1 and 2 (North Anna 1 and 2), (2) issue a notice of violation against the Licensee with a proposed civil penalty in the amount of 1 million dollars, and (3) issue an order to the Licensee requiring the Licensee to keep North Anna 1 and 2 in a "cold shutdown" mode of operation until such time as a series of actions described in the petition are completed. Part II of this Director's Decision describes the bases for these requests.

The Petition Review Board (PRB) met on September 20, 2011, to discuss the petition and denied the request for immediate action contained in the petition. The PRB denied the request for immediate action because there was no immediate safety risk to North Anna 1 and 2 or 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 10 C.F.R. Part 100, "Reactor Site Criteria," Appendix A, "Seismic and Geologic Siting Criteria for Nuclear Power Plants." The PRB communicated this decision to the Petitioner in an e-mail dated September 21, 2011, and the Petitioner requested an opportunity to address the PRB before its initial meeting to provide supplemental information for the PRB's consideration.

The Petitioner met with the PRB during a telephone conference on September 29, 2011, to discuss his petition (meeting transcript at Agencywide Documents Access and Management System (ADAMS) Accession No. ML11332A046). During this meeting, and by separate e-mail dated September 29, 2011 (ADAMS Accession No. ML11334A152), the Petitioner also requested that his letter to a senior allegations coordinator in the NRC's Region II, Oscar DeMiranda, dated September 8, 2011 (enclosed in the e-mail), be included as a supplement to the petition. The PRB met on October 11, 2011, to discuss the petition. The PRB made an initial recommendation to accept the petition based on the fact that it met all the criteria for acceptance and did not meet any of the criteria for rejection. The PRB communicated its initial recommendation to the Petitioner in an e-mail dated October 31, 2011. In an e-mail dated October 31, 2011, the Petitioner requested a second opportunity to address the PRB. The Petitioner met with the PRB again on November 7, 2011 (meeting transcript, ADAMS Accession No. ML113530035), to provide supplemental information in support of the petition request. In an e-mail dated October 21, 2011 (ADAMS Accession No. ML11308A016), the Petitioner expressed concerns about the restart of North Anna 1 and 2 after the earthquake on August 23, 2011. As the concerns expressed in this e-mail were similar to those expressed in the Petitioner's original petition dated September 8, 2011, this e-mail has been considered as a supplement to the petition. The PRB considered the results of these discussions, along with the additional information, in determining its final recommendation to accept the petition for review and in establishing the schedule for reviewing the petition. In the February 22, 2012, acknowledgment letter (ADAMS Accession No. ML11356A164), the NRC informed the Petitioner that the petition was accepted for review under 10 C.F.R. § 2.206 and had been referred to the Office of Nuclear Reactor Regulation for appropriate action. The proposed Director's Decision was enclosed with the acknowledgment letter for the petition and addressed the concerns raised in the original petition, along with the additional concerns raised during PRB meetings held on September 29, 2011, and November 7, 2011, and in the two supplemental letters to the NRC dated September 8, 2011, and October 21, 2011.

The transcripts of these meetings between the PRB and the Petitioner were treated as supplements to the petition and are available in ADAMS for inspection at the Commission's Public Document Room (PDR), located at One White Flint North, Public File Area O1 F21, 11555 Rockville Pike (first floor), Rockville,

Maryland. Publicly available documents created or received at the NRC are accessible electronically through ADAMS in the NRC Library section of the Web site 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 Director's Decision to the Petitioner and to the Licensee for comment on February 22, 2012 (ADAMS Accession No. ML11356A164), and February 28, 2012 (ADAMS Accession No. ML11357A117), respectively. The Licensee responded with comments on March 12, 2012 (ADAMS Accession No. ML120720519). The comments and the NRC Staff's response to them are included in the attachment to this Director's Decision.

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 (USGS)) in Mineral, Virginia, approximately 11 miles from the site. Shortly after the earthquake, both of the North Anna reactors tripped, and offsite power to the station was lost. 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 nuclear power plant is required to be shut down 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. An inspection report summarizing the AIT findings was published on 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 10 C.F.R. Part 100, Appendix A, and consistent with the guidance contained 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 EPRl 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. The Licensee's activities in support of the restart of North Anna 1 and 2 after the earthquake of August 23, 2011, are described in a letter from the Licensee dated September 17, 2011 (ADAMS Accession No. ML11262A151), which enclosed the Licensee's "Readiness Assessment Plan" for North Anna 1 and 2. (The Licensee's Readiness Assessment Plan was later supplemented numerous times in response to NRC requests for additional information (RAIs) issued to support the development of the NRC's independent technical evaluation of the Licensee's plan).

To further support implementation of 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 had completed its review and authorized continued operation. 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, "Follow-up on Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, and Alternative Dispute Resolution Confirmatory Orders." Supplemental guidance to this inspection procedure was provided by the 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's onsite inspection activities were completed on October 14, 2011. There was some earthquake-related damage to nonsafety-related equipment observed 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, nonearthquake-related issues were identified as a result of the inspections. These issues are being reviewed through established Licensee and NRC processes to ensure they are adequately addressed without undue risk to the health and safety of the public.

The resolution of issues identified by the RRIT was discussed at an exit meeting between the Licensee and the NRC Staff held on November 7, 2011, and 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 safety-related structures, systems, and components (SSCs) had not been adversely affected by the August 23, 2011 earthquake. The NRC's independent inspections of plant equipment, observation of surveillance testing, and review of completed test data, calculations, root-cause evaluations, and documents associated with the station's corrective action and work order programs confirmed the operability and functionality of plant SSCs. The RRIT reviewed the unresolved items from the AIT and determined that the Licensee had completed corrective actions such that the systems were operable 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) 10 C.F.R. Part 100, Appendix A, § 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)," along with the Licensee's response to GL 88-20, Supplement 4; (6) International Atomic Energy Agency Safety Report 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, 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 for North Anna 1 and 2. The NRC monitored the startup of North Anna 1 and 2 to confirm that the plant would be safely operated (*see* Inspection Report, 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. These long-term commitments are documented in the NRC-issued CAL No. NRR-2011-002, but are unrelated to the NRC's conclusion that the Licensee demonstrated that no functional damage occurred to North Anna 1 and 2, and that they could be safely restarted.

B. Concerns Raised by the Petitioner and the Response by the NRC

The Petitioner raised a number of concerns in his petition dated September 8, 2011, and in supplements to his original petition. These concerns, and the NRC response to these concerns, are discussed in detail in this section. Most of these concerns are addressed, either in full or in part, by the NRC inspections and technical evaluation that evaluated the Licensee's actions after the earthquake of August 23, 2011, to support completion of its Readiness Assessment Plan to demonstrate 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. The Petitioner's concerns and the NRC's resolution are described below:

(1) On August 23, 2011, North Anna 1 and 2 automatically tripped offline as a direct result of ground motion caused by an earthquake centered in Mineral, Virginia, approximately 10 miles from North Anna 1 and 2. The Licensee has not determined the root cause of this event, nor has it explained why the reactor tripped on "negative flux rate" rather than on loss of offsite power.

The NRC Staff has focused on understanding the cause of the reactor trips at North Anna 1 and 2, which occurred after the earthquake of August 23, 2011. Part of the scope of the AIT sent to North Anna 1 and 2 was to ascertain what caused this reactor trip. The AIT interviewed Licensee staff to obtain an accurate account of the sequence of events. In addition, the AIT reviewed plant data and logs to gain an understanding of the plant response. The AIT also reviewed the Post-Trip Event Report to gauge the Licensee's assessment of the plant trip and the identified possible causes.

Based on the sequence of events, the AIT found that the reactor trips resulted from high negative rate flux signals and occurred before the loss of offsite power. Based on the plant response data, the Licensee determined that reactor trips at both North Anna 1 and 2 were caused by a "Power Range High Negative Neutron Flux Rate" reactor trip signal, which is for an abnormal rate of decrease in nuclear power. The Licensee's Post Event Trip Report identified four possible causes for this trip: (1) loss of power to the control rod motor generator sets, (2) a dropped control rod, (3) movement of the nuclear instrumentation detectors, and (4) core barrel movement.

At the time the inspection report for the AIT was issued on October 31, 2011, the Licensee was in the midst of conducting a root-cause evaluation of the North Anna 1 and 2 reactor trips and planned to assess each one of the potential causes through engineering analysis and testing to determine the most likely underlying cause of the trip signal and any contributing causes.

Subsequently, the Licensee completed its root-cause evaluation of the North Anna 1 and 2 reactor trips following the earthquake of August 23, 2011. The RRIT reviewed the Licensee's documentation for the investigative analysis of the seismic event and identified no issues that would prevent the safe restart of North Anna 1 and 2. The Licensee's analysis included a third-party evaluation of the potential response of the core nucleate boiling and the nuclear instrumentation when subjected to seismic motion. The root cause of this event was a synergistic combination of seismically induced conditions that included core barrel movement, detector movement, and small reactivity effects from core movement

and thickening of the thermal boundary layer along the fuel rods. The additive effects of the combined conditions resulted in momentary undermoderated core conditions as evidenced by the oscillatory, but overall decreasing, flux profiles from both North Anna 1 and 2.

In addition, the RRIT interviewed, in person and over the phone, Licensee personnel who were responsible for the root-cause evaluations to understand the process for these evaluations. The RRIT's assessment of the Licensee's root-cause evaluation found that the investigative analysis methodology focused on the cause of the reactor trips, which limited the breadth of the investigation. Following discussions between the RRIT and the Licensee, the Licensee's Corrective Action Review Board assigned a corrective action to evaluate what additional actions were warranted to minimize complications of a loss-of-offsite-power event. The RRIT did not find that any further action on this issue was necessary.

(2) Subsequent to the earthquake, the Licensee initiated various inspection activities and tests to discover the extent of damage to the nuclear facility, but these inspection and testing activities continue and remain incomplete and nonvalidated.

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 numerous walkdowns of plant systems and focused inspections of selected structures and components. In addition, NRC inspectors from the AIT, 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. The purpose of all these inspections was 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 support a position of 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 a consistent approach was used in the walkdowns.

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 technical specifications (TSs). For North Anna 2, more than 150 surveillance procedures were identified for performance in addition to those already scheduled to support the refueling outage before restarting the unit.

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, would have been 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. However, during the inspection, some examples of minor problems were identified, including issues that had not been entered into the CAP or work control program as required, opportunities to enhance the root-cause evaluations conducted following the seismic event, committed actions that were not being processed in accordance with program requirements, and areas that had not been inspected or evaluated before the RRIT engaged the Licensee's staff.

The Petitioner also raised a number of specific technical issues related to the inspections conducted 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. These specific concerns with the inspections include the following:

(a) Inspections of the North Anna 2 nuclear fuel cannot be used to "bound" the condition of nuclear fuel at North Anna 1. Similarly, inspections of North Anna 2 reactor vessel internals cannot be used to "bound" the condition of reactor vessel internals at North Anna 1. Enhanced Licensee inspections should be required for North Anna 1 and 2, to determine the extent of any damage to critical safety-related equipment, systems, and components prior to any restart of the nuclear reactors. The inspection activities should include removal of the entire nuclear fuel core assemblies for both North Anna 1 and 2, for inspection via closed-circuit television and inspection of the reactor vessel internals.

The NRC Staff's assessment of the nuclear fuel at North Anna 1 and 2 was independent of the fuel activities performed by the Licensee. The NRC Staff evaluated the design of the North Anna 1 and 2 fuel assemblies, considered information on the seismic forces present during the earthquake, and determined whether sufficient design margin existed for all of the North Anna 1 and 2 nuclear fuel components.

At the request of the NRC Staff, the Licensee calculated the applied seismic loads on the fuel residing in the North Anna 2 reactor on August 23, 2011, based on measured ground motion. This information was provided to the Licensee's fuel

vendor, who performed a detailed engineering calculation that demonstrated that these applied seismic loads would not result in damage or deformation of the fuel assembly components, including the fuel rods, guide tubes, and grid cages. The NRC fuel staff audited these calculations and indicated that these were acceptable in the NRC Staff's independent technical evaluation, dated November 11, 2011.

As for the visual inspections of the North Anna 1 fuel, the Licensee performed a detailed visual inspection of the North Anna 2 fuel assemblies and reviewed rod cluster control assembly drag tests for both units to confirm no damage or deformations. The NRC Staff was onsite during these inspections and tests to verify that the Licensee's fuel assessment methods and criteria were consistently applied. During its audit of the fuel vendor calculations, the NRC Staff considered the information gathered from these visual inspections and tests.

The Licensee conducted additional inspections during the startup of North Anna 1 and 2. The Licensee performed control rod and core physics testing during startup of both units. This information provided additional confirmation of adequate performance by the fuel at North Anna 1 and 2.

To ensure that the functionality and the structural integrity of the reactor vessel internal (RVI) components are maintained under the current license period, the Licensee conducted inspections of the RVI components in North Anna 2. The Licensee determined that inspection of RVI components in North Anna 2 would be representative of North Anna 1, and the NRC Staff assessed this determination.

The NRC Staff assessment of RVI components considered the inspection results of the North Anna 2 RVI components, the inspection results of the North Anna 1 and 2 reactor vessel supports, and information on the seismic forces present during the earthquake, and determined whether the functionality of the North Anna 1 or 2 RVI components were affected.

Based on a review of Final Safety Analysis Report (FSAR) §§ 4.2.2.2, the NRC Staff determined that the same types of materials were used for the RVI components in both North Anna 1 and 2. Because the materials and configuration of the RVI components in both units are the same, from a metallurgical perspective, they should react similarly. Furthermore, inspections of RVI components in North Anna 2 did not identify any visible damage and the NRC Staff concluded in its technical evaluation dated November 11, 2011, that the Licensee had satisfactorily resolved this issue.

(b) The Licensee should be required to torque-test all safety-related equipment support, installation, and retention bolts to insure that the bolts have not sheared from the recent earthquake event.

In its letter dated October 31, 2011, the Licensee stated that it verified torque on 316 anchor bolts on 51 pipe supports in the North Anna 2 safeguards building, auxiliary building, and North Anna 2 containment. The Licensee randomly

selected anchor bolts ranging from $^1/_2$-inch to $1\,^1/_4$ inches in size for torque verification. Of the 316 anchor bolts that were torque tested, all but 5 passed the test. The five that did not pass were wrench-tight, were retorqued (which confirmed proper grip), and maintained full-load carrying capability. The five anchor bolts that did not meet the torque checks were in five different supports. The Licensee clarified that the remaining bolts in each support passed the torque check, and the affected support remained tight against the wall, indicating that the five wrench-tight bolts were not caused by the August 23, 2011 earthquake.

The Licensee reported that in no case were any supports rendered inoperable. The Licensee concluded that, because of the low number of cycles of strong motion from the August 23, 2011 earthquake, extensive system inspections, and the tightness sampling performed, there is no concern for vibratory damage to expansion anchors. The NRC Staff noted that torque verification is part of the procedures to support the functionality of the piping system. Based on the Licensee's inspection results for the bolts, the NRC Staff, in its technical evaluation of November 11, 2011, found that the Licensee had appropriately verified the torque of a reasonable number of the bolts on supports. Therefore, the NRC Staff concluded that the Licensee had demonstrated no functional damage to the pipe supports.

(c) The Licensee should inspect all snubbers throughout the entire facility to ensure the devices remain intact and able to perform their designed function.

The Licensee visually inspected all small-bore and large-bore snubbers at both North Anna 1 and 2. In addition, the Licensee performed functional testing on twelve snubbers at North Anna 1 and sixty-two snubbers at North Anna 2. The Licensee found no snubbers at either North Anna 1 or North Anna 2 that failed during any functional test. The NRC Staff reviewed the results of the Licensee's inspection of snubbers throughout North Anna 1 and 2 and found that the Licensee demonstrated 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.

(d) The Licensee should inspect and validate all nuclear steam supply piping and related piping systems including the nuclear reactor hot- and cold-leg piping on both units to validate their integrity and to evaluate the seismic capability of the piping to withstand an earthquake event greater than the plant's current design basis and to meet any enhanced plant design basis that may be required.

In its technical evaluation, the NRC Staff evaluated the Licensee's assessment of the existing pipe stress analyses and inspection of the piping and associated

support systems, including scope, inspection and evaluation methods, acceptance criteria, results, and corrective actions, both in the Readiness Assessment Plan sent by letter dated September 17, 2011, and in responses to the NRC Staff's RAIs, to show that the operability and functionality of plant SSCs demonstrated the plant's restart readiness.

In its technical evaluation dated November 11, 2011, the NRC Staff found that the Licensee had performed appropriate verification for the leak-before-break (LBB) analysis and adequately evaluated piping systems and pipe supports. The NRC Staff further concluded that the Licensee demonstrated that no functional damage had occurred to piping and pipe supports, which are necessary for continued operation without undue risk to the health and safety of the public.

(e) The Licensee should inspect the offsite power structures and facilities providing power to North Anna 1 and 2, including the entirety of the high-voltage distribution system. There is a potential for a station blackout (SBO) caused by damage of which the Licensee is currently unaware. The Licensee needs to inspect the entirety of its high-voltage distribution system, including its offsite power physical transmission lines, insulators, and substations. The Licensee also needs to inspect electrical relays, circuit breakers, and switches throughout the plant.

As noted in the RRIT's inspection report dated November 30, 2011, detailed inspections of electrical systems and components were performed by the Licensee following the seismic event, including a 100% inspection of the high-voltage switchyard. Systems reviewed in detail included electrical power, emergency diesel generators, alternate AC diesel generator and support systems, emergency electrical, batteries, and vital buss. The inspections were performed by station electrical maintenance technicians, system engineers, members of the Licensee's transmission group, and engineers from the Licensee's other facilities. The results of these inspections were documented in the Licensee's Seismic Event System Deficiencies Log and subsequently evaluated by the Licensee to determine if any were seismically induced and what corrective actions were required to address them.

The NRC's RRIT reviewed the results of these inspections and how identified deficiencies had been addressed through the CAP or work-order process. The RRIT also accompanied Licensee personnel conducting the detailed inspections of the switchyard and walked down selected portions of other electrical systems in the plant in conjunction with system engineers.

The NRC Staff did not identify any deficiencies that had not previously been identified by Licensee personnel during their inspections nor did it have any concerns with Licensee evaluations and dispositions of the issues before declaring the electrical systems fully operable and functional.

The NRC Staff's technical evaluation, dated November 11, 2011, also considered issues related to offsite power structures and facilities providing power to North Anna 1 and 2. In its letter dated September 17, 2011, the Licensee noted that it had completed, in accordance with NP-6695, a comprehensive external and internal inspection for 4160 volts (V) AC, 480 V AC, Vital/Semi-Vital120 V AC, and 125 V direct current (DC) equipment. The Licensee further noted that it used guidance in RG 1.167 and NP-6695 to develop a methodology for performing inspections to assess significant physical or functional earthquake-related damage to SSCs. The Licensee noted that it did not identify any significant physical or functional damage to the electrical systems and components that would render them incapable of performing their design function.

When crediting North Anna 2 inspection activities for demonstrating acceptability of North Anna 1 electrical components, the NRC Staff confirmed that the electrical equipment (i.e., batteries, bus work, breakers) and instrument and control equipment (e.g., protection and control cabinets) are similar and functionally equivalent, and that the equipment orientation and location is the same in each unit. Based on this information, the NRC Staff found that the effect of the August 23, 2011 seismic event on electrical equipment in North Anna 1 should be the same as at North Anna 2 and vice versa. Therefore, the NRC Staff found that the inspections of North Anna 1 electrical and instrument and control equipment that is equivalent and installed in the same orientation and general location (e.g., elevation), were acceptable for demonstrating the adequacy of the electrical and instrument and control equipment in North Anna 2 and vice versa.

Using the guidance in Appendix B of EPRI NP-6695, the Licensee also developed a list of surveillance tests that needed to be performed before restarting North Anna 1 and 2. The Licensee performed these tests to demonstrate the availability and operability of components and systems identified as important to nuclear safety in the North Anna 1 and 2 TSs, or required to mitigate the consequences of an accident. The NRC Staff concluded that these tests demonstrated that the electrical equipment is capable of performing its design function.

After reviewing the Licensee's September 17, 2011 letter, the NRC Staff developed several questions related to the Licensee's evaluation of electrical equipment following the August 23, 2011 earthquake. In its October 3, 2011 response to an NRC Staff RAI (ADAMS Accession No. ML11277A267), the Licensee provided detailed information on the inspection activities associated with the safety-related batteries at North Anna 1 and 2. The Licensee stated that it did not identify any abnormal results when using thermography to find potential evidence of battery degradation. The Licensee also performed visual inspections of the battery rack anchorages, feeder cable tie wraps, and battery cell jars (internal and external). The Licensee did not identify any visible damage during its battery inspections. The Licensee measured battery cell parameters (temperature, specific gravity, electrolyte level, and individual cell voltages) for

the North Anna 2 battery banks with no abnormal or adverse trends noted from preseismic event results.

In its technical evaluation, the NRC Staff concluded that the Licensee had demonstrated that electrical equipment offsite and onsite at North Anna 1 and 2 remains capable of performing its intended design function, and that no functional damage had occurred to the electrical equipment as a result of the August 23, 2011 earthquake. The results of the NRC inspection activities also supported this conclusion, in that the NRC Staff observed no significant damage to electrical equipment. The NRC Staff also found that it had reasonable assurance that any degradation of equipment, whether created by the August 23, 2011 earthquake or not, should be detected during performance of routine TS surveillance requirements or maintenance activities. Therefore, the NRC Staff found that the resumption of plant operation would not result in undue risk to the health and safety of the public.

(3) The Licensee set an overly aggressive schedule for restarting North Anna 1 and 2 that was based on economic considerations rather than safety.

As discussed above, the Licensee's schedule for restart of North Anna 1 and 2 after the August 23, 2011 earthquake was based 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.

(4) The Licensee needs to amend its licensing documents, including its licenses and the updated final safety analysis report (UFSAR). As a result of ground motion experienced at, and damage sustained to, North Anna 1 and 2 due to the earthquake of August 23, 2011, which is greater than the Licensee's design and safety bases, North Anna 1 and 2 are in an unanalyzed condition and current licensing documents are erroneous and incomplete. As a result, the Licensee cannot rely on them to provide reasonable assurance to the NRC that these nuclear reactors can be operated in a safe and reliable manner to protect public health and safety.

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 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 and/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 SSCs were confirmed as operable and/or functional before plant startup. None of the inspections conducted indicated any significant damage that would render inoperability.

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 Operating Basis Earthquake 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. There is no requirement for the Licensee to submit a license amendment request following an earthquake that exceeds its DBE.

(5) The Licensee needs to conduct new seismic and geological evaluations of the North Anna 1 and 2 site that are independent. These evaluations should ascertain the degree and magnitude of future earthquake events and address a "worst case" earthquake.

The NRC Staff is monitoring the Licensee's initiative to further its understanding of the earthquake of August 23, 2011, and its impact on the ground-motion effects likely to be experienced at the North Anna site in the future. The Licensee is in discussion with two independent organizations — the USGS and the Department of Geosciences at Virginia Polytechnic Institute and State University — on this issue. With respect to addressing a "worst case" earthquake, the NRC regulations require that the design basis of safety features for each nuclear power plant take into account the potential effects of two levels of earthquake motion. The greater earthquake motion is based on an evaluation of the maximum earthquake potential considering regional and local geology and seismology and the specific characteristics of local subsurface material. This earthquake motion is designated as the safe-shutdown earthquake (SSE) or, in the case of North Anna 1 and 2, the DBE. It is the DBE for which certain SSCs necessary for safe shutdown are designed to remain functional. The lesser earthquake motion represents an earthquake event that has a reasonable chance of occurring during the life of the plant and is designated as the OBE. It is the OBE that produces the ground motion for which those features of the nuclear power plant necessary for continued

operation are designed to remain functional. The regulations in Appendix A to 10 C.F.R. Part 100 require that the design bases for earthquakes be determined through evaluation of the geologic and seismic history of the site and surrounding region. A determination is also required of the influences that result from human activities and from local site soil conditions. The largest earthquakes occurring in the site region must be assessed. An evaluation is required to determine whether faults in the site region are active and could generate earthquakes large enough to be of significance to the earthquake design bases.

According to the North Anna 1 and 2, UFSAR § 2.5, "Geology and Seismology," the most significant earthquakes in the region of the station affecting its design occurred near the Richmond Basin in 1774 and near the Arvonia Syncline in 1875. These shocks and related zones of earthquake activity are both located within 50 miles of the site and are believed to be associated with faulting in their respective basin-like structures. For the purpose of establishing a DBE, it was assumed that an earthquake equal to the largest shock associated with the Arvonia Syncline might occur close to the site area. With the epicenter of a shock similar to the 1875 Arvonia earthquake shifted to the vicinity of the site, it was estimated that the maximum horizontal ground acceleration (g) at the rock surface would be less than $0.12g$. Accordingly, the DBE for structures founded on rock was taken at $0.12g$ for horizontal ground motion and two-thirds that value ($0.08g$) for vertical ground motion. For structures founded on soil, the DBE was taken at $0.18g$ for horizontal motion and $0.12g$ for vertical motion. Seismic design for SSCs is described in North Anna 1 and 2, UFSAR § 3.7, "Seismic Design."

In evaluating seismic and geologic information regarding the August 23, 2011 earthquake and its impact on the North Anna 1 and 2 site, the Licensee has relied extensively on independent organizations, especially the USGS. According to the USGS, on August 23, 2011, a 5.8-moment-magnitude-scale (M_w) magnitude earthquake occurred near Mineral, VA, at a relatively shallow depth about 6 km from the surface and was felt in the entire United States eastern coastal area. Some chimney and structural damage to residential buildings was observed around the epicenter area. A number of aftershocks have occurred since the main shock, with the largest magnitude being a 4.5 M_w. There is no known fault source associated with the earthquake and aftershocks, but the USGS focal mechanism solution of the earthquake indicates that the earthquake was possibly associated with a reverse fault. Since there is no report on any existing fault in the area and no surface ruptures reported during the earthquake, the fault is assumed to be a blind reverse fault.

The earthquake and its aftershocks occurred inside an area seismic source zone called the Central Virginia Seismic Zone (CVSZ). The CVSZ has produced small and moderate earthquakes since at least the 18th century and magnitudes for some significant events since 1984 ranged from 4.0 to 4.6 with the depth between 5 and 8 km. The largest earthquake known to have occurred in the CVSZ before

2011 is a magnitude 5.0-mb (body wave magnitude) Goochland County event in 1875. CVSZ is determined in the USGS Quaternary fault database as an "A" class seismic source, meaning that the CVSZ demonstrated Quaternary faulting of tectonic origin.

According to the USGS, the earthquake epicenter was located at 37.936° N, 77.933° W, approximately 18 km (11 miles) from North Anna 1 and 2. The USGS's estimate of Modified Mercalli Intensity is VI at the North Anna 1 and 2 site. The USGS estimated that the August 23, 2011 earthquake produced a peak ground acceleration of 0.26*g* at the North Anna 1 and 2 site using ground-motion prediction equations modified by intensity information obtained by the USGS. Since the fault is assumed to strike north or northeast, that places the seismogenic fault closer to the North Anna 1 and 2 site (<18 km).

In the tectonic summary, the USGS indicates that the earthquake could not be causally associated with a currently mapped fault, but that it originated from a reverse or compression fault with a north or northeast striking plane. Earthquake magnitude estimates for the August 23, 2011 event range from 5.7 to 5.8 (M_w), which is dependent upon the calculation methodology used. According to the USGS, accurate estimates of the probable fault rupture geometry will not be understood until longer-term studies have been completed. The recurrence interval for this event cannot be stated with any degree of certainty at this time.

The Licensee indicated that the scientific community has not yet completed a full evaluation of the August 23, 2011 earthquake. The Licensee has been consulting with the Department of Geosciences at Virginia Polytechnic Institute and State University on this issue and will provide an update regarding any special ground-motion effects by March 31, 2012. The NRC Staff agrees that understanding the special ground-motion effect is closely related to the knowledge of the seismic source fault, and will monitor and evaluate Licensee's initiative in these areas.

(6) There are numerous issues with the seismic instrumentation at North Anna 1 and 2, including lack of free-field instrumentation, issues associated with conversion of analog data to digital data, issues with lack of onsite personnel with sufficient training in seismic measurements, and potential skewing of ground motion data due to the location of the "scratch plates."

The AIT inspection report identified an unresolved issue (URI), URI 05000338, 339/2011011-06, "Seismic Alarm Panel." Following the seismic event, the Licensee installed a temporary uninterruptible power supply (UPS) to ensure that the seismic monitoring panel and its associated alarms that are used to determine if an emergency plan entry is required will remain operable during periods where 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 means for upgrading 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 program. Therefore, no restart concerns were identified by the RRIT.

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 Kinemetrics, 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 regarding 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, a UPS was seismically qualified and installed in the control room in September 2011. This UPS provides backup power to the Kinemetrics 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 regarding whether the OBE has been exceeded. Second, an autonomous, temporary free-field seismic monitor was installed within the North Anna 1 and 2 owner-controlled area, east of the training building, in September 2011. In addition, the station abnormal procedure for seismic events was updated to include reference to, and use of, the free-field monitor. Also, a procedure is in place for obtaining and evaluating free-field seismic data as they relate 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 further indicated that a project has been initiated to replace the existing seismic equipment and MCR indication with more modern equipment. Permanent, free-field seismic equipment will be installed to facilitate the per-

formance of CAV calculations. The upgrade will also include installation of seismic recording instrumentation at the station's independent spent fuel storage installation (ISFSI) pad. The project is currently scheduled to begin equipment installation during the spring 2012 refueling outage.

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 Kinemetrics. The Licensee installed the free-surface/free-field seismometer with temporary settings. While this does not have the direct connection to the MCR instrumental panel to alert plant operators immediately during an earthquake event, the plant operator can still make an appropriate operating and reporting decision within the 4-hour limit. Therefore, with the combination of Kinemetrics and free-field seismometer, the NRC Staff considered the Licensee response acceptable. In addition, the Licensee had connected the MCR instrument panel with a noninterruptible seismically qualified backup power, and therefore, power disruption would not be expected in a future earthquake event.

The Licensee also indicated that the Kinemetrics 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 (NI) signal changes) for the reactor shutdown root-cause analysis. Considering this issue, the NRC Staff 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, 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 surveillance requirements 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 also completed for the time-history accelerographs and the seismic switch control room alarm indications. A channel orientation issue was identified for the time-history accelerographs whereby the horizontal sensors were 90 degrees off specified orientation. This discrepancy was entered 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, there are presently 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, 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.

The NRC Staff asked the Licensee to discuss the sensitivity of spectral acceleration value with respect to the methodology used (for example, sampling rates) and any other alternative calculations because in the Licensee's letter dated September 17, 2011 (ADAMS Accession No. ML11262A151), Enclosure 1, Attachment 3, page 7, "Kinemetrics Data for Containment Elevation 291 [feet (ft)] — Vertical Direction," a figure shows a peak recorded value at about 10 hertz (Hz) that is greater than 1*g*.

The Licensee responded that this figure plots the vertical response spectrum generated from the time history of the August 23, 2011 earthquake recorded by the Kinemetrics Instrument located at the North Anna 1 Containment Operating Deck (291-ft elevation). The time history was recorded to an analog tape that was sent to the vendor, Kinemetrics, for processing and baseline correction. The resulting corrected time history was input into a finite element program (STARDYNE, Version 5.11) to generate the response spectrum plot spanning from 0.2 Hz to 50 Hz in increments of 0.2 Hz. Two outside consultants used the same input time history and independently generated nearly identical response spectra. Kinemetrics, in its input to the Licensee (which was provided to the NRC Staff in the letter dated September 17, 2011), also plotted the vertical time history for comparison to the design-basis OBE and DBE curves. According to Kinemetrics, its software requires consistent use of input frequencies for all response spectra plotted for comparison. Accordingly, its data analysis program plots the response spectrum generated from the recorded time histories at only those frequencies at which the design spectra curves were digitized and were sent to it. Thus, the frequencies used by Kinemetrics in plotting the vertical response spectrum lack the refinement and are not consistent with those frequencies that the Licensee and other consultants used for plotting the response spectrum.

The Kinemetrics results provided in Enclosure 1 to the letter dated September 17, 2011, were compared to the calculations performed by the Licensee. The comparison shows differences in the peak spectral acceleration for the vertical direction spectra at the 291-ft elevation. The apparent difference in this instance is attributed to the frequency points at which Kinemetrics plotted the vertical spectrum generated from the recorded time history. The Licensee's calculated peak spectral acceleration is 1.06*g* at 10 Hz; whereas, the Kinemetrics-reported

peak is only 0.973*g*. The Licensee explained that the value at 10 Hz provided by Kinemetrics was an interpolated value, which caused a difference of less than 1%. Therefore, the apparent error was caused because of interpolations used by Kinemetrics and not caused by differences in numerical integration methodology or sampling rates. Plotted at consistent frequencies, the Kinemetrics data and the Licensee's data are consistent, as is the case with the spectra developed from recorded motions by two other consultants.

In its technical evaluation dated November 11, 2011, the NRC Staff agreed with the Licensee's explanation that spectral acceleration difference is caused by the fact that Kinemetrics methodology requires consistent frequency input for response spectrum calculation. The NRC Staff also independently calculated response spectra for the three components at the 291-ft elevation level and the results match with the results provided by the Licensee.

The NRC Staff concluded in its technical evaluation of November 11, 2011, that the Licensee's characterization of the ground motion from the August 23, 2011 earthquake and its impact on North Anna 1 and 2 was reasonable and acceptable. The NRC Staff also concluded in this document that the Licensee had reasonably demonstrated the operability of the seismic instrumentation during the seismic event at North Anna 1 and 2. The AIT also identified a URI associated with the seismic alarm panel in the MCR. The RRIT inspectors determined that the Licensee had taken appropriate actions to address the issue and documented it in its CAP program. Therefore, the RRIT identified no restart concerns.

(7) Retrofitting of North Anna 1 and 2 is required due to damage to North Anna 1 and 2 from the earthquake of August 23, 2011.

The NRC's RRIT concluded that the Licensee adequately inspected plant SSCs to ensure that any damage from the August 23, 2011 seismic event was identified and, if found, would have been 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. The NRC RRIT did not identify any retrofitting as necessary for restart or continued safe operation. During the inspection, some examples of minor problems were identified and are discussed in the NRC Staff's inspection report dated November 30, 2011. However, these issues did not rise to the significance of requiring retrofitting of the plant.

(8) There are concerns with the impact of the August 23, 2011 earthquake on the North Anna 1 and 2 ISFSI including the fact that twenty-five casks weighing over 115 tons were not supposed to shift as much

as 4.5 inches during an earthquake, validation of the integrity of the seals inside the spent fuel casks, assessing whether spent nuclear fuel storage facilities could topple or otherwise sustain significant damage resulting in a release, and assessing whether the Licensee's emergency plans adequately addressed damage to the ISFSI as a result of a severe earthquake.

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. 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 NUHOMS-HD 32PTH damage described above was 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 by the Licensee personnel and personnel from Nuclear Analysis and Fuel. These were 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 casks moved 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/outlet vents were inspected and no abnormal blockage was found, (g) thermal performance measurements for all loaded HSMs were performed and no abnormal temperature differences were found, and (h) radiological surveys of both pads indicated no changes to cask surface dose. Post-seismic 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 maintains that there is no immediate safety issue at the North Anna ISFSI. This is based on (1) confirmatory inspections by the AIT 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 were normal and monitoring systems were functional. Licensee actions are under way to evaluate and repair, if necessary, the ISFSI dry cask storage systems

and components. The NRC Staff has requested from the Licensee a detailed integrated action plan to include completion target dates. Further, the NRC plans to independently assess the Licensee analysis and corrective actions to ensure that the Licensee adequately addresses short- and long-term ISFSI issues. The review may include confirmatory walkdowns, inspections, and analyses, as appropriate.

With respect to any damage to the ISFSI, such as the integrity of the seals and the radiation shielding on the casks, the NRC Staff believes there is no immediate safety issue. The cask designs are robust and consider severe natural phenomena. As expected, the casks withstood the earthquake at the North Anna site. The spent fuel continues to be surrounded by several tons of steel and concrete and sealed in an inert helium environment. Damage to concrete components was minor and considered cosmetic and did not affect structural integrity or radiation shielding capability. Additionally, the fuel assemblies are designed to withstand a maximum of 4*g* axial load and 6*g* lateral load. The Licensee inspected inlet and outlet vents and found no exterior blockage. Radiation surveys indicate no changes to cask surface dose rates. Thermal performance measurements for all loaded casks found no abnormal temperature differences.

The NRC Staff assessed whether spent nuclear fuel storage facilities could topple or otherwise sustain significant damage from a more powerful earthquake that would result in a release of nuclear radioactive particles into the environment. As discussed above, there are two spent fuel dry cask storage systems deployed at the North Anna site: the TN-32 and the NUHOMS-HD. For the TN-32 system, spent fuel is loaded directly into the metal casks equipped with a bolted closure lid. The NUHOMS-HD system places spent fuel in a welded dry shielded canister (DSC) resting on horizontal rails inside the HSM, which uses thick concrete in the walls, floor, and roof slabs.

The cask systems at the North Anna site are designed to accommodate environmental conditions and natural phenomena as well as withstand postulated accidents in accordance with 10 C.F.R. § 72.122(b). This involves structural integrity analysis of the DSC held within a transfer cask during fuel loading for the handling drop accidents and the TN-32 cask for the nonmechanistic tip-over condition. The impact inertia forces imposed on the cask structural components for these analyses are many times higher than those associated with the design-basis earthquake. The design analysis indicated that, although some structural component damage may result in some adverse effect on the system shielding function, the cask confinement boundaries (i.e., the DSC of the NUHOMS-HD and the inner shell of the TN-32 metal cask) would not be breached.

For a much more powerful earthquake than that experienced at the North Anna site, the spent fuel cask storage systems may or may not topple. However, as discussed above, even if the cask systems topple, the confinement boundaries of the cask systems would not be breached and no release of radioactive particles would occur.

With respect to assessing whether the Licensee's emergency plans are sufficient to deal with an emergency situation where spent nuclear fuel storage facilities are significantly damaged as a result of a severe earthquake, the NRC Staff has also made an evaluation. First, with regard to the toppling of the NUHOMS-HD and TN-32 dry cask storage systems, no credible earthquakes have been identified that would result in such an event occurring. However, NRC standard review plans (SRPs), NUREG-1536 and NUREG-1567, provide that a nonmechanistic cask tip-over be assumed and analyzed to determine what effect would result from such an event. For the NUHOMS-HD system, since the canister is not stored in a vertical cylindrical overpack, no tip-over analysis is performed. For the TN-32, the tip-over structural analysis demonstrates that the confinement boundary or the inner shell of the metal cask would not be breached, and no release path would exist for any of the radioactive particles contained in the cask. There is, however, the potential for some adverse effect on the shielding function of the cask. Any such degradation in shielding, and consequent potential increase in radiation levels around any toppled casks, would be evaluated by the Licensee and may or may not result in required actions under the site emergency plan.

With respect to emergency planning for such an eventuality, the North Anna Emergency Plan (NAEP) describes the organization, assessment actions, conditions for activation of the emergency organization, notification procedures, emergency facilities and equipment, training, provisions for maintaining emergency preparedness, and recovery criteria used at North Anna. This emergency plan also addresses any radiological emergencies that may arise at the North Anna ISFSI. Appropriate response actions and notifications have been established in the NAEP.

(9) The Petitioner is concerned that the Licensee cannot be trusted to communicate reliable information to the public or the regulator based on the fact that the Licensee in the 1970s failed to promptly disclose the discovery of geological information and was subjected to a monetary fine for the violation.

The Licensee informed the NRC Staff in May 1973 that it had found a family of faults during excavation for a previously planned Unit 3 and Unit 4 for the North Anna Power Station. (These units were not constructed for various reasons.) The Licensee did not observe any faults in the foundation excavations for the existing North Anna 1 and 2. After a number of investigations, assisted by the USGS, the NRC Staff concluded in December 1976 in the safety evaluation report, Supplement No. 5, for North Anna 1 and 2 that none of the faults known to exist at the North Anna site were capable faults within the context of Appendix A of 10 C.F.R. Part 100.

The NRC took enforcement action and assessed a civil penalty after finding in

January 1975 that the Licensee for North Anna 1 and 2 had submitted multiple "material false statements" regarding the fault beneath the North Anna site. However, the NRC Staff considers this a closed issue that has no bearing on its assessment of the August 23, 2011 earthquake.

C. Enforcement Actions Requested by the Petitioner and the Response by the NRC

The NRC Staff has evaluated the Petitioner's requests to: (1) take escalated enforcement action against the Licensee and suspend, or revoke, the operating licenses for North Anna 1 and 2; and (2) issue a notice of violation against the Licensee with a proposed civil penalty in the amount of 1 million dollars. With respect to these two requests, the evaluations of two NRC inspection teams as documented in inspection reports dated October 31, 2011, and November 30, 2011, did not find any violation of NRC regulations that would merit such enforcement actions.

With respect to the Petitioner's third request for enforcement action: to issue an order to the Licensee requiring the Licensee to keep North Anna 1 and 2 in a "cold shutdown" mode of operation until such time as a series of actions described in the petition are completed, the NRC Staff concludes that it has partially granted that 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 Updated Final Safety Analysis Report.
>
> 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 addressing a number of issues before startup, many of which issues were identified in whole or in part in the petition as concerns.

Issues in the petition, identified and discussed above as concerns 1, 2, 3, 5, 6, 7, and 8, 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 third request for enforcement action described in the petition. Issues in the petition, identified and discussed above as concerns 4 and 9, were evaluated by the NRC Staff before restart of North Anna 1 and 2, but disposition of these concerns by the NRC Staff differs from the course of action requested in the petition. In that respect, these aspects of the petition are denied.

III. CONCLUSION

Based on the above, the Office of Nuclear Reactor Regulation has decided to deny the Petitioner's first two requests for enforcement action and to partially grant the Petitioner's third request. As provided in 10 C.F.R. § 2.206(c), a copy of this Director's Decision will be filed with the Secretary of the Commission for the Commission to review. As provided for by this regulation, the Decision will constitute the final action of the Commission 25 days after the date of the Decision unless the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE NUCLEAR REGULATORY
COMMISSION

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 26th day of April 2012.

ATTACHMENT

RESOLUTION OF COMMENTS FROM VIRGINIA ELECTRIC AND POWER COMPANY (DOMINION) ON THE PROPOSED DIRECTOR'S DECISION

1. On page 25 the [proposed Director's] Decision states, "Following the seismic event, the licensee installed a temporary uninterruptible power supply (UPS) to ensure that the seismic monitoring panel and its associated alarms that are used to determine if an emergency plan entry is required will remain operable during periods where power is being transferred between the normal supply and the *semivital bus* (emphasis added)."

Dominion recommends that the sentence be changed to read "remain operable during periods where power is being transferred between the normal supply and the *emergency power supply.*"

Response

The U.S. Nuclear Regulatory Commission (NRC) Staff modified the final Director's Decision to reflect that power is being transferred between the normal supply and the emergency power supply.

2. On page 26, the [proposed Director's] Decision states, "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 indications of OBE *and SSE exceedence* (emphasis added)."

Dominion recommends that the end of the sentence be changed to read "with indication of *OBE exceedence.*"

Response

The NRC Staff modified the final Director's Decision to reflect on page 26 that the seismic instrumentation panel located in the North Anna 1 and 2 control room provides indication of OBE exceedance, but not SSE exceedance.

3. On page 28, the [proposed Director's] Decision states, "Considering this issue, the NRC staff 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."

Dominion recommends that the additional sentence noted below be added following the above statement consistent with Item 4 of the Action List in the

November 11, 2011 Confirmatory Action Letter (CAL). We recommend the sentence, "Consistent with the NRC CAL, Action Item 4, Dominion will implement a design change to replace the existing seismic equipment and main control room indication with upgraded and enhanced seismic monitoring instrumentation equipment, which includes installation of a permanent, free field seismic monitor."

Response

The NRC Staff did not modify the final Director's Decision as a result of this comment. The proposed additional sentence does not fit the context of that section of the Director's Decision as this section describes NRC Staff actions taken as part of the augmented inspection team for North Anna 1 and 2, as documented in the inspection report dated October 31, 2011.

4. On page 32 the [proposed Director's] Decision states that, "(e) no movement occurred at the bases of the loaded HSMs [horizontal storage modules] (spacing between several HSM roofs indicated some very slight movement,"

Since the initial operability evaluation, Dominion has performed additional surveys to verify proper alignment of the front face of the HSMs to the approach monuments. The subsequent surveys indicated that all but one of the loaded HSMs exhibited a slight (less than 1 inch) sideways shift.

Response

The NRC Staff modified the final Director's Decision to reflect on page 32 the addition of the following words after the words referenced above: "(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)."

5. On page 36 the [proposed Director's] Decision states, "After NRC's investigation, which was assisted by the USGC, it was concluded in *1973 in the safety evaluation report, Supplement No. 3* (emphasis added), that "none of the faults known to exist . . . . and 10 C.F.R. Part 100.

Dominion recommends that the sentence read as follows, "After NRC's investigation, which was assisted by the USGC, it was concluded in *1976 in the safety evaluation report [SER], Supplement No. 2,* states in part. . . ." The discussion of seismology is included in SER supplement 2 dated August 1976.

Response

The NRC Staff modified the final Director's Decision to properly reflect the proper reference to Supplement No. 5 to the SER.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of **Docket No. 40-9091-MLA**

STRATA ENERGY, INC.
(Ross In Situ Uranium Recovery Project) **May 11, 2012**

APPEALS

Our rules of practice provide for appeals as of right on the question whether an intervention petition should have been "wholly denied." 10 C.F.R. § 2.311(a)(1), (a)(2), (d)(1). Appeals of a Board's finding of standing are proper because if that finding is in error, the petitioner would not be entitled to a hearing at all.

RULES OF PRACTICE: INTERLOCUTORY APPEALS

Routine contention admissibility determinations are not generally appropriate for interlocutory review. *See, e.g., South Texas Project Nuclear Operating Co.* (South Texas Project, Units 3 and 4), CLI-10-16, 71 NRC 486, 491 (2010); *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-09-6, 69 NRC 128, 137 (2009); *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-21, 62 NRC 538, 539 (2005).

RULES OF PRACTICE: INTERLOCUTORY APPEALS

It is well settled in Commission case law that an applicant may file an

interlocutory appeal of board orders admitting contentions, but only if the appeal challenges the admissibility of all admitted contentions. *Pa'ina Hawaii, LLC,* CLI-06-13, 63 NRC 508, 509 (2006). Similarly, an intervenor may not challenge the Board's rejection of contentions where the Board has granted a hearing on any contention. *See, e.g., South Texas Project,* CLI-10-16, 71 NRC at 491; *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-04-31, 60 NRC 461, 465-67 (2004).

STANDING TO INTERVENE

The Commission gives a Board's ruling on standing "substantial deference." *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 914 (2009); *Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decommissioning), CLI-01-2, 53 NRC 9, 14; *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 324 (1999). That is, the Commission defers to the Board's rulings on standing absent an error of law or abuse of discretion. *Nuclear Fuel Services, Inc.* (Erwin, Tennessee), CLI-04-13, 59 NRC 244, 248 (2004) (citing *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252 (2001); *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-98-6, 47 NRC 116, 118 (1998)).

STANDING TO INTERVENE

Petitioners are not required to demonstrate their asserted injury with "certainty" with respect to standing. *See Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 74 (1994). Once the Board determines that injury to the petitioners from the proposed project is plausible, it is not required to weigh the evidence to determine whether the potential harm was beyond doubt. *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 346 (2009).

ORAL ARGUMENT

The Commission will generally not hold oral argument unless there is a specific showing that oral argument will assist us in reaching a decision. *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 219-20 (2011) (citing *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-10-9, 71 NRC 245, 251 (2010) (citing, in turn, *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-2, 37 NRC 55, 59 n.4 (1993); *Texas Utilities Electric Co.* (Comanche

Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 68-69 (1992))).

MEMORANDUM AND ORDER

The NRC Staff and Strata Energy, Inc. (Strata) have appealed the Atomic Safety and Licensing Board's recent decision granting a hearing to the Natural Resources Defense Council and the Powder River Basin Resource Defense Council (together, Joint Petitioners).[1] The two appellants argue that Joint Petitioners have not demonstrated standing in this proceeding on Strata's application for a license for an *in situ* uranium recovery project in Crook County, Wyoming.[2] Strata also asks us to eliminate two contentions from the proceeding, should we decline to reverse the Board's standing determination. For the reasons stated below, we affirm the Board's standing determination. We decline, however, to consider Strata's remaining claims.

I. BACKGROUND

This proceeding concerns Strata's January 4, 2011, application for a combined source and byproduct materials license for its proposed Ross *in situ* recovery (ISR) operation in Crook County. Following a notice of opportunity to request a hearing,[3] Joint Petitioners timely filed an intervention petition and request for hearing.[4]

The Board granted the hearing, and admitted four contentions.[5] The Board found that both organizations had demonstrated representational standing based

[1] LBP-12-3, 75 NRC 164 (2012).

[2] *See* NRC Staff's Notice of Appeal of LBP-12-3, Licensing Board's Order of February 10, 2012, and Accompanying Brief (Feb. 21, 2012) (Staff Appeal); Applicant Strata Energy's Notice of Appeal of LBP-12-3 (Feb. 21, 2012) (Strata Notice of Appeal); Brief of Applicant Strata Energy, Inc. in Support of Its Appeal from LBP-12-3 (Feb. 21, 2012) (Strata Appeal Brief).

[3] *See* Strata Energy, Inc., Ross Uranium Recovery Project, Crook County, WY; Notice of Materials License Application, Opportunity to Request a Hearing and to Petition for Leave to Intervene, and Commission Order Imposing Procedures for Document Access to Sensitive Unclassified Non-Safeguards Information for Contention Preparation, 76 Fed. Reg. 41,308 (July 13, 2011).

[4] Petition to Intervene and Request for Hearing by the Natural Resources Defense Council & Powder River Basin Resource Council (Oct. 27, 2011). *See also* Declaration of Pamela Viviano (Oct. 21, 2011), appended to petition (Viviano Declaration).

[5] *See* LBP-12-3, 75 NRC at 178-90.

on the affidavit of Ms. Pamela Viviano, who is a member of both organizations.[6] Although Ms. Viviano claimed that the proposed Ross ISR operation could harm her in several respects, the Board, construing the petition in favor of Joint Petitioners, based its standing finding on two potential harms: traffic-generated dust and light pollution.[7]

After finding standing for Joint Petitioners, the Board admitted four contentions for hearing.[8] The Staff filed a timely appeal, challenging the Board's standing determinations. Strata also challenges the Board's ruling on standing, as well as the admission of Environmental Contentions 1 and 2.[9] Joint Petitioners oppose both appeals.[10]

II. DISCUSSION

A. Standard of Review

Section 2.311(d)(1) provides for appeals as of right on the question whether an intervention petition should have been "wholly denied."[11] The appeals of the Board's finding of standing are, therefore, properly before us because if the Board's finding of standing is in error, the Joint Petitioners are not entitled to a hearing at all.

However, we observe that a portion of Strata's request for review is not ordinarily appealable now. Strata's request that we review the admissibility of

---

[6] The Board also rejected Joint Petitioners' claim of organizational standing, finding that the assertions made by both organizations "are 'of the sort [that] repeatedly have [been] found insufficient for organizational standing.'" *Id.* at 178 (citing *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252 (2001); *Cogema Mining, Inc.* (Irigaray and Christensen Ranch Facilities), LBP-09-13, 70 NRC 168, 191 (2009)).

[7] *Id.* at 187, 188-89 (citing, in both locations, *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995)).

[8] *See id.* at 192-93, 195, 198, 199. Environmental Contention 1 asserts that the application fails to adequately characterize baseline groundwater quality. Environmental Contention 2 asserts that the application fails to analyze the environmental impacts that will occur if Strata cannot restore groundwater to baseline quality or drinking water quality standards. Environmental Contention 3 asserts that the application fails to include adequate hydrological information to demonstrate Strata's ability to contain groundwater fluid migration. Finally, Environmental Contention 4/5A asserts that the application fails to assess adequately cumulative impacts of this proposed action and the planned Lance District expansion project (a project to operate additional *in situ* recovery facilities surrounding the Ross site).

[9] *See* Strata Appeal Brief at 12-24.

[10] *See* Natural Resources Defense Council's and Powder River Basin Resource Council's Opposition to Appeals by Strata Energy, Inc. and NRC Staff of the Atomic Safety & Licensing Board's Ruling in LBP-12-3 (Mar. 2, 2012) (Joint Petitioners' Answer).

[11] 10 C.F.R. § 2.311(a)(1), (a)(2), (d)(1).

two out of four admitted contentions would not resolve the question whether the petition should have been "wholly denied." As is apparent from the wording of section 2.311(d)(1), the Commission discourages "piecemeal" appeals. It is well settled in Commission case law that an applicant may file an interlocutory appeal of board orders admitting contentions, but only if the appeal challenges the admissibility of all admitted contentions.[12] We have on occasion considered whether to exercise "pendent" jurisdiction of otherwise nonappealable issues, such as where those issues are "inextricably intertwined" with a related legal question properly before us, or where consideration of the issues together has the potential to resolve the entire litigation.[13] Here, however, the two contentions that Strata challenges, which deal with Strata's baseline groundwater quality characterization and groundwater restoration, are not related to the standing issue that is properly before us. Furthermore, because we decline to disturb the Board's standing determination, Strata's challenge to two out of four admitted contentions does not have the potential to resolve this case in its entirety. For these reasons, we decline to take pendent jurisdiction of these contention admissibility determinations, to avoid encouraging "interlocutory appeals 'riding on the coattails' of appealable issues."[14]

Strata's challenge to the two contentions also would not satisfy our traditional standards for discretionary interlocutory review of contention admissibility rulings.[15] Strata's appeal brief asserts that the Board's admission of the two contentions was incorrect, but this alone does not justify immediate review. Our rules provide for interlocutory review where the ruling threatens the petitioner with "immediate and serious irreparable harm," or has a "pervasive and unusual" effect on the "basic structure of the proceeding."[16] Routine contention admissibility determinations, accordingly, are not generally appropriate for interlocutory

---

[12] *Pa'ina Hawaii, LLC,* CLI-06-13, 63 NRC 508, 509 (2006). Similarly, we normally do not allow an intervenor to challenge the Board's rejection of contentions where the Board has granted a hearing on any contention. *See, e.g., South Texas Project Nuclear Operating Co.* (South Texas Project, Units 3 and 4), CLI-10-16, 71 NRC 486, 491 (2010); *Exelon Generation Co., LLC* (Early Site Permit for the Clinton ESP Site), CLI-04-31, 60 NRC 461, 465-67 (2004).

[13] *See, e.g., Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-08-27, 68 NRC 655 (2008) (considering a board ruling denying a waiver request where that request was "inextricably intertwined" with a board decision to wholly deny the same petitioner's request for hearing). *Compare Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decommissioning), CLI-01-2, 53 NRC 9, 19 (2001) (declining to take review of board rulings that were not "inextricably linked" to appealable issues, and the resolution of which did not have the potential to dispose of the entire litigation).

[14] *Sequoyah Fuels,* CLI-01-2, 53 NRC at 20 (citing *Swint v. Chambers County Commission,* 514 U.S. 35, 49-50 (1995)).

[15] The appropriate mechanism to challenge individual contention admissibility determinations following a ruling on an initial petition is a request for interlocutory review under our rules in 10 C.F.R. § 2.341(f)(2).

[16] 10 C.F.R. § 2.341(f)(2).

review.[17] Because Strata has not addressed how these contention determinations constitute "immediate and serious irreparable harm" or a "pervasive and unusual" effect on the proceeding, we do not take review of them now.

With respect to the standing question, we afford the Board's ruling on standing "substantial deference."[18] That is, we will defer to the Board's rulings on standing absent an error of law or abuse of discretion.[19] Here, we find that neither Strata nor the Staff has overcome this hurdle.

B. Standing

The Staff and Strata challenge Joint Petitioners' demonstration of standing based on traffic-generated dust. Ms. Viviano, in her Declaration, claimed that the project would lead to increased traffic on her road, creating impacts from dust at her home:

> [A] potential negative impact from this site would be the increase in traffic on our road during the construction of the site and the operational phase. These roads are dirt and gravel, and any traffic results in a dust problem. The increased traffic would cause a health hazard to us and to all those with homes along these roads.[20]

Ms. Viviano states that her residence is located about 10 miles to the northeast of the Ross site, along New Haven Road (also known in part as County Road 164 and in part as County Road 105).[21] New Haven Road runs east to west at her residence, and turns generally south toward the Ross ISR site, which also abuts New Haven Road.[22] From the Ross ISR site, New Haven Road continues south

---

[17] *See, e.g., South Texas Project Nuclear Operating Co.,* CLI-10-16, 71 NRC at 491; *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-09-6, 69 NRC 128, 137 (2009); *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-21, 62 NRC 538, 539 (2005).

[18] *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 914 (2009); *Sequoyah Fuels,* CLI-01-2, 53 NRC at 14; *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 324 (1999).

[19] *Nuclear Fuel Services, Inc.* (Erwin, Tennessee), CLI-04-13, 59 NRC 244, 248 (2004) (citing *White Mesa,* CLI-01-21, 54 NRC at 252; *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-98-6, 47 NRC 116, 118 (1998)). *See also Sequoyah Fuels,* CLI-01-2, 53 NRC at 14; *Private Fuel Storage, L.L.C.,* CLI-99-10, 49 NRC at 324.

[20] Viviano Declaration ¶ 10.

[21] LBP-12-3, 75 NRC at 187 & n.23; Viviano Declaration ¶ 1.

[22] LBP-12-3, 75 NRC at 187 & n.23.

for 3 miles where it merges with D Road (CR 68), which extends south 18 miles to Interstate 90.[23]

Considering this declaration along with statements in the Environmental Report, the Board found plausible Ms. Viviano's claim that vehicles traveling to the Ross site will increase traffic on the gravel road abutting her property, which in turn will cause a "dust problem."[24] Strata's Environmental Report describes the "primary access" to the site as being from I-90 to the south and north along D Road and New Haven Road (that is, a route that would not pass Ms. Viviano's residence).[25] The Environmental Report also acknowledges that the Ross ISR site "can also be accessed" driving west then south along New Haven Road.[26] Elsewhere in the Environmental Report, Strata states that traffic increase on affected roads is estimated to be up to 400 passenger vehicles and 24 trucks per day during construction, and approximately 120 passenger vehicles and 16 trucks per day during operations.[27] The Board observed that the New Haven Road "eventually goes past Ms. Viviano's residence before heading to the southeast (as County Road 105) toward the town of Hulett."[28] In view of all this information, the Board determined that it was not "implausible" that the proposed Ross facility would generate increased traffic along the road adjacent to Ms. Viviano's residence, in the form of trucks or workers' passenger vehicles.[29] The Board found that this determination, in combination with Ms. Viviano's unrebutted statement that "any traffic results in a dust problem" on the road abutting her property, was sufficient to establish the injury and causation elements necessary to afford Ms. Viviano standing relative to the dust impacts claim.[30]

On appeal, the Staff argues, in essence, that the Board improperly shifted the burden from Joint Petitioners by failing to require sufficient facts (in particular,

---

[23] *See* Strata Energy, Ross ISR Project USNRC License Application Environmental Report § 3.2.1, at 3-26 (Environmental Report) § 3.2.1, at 3-26 (ADAMS Accession Nos. ML110130342, ML-110130346, ML110130344, ML110130348) (Environmental Report).

[24] *See* LBP-12-3, 75 NRC at 185-88.

[25] *See* Environmental Report § 3.2.1, at 3-26.

[26] *Id.* at 3-26 to 3-27.

[27] *Id.* § 4.2.1.1, at 4-18 (construction impacts), § 4.2.1.2, at 4-20 (operations). The Environmental Report explains that by "400 passenger vehicles per day," for example, it means 200 vehicles making a round trip. *See id.* at 4-18. The Environmental Report also states that this traffic (particularly truck traffic) is likely to generate fugitive dust, and identifies several dust mitigation measures that will be implemented. LBP-12-3, 75 NRC at 187 (citing Environmental Report § 4.6.1, at 4-89 to 4-90, 4-93; § 5.9, at 5-58 to 5-59, § 5.10, at 5-60 to 5-61).

[28] LBP-12-3, 75 NRC at 187 (citation omitted). The Board confirmed that the New Haven Road is in fact a "dirt and gravel road." *Id.* at 187 n.22 (referencing, and taking judicial notice of, the 2011-12 American Automobile Association Wyoming/Colorado road map).

[29] *Id.* at 187.

[30] *Id.* at 187-88.

a plausible chain of causation and a "non-hypothetical injury") to establish standing.[31] We do not find that the Board reversed the burden here. On the contrary, the Board looked, as it should, to traditional concepts of injury, causation, and redressability to determine whether Joint Petitioners had demonstrated standing.[32]

Both appellants maintain that Joint Petitioners provided insufficient support for the claim that the project will increase traffic on the road passing Ms. Viviano's home. The Staff argues that Joint Petitioners did not substantiate their claim that the Ross ISR project could cause an increase of traffic on roads that are not part of Strata's "planned route" and that are located nearby Ms. Viviano's residence. The Staff argues that "the Applicant's planned route" does not go past Ms. Viviano's property, but proceeds north from Interstate 90 along D Road (County Road 68) and New Haven Road.[33] Similarly, both the Staff and Strata argue that because the Environmental Report makes no mention of increased traffic on the part of New Haven Road that runs by Ms. Viviano's residence, the Board erred in finding it "plausible" that the traffic on that stretch of road could increase.[34]

We are not convinced by the appellants' arguments that statements in the Environmental Report foreclose the possibility that Ms. Viviano plausibly could suffer adverse impacts from the project. With respect to the argument that the Environmental Report identifies the route heading north from I-90 as the "primary access" to the site, the Board found nothing to prevent Strata's employees and contractors from taking the route from the northeast.[35] And, as Joint Petitioners observe: "Strata employees and contractors will almost certainly live nearby and in the surrounding towns, and there is no evidence or reason to suggest that they would not use the same local roads that Ms. Viviano uses, particularly New Haven

---

[31] Staff Appeal at 4.

[32] *See* LBP-12-3, 75 NRC at 179. The Board suggests in a footnote to its decision that it might be more efficient to simply create a "proximity presumption" for standing similar to the one the Commission uses to determine standing in reactor cases. *See* LBP-12-3, 75 NRC at 189-90 n.27. But as the Board notes, the 50-mile proximity zone we use for standing in reactor proceedings corresponds roughly to the emergency planning zone for ingestion pathways. There is no similar zone for materials cases, and, therefore, no similar boundary that suggests itself for the use as boundary for presumptive standing. We agree with the Board that determining standing in our materials licensing proceedings may sometimes necessitate the complicated "parsing" of asserted harms. Nevertheless, we do not see a sound basis for departing from our current practice of basing standing on the circumstances specific to the particular license application.

[33] Staff Appeal at 5. *See also* Strata Appeal Brief at 8.

[34] Staff Appeal at 5; Strata Appeal Brief at 7.

[35] LBP-12-3, 75 NRC at 187. In a related argument, the Staff claims that the Joint Petitioners "did not show that Ms. Viviano uses any part of the route that the Applicant plans to use." Staff Appeal at 5. This argument fails because the Board expressly rejected, and did not base its finding of standing upon, Joint Petitioners' argument that Ms. Viviano will be affected by the traffic while she is driving. LBP-12-3, 75 NRC at 186.

Road."[36] The Board's conclusion in this regard does not constitute an error or abuse of discretion.

Strata's argument that the Board unreasonably concluded that Strata's employees or contractors would choose to use an "unimproved" dirt road going past Ms. Viviano's residence is similarly unpersuasive.[37] According to the Environmental Report, D Road, after the first 3 miles, and New Haven Road are also gravel-surfaced on the route from I-90.[38] The Board's conclusion that some vehicles may choose one dirt road over another does not, on its face, appear so unlikely as to constitute an error of law or abuse of discretion.

In sum, the Environmental Report acknowledges that the route past Ms. Viviano's residence is one means of access to the site, and that the project will generate an increase in vehicular traffic. We do not see anything in the Staff's or Strata's arguments to render "implausible" the Board's determination that some of the traffic would use that route.[39]

We reach a similar conclusion with regard to the Board's determination that increased traffic could, in turn, create a "dust problem," as claimed by Ms. Viviano. First, as the Board observed, the Environmental Report describes mitigation measures — such as speed limits for Strata employees and contractors traveling to and from the facility — that can be taken to reduce traffic-generated dust on the local roads leading to the project.[40] Next, neither the Staff nor Strata disputes that traffic along the stretch of road past Ms. Viviano's residence would generate dust.[41] Further, we do not find compelling the Staff's claim that Strata's onsite dust mitigation measures would prevent dust from the project from affecting Ms. Viviano's residence.[42] Even assuming the efficacy of those measures, it is

---

[36] Joint Petitioners' Answer at 5.

[37] Strata Appeal Brief at 7-8.

[38] *See* Environmental Report § 4.2.1, at 4-14; § 5.2.2, at 5-16.

[39] The Staff argues that the Board's reasoning on this point constitutes an "overbroad interpretation" of our case law directing that an intervention petition should be construed in favor of the petitioner. Staff Appeal at 7. *See generally Georgia Tech,* CLI-95-12, 42 NRC at 115. While we agree that a board should not supply new information not otherwise present in the adjudicatory record in order to cure deficiencies in a petition, we do not find that the Board did so in the circumstances presented here. *Cf. Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 437 & n.49 (2011). Rather, the Board drew conclusions based on information provided in the record. We do not find this sort of reasoning improper.

[40] LBP-12-3, 75 NRC at 187 (citing Environmental Report § 4.6.1, at 4-89 to 4-90, 4-93; § 5.9, at 5-58 to 5-59, § 5.10, at 5-60 to 5-61).

[41] Strata plans to work with Crook County to implement traffic mitigation measures along the primary route — that is, along D Road and New Haven Road from the south. *See* Environmental Report § 5.2.2, at 5-14 to 5-16. This plan does not provide conclusive evidence that all Strata's employees and contractors will use that route — although it may go to show that Ms. Viviano's harm is mitigable.

[42] Staff Appeal at 6.

unclear how they would bear on traffic-generated dust *offsite.* The Board did not base standing on fugitive dust from the project site itself.[43]

The appellants next argue, in essence, that Joint Petitioners did not show that Ms. Viviano's exposure to dust alone constitutes a potential "injury." The Staff claims that Joint Petitioners did not articulate how Ms. Viviano will be impacted by traffic-associated dust, or the nature of a dust-related injury.[44] Similarly, Strata argues that Ms. Viviano did not substantiate her claim that the dust raised by the potential increase in traffic would constitute a "health hazard" to herself.[45] In this regard, we agree with the Staff and Strata that Ms. Viviano's declaration is somewhat ambiguous. She anticipates an increase in traffic and states that traffic will cause "a dust problem," and in the next sentence claims (without further description) that the dust presents a "health hazard," leaving to conjecture whether it is the dust itself, or some presumed health-related consequence of the dust, that is the source of her complaint. Strata, at least, construes her claim of traffic-related injury to be restricted to potential health hazards caused by dust.[46] This distinction received little further discussion in the record, however.[47]

We interpret the Board's reasoning as finding that the annoyance or nuisance of the potential traffic-generated dust constituted a sufficient harm to support Ms. Viviano's claim of standing even without a showing of a particular hazard to her health. The Board pointed to Strata's dust mitigation measures to illustrate that excessive dust generated in the context of this project (including from traffic to and from the site), could present an adverse impact.[48] Certainly, the potential "harm" necessary to demonstrate standing in our proceedings need not relate

---

[43] *See* LBP-12-3, 75 NRC at 186 n.20.

[44] Staff Appeal at 6.

[45] Strata Appeal Brief at 8-9.

[46] *Id.* at 9.

[47] The responses of both the Staff and Strata to Ms. Viviano's standing claim focused primarily on whether or not Ms. Viviano plausibly would be exposed to dust generated by the project or project-related traffic, not whether exposure to dust would be harmful to her if it did occur. *See* Applicant Strata's Response to Natural Resource [sic] Defense Council and Powder River Basin Resource Council Request for a Hearing and Petition to Intervene at 41-42 (Dec. 5, 2011); NRC Staff Response to Petition to Intervene and Natural Resources Defense Council & Powder River Basin Resource Council at 11 (Dec. 5, 2012). At oral argument, both Strata and the Staff focused on whether the project would plausibly expose Ms. Viviano to any more dust than that to which she is already exposed by virtue of living in rural Wyoming. Tr. at 28-29, 30-32, 37-40. The Staff appears to acknowledge that a petitioner could base standing upon a demonstration that a project could plausibly cause a significant amount of dust at his home. Tr. at 37-38.

[48] *See* LBP-12-3, 75 NRC at 187 (pointing to the dust mitigation measures Strata intends to use at the site). *See also* Tr. at 32 ("Judge Bollwerk: Well, I guess if there wasn't any harm then there'd be no reason to mitigate [dust] and you already said you are going to mitigate, so somebody thinks there's harm here. There's no question about the dust that you're raising . . . and someone thinks it has an impact and needs to be mitigated."), 39-40, 47-48.

to physical or bodily injury.[49] Further, we have held that petitioners are not required to demonstrate their asserted injury with "certainty" at this stage of the proceeding.[50] We do not find that the Board erred in taking at face value the unrebutted statements in Ms. Viviano's Declaration, in conjunction with the ER and its description of Strata's intended dust-mitigation measures, in making its determination on injury.

In sum, we find that the Board considered the record and reasonably determined that Joint Petitioners articulated sufficient detail as to how the proposed action would affect their representative. As we stated in the *Crow Butte* matter, once it made that determination of plausible injury from the proposed project, the Board "was not required to weigh the evidence to determine whether the harm to the [Joint Petitioners] is beyond doubt."[51] We find no error or law or abuse of discretion, and defer to the Board's judgment on Joint Petitioners' standing on the basis of harm from traffic-generated dust.[52]

C. Strata's Request for Oral Argument

Strata additionally requests that we grant oral argument on its appeal.[53] Our rules provide that, at our discretion, we may allow oral argument upon the request

---

[49] *Cf. Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 544-45 (2009) (upholding standing based on bad odor and discoloration of declarant's well water); *Private Fuel Storage,* CLI-99-10, 49 NRC at 322-25 (upholding standing where licensing action could harm declarant's recreational interests in wilderness area). *Accord Sierra Club v. Morton,* 405 U.S. 727, 734-35 (1972) (aesthetic harms may amount to an injury in fact sufficient for standing); *Sierra Club v. U.S. Army Corps of Engineers,* 645 F.3d 978, 987-88 (8th Cir. 2011) (standing based on diminishment of recreational enjoyment of wildlife area due to, among other factors, an increase in dust due to traffic on adjacent highway).

[50] *See Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 74 (1994).

[51] *Crow Butte Resources, Inc.* (*In Situ* Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 346 (2009). As to redressability, the Board concluded that Ms. Viviano's "averment that the environmental contentions proffered by Joint Petitioners will better position the agency to 'fully review the possible impacts of [Strata's] proposed [*in situ* leach] mining and milling project and based on [Joint Petitioners] and their experts' information, may address concerns and mitigate impacts to our water, land, and other resources,'[ ] is an assertion that is sufficient to fulfill the redressability of the standing requirement in a case such as this in which environmental/NEPA-related matters are raised by the petitioners." *See* LBP-12-3, 75 NRC at 188 n.24 (quoting Viviano Declaration ¶ 13, and citing *Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 242-43, *aff'd,* CLI-09-22, 71 NRC 932 (2009)). We find no error or abuse of discretion in this conclusion.

[52] With respect to Joint Petitioners' standing based on light pollution, the appellants claim that the Board went too far in its effort to "construe the petition in favor of the petitioner." However, because we have already decided to defer to the Board's finding of standing with respect to traffic-generated dust, we need not reach the question of Joint Petitioners' standing based on light pollution.

[53] Strata Notice of Appeal at 1-2.

of a party made in a petition for review.[54] As grounds for its request, Strata cites "the complexity of the issues argued in this appeal, especially with respect to [its] appeal of the admission of Environmental Contentions 1 and 2, and the potential industry impact of this appeal."[55]

We generally decline to hold oral argument, however, absent a specific showing that oral argument will assist us in reaching a decision.[56] Because we find that the written record in this appeal is thorough, sets forth the positions of all participants, and, overall, contains sufficient information on which to base today's decision, we deny Strata's request.

III. CONCLUSION

For the reasons discussed above, we *affirm* the Board's ruling with respect to its finding of standing for Joint Petitioners. We *decline* to exercise our discretion to examine the additional issues raised by Strata's appeal, and we *deny* Strata's request for oral argument.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 11th day of May 2012.

[54] 10 C.F.R. § 2.343.

[55] Strata Notice of Appeal at 1-2.

[56] *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 219-20 (2011) (citing *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-10-9, 71 NRC 245, 251 (2010) (citing, in turn, *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-2, 37 NRC 55, 59 n.4 (1993); *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 68-69 (1992))).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

E. Roy Hawkens, Chairman
Dr. Michael F. Kennedy
Dr. William C. Burnett

In the Matter of **Docket Nos. 52-040-COL**
52-041-COL
(ASLBP No. 10-903-02-COL-BD01)

FLORIDA POWER & LIGHT COMPANY
(Turkey Point Nuclear Generating Plant, Units 6 and 7) **May 2, 2012**

RULES OF PRACTICE: CONTENTIONS (NONTIMELY)

The "good cause" factor of 10 C.F.R. § 2.309(c)(1) is the "most important" and is entitled to receive the most weight. *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 261 (2009); *see Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 NRC 460, 469 (1982) (describing good cause). Where a petitioner fails to show good cause, "petitioner's demonstration on the other factors must be particularly strong." *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 73 (1992) (internal quotations omitted). A petition that attempts to proffer a nontimely contention without addressing the balancing factors in section 2.309(c) may be summarily rejected. *See Oyster Creek,* CLI-09-7, 69 NRC at 260-61.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

Failure to comply with any of the 10 C.F.R. § 2.309(f)(1) admissibility criteria is grounds for rejection of a contention. *USEC Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 437 (2006).

COMBINED LICENSES

ENVIRONMENTAL REPORT: CONTENTS

ENVIRONMENTAL IMPACT STATEMENT

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): INDEPENDENT INQUIRY BY FEDERAL AGENCY, NRC RESPONSIBILITIES

The regulations in 10 C.F.R. Part 51 implement the NRC's obligations arising from section 102(2) of NEPA, 42 U.S.C. § 4332(2). *See* 10 C.F.R. § 51.10(a). Pursuant to Part 51 (*id.* § 51.50(c)), every COL application must be accompanied by an ER, the purpose of which is to aid the Commission in its preparation of an Environmental Impact Statement (EIS). *See id.* § 51.14(a). The EIS must "disclose the significant health, socioeconomic and cumulative consequences of the environmental impact of a proposed action." *Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.,* 462 U.S. 87, 106-07 (1983).

ENVIRONMENTAL REPORT: CONTENTS

NEPA: NRC RESPONSIBILITIES

Regarding the level of detail in an ER, the governing regulations require it to discuss environmental impacts "in proportion to their significance" (10 C.F.R. § 51.45(b)(1)), and it "should contain sufficient data to aid the Commission in its development of an independent analysis." *Id.* § 51.45(c). NEPA documents need consider only those environmental impacts that are "reasonably foreseeable" (*Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348-49 (2002)), not those that are "'remote and speculative possibilities.'" *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.,* 435 U.S. 519, 551 (1978) (quoting *Natural Resources Defense Council, Inc. v. Morton,* 458 F.2d 827, 837-38 (D.C. Cir. 1972)); *see also Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005) ("NEPA . . . does not call for certainty or precision, but an *estimate* of anticipated (not unduly speculative) impacts." (emphasis in original)).

ENVIRONMENTAL REPORT: CONTENTS

ENVIRONMENTAL IMPACT STATEMENT

NEPA: INDEPENDENT INQUIRY BY FEDERAL AGENCY, NRC RESPONSIBILITIES

Where the NRC Staff has deemed certain data to be material for ensuring the accuracy and reliability of an environmental report (ER), an applicant — to promote consistency in the ER and to ensure its accuracy and reliability — might elect to include similar related data in the ER. Alternatively, the NRC Staff might require an applicant to include these data, or the Staff might acquire these data independently for its own analysis in the EIS. *Cf. Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 348-50 (1998) (describing NRC Staff's responsibilities, parallel to the adjudicatory process, to seek additional information from an applicant after docketing of pending license application).

RULES OF PRACTICE: CONTENTIONS

NEPA: INDEPENDENT INQUIRY BY FEDERAL AGENCY, NRC RESPONSIBILITIES

Although aspects of a newly proffered environmental contention may be time-barred from resolution through administrative adjudication, NEPA nevertheless obligates the NRC Staff to undertake a full and independent evaluation of the environmental impacts of a license applicant's proposed action. *See* 10 C.F.R. § 51.41; *see also USEC Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC at 448 (describing the NRC's NEPA responsibilities of conducting a "rigorous" and "objective" review).

ENVIRONMENTAL REPORT: CONTENTS

The ER must, *inter alia,* discuss reasonably foreseeable environmental impacts of the proposed action in proportion to their significance, as well as adverse environmental effects that cannot be avoided if the proposed plan is implemented. *See* 10 C.F.R. § 51.45(b)(1)-(2); *Private Fuel Storage,* CLI-02-25, 56 NRC at 348-49.

MEMORANDUM AND ORDER
(Granting, in Part, Joint Intervenors' Motion to Admit Amended Contention NEPA 2.1)

Mark Oncavage, Dan Kipnis, Southern Alliance for Clean Energy, and National Parks Conservation Association (hereinafter referred to collectively as Joint Intervenors) have moved to admit an amended version of their previously admitted, but recently dismissed-as-moot, Contention NEPA [National Environmental Policy Act] 2.1.[1] For the reasons discussed below, we grant Joint Intervenors' motion in part.

I. BACKGROUND

This proceeding concerns challenges to Florida Power & Light Company's (FPL's) combined license (COL) application for two new nuclear power reactors, Turkey Point Units 6 and 7, at its facility near Homestead, Florida.[2] On February 28, 2011, this Board granted Joint Intervenors' hearing request and admitted, in part, one contention they advanced — Contention NEPA 2.1. *See* LBP-11-6, 73 NRC 149, 188-94 (2011).[3]

Contention NEPA 2.1 was an environmental "contention of omission" that challenged an allegedly omitted analytical aspect of FPL's proposed reclaimed wastewater system.[4] As admitted, the contention stated:

---

[1] *See* Joint Intervenors' Answer to FPL's Motion to Dismiss Joint Intervenors' Contention 2.1 as Moot, and Alternatively, Joint Intervenors' Motion to Amend Contention NEPA 2.1 (Jan. 23, 2012) [hereinafter Joint Intervenors Motion].

[2] *See* [FPL, COL] Application for the Turkey Point Units 6 & 7, Notice of Hearing, Opportunity to Petition for Leave to Intervene and Associated Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation, 75 Fed. Reg. 34,777 (June 18, 2010).

[3] We also granted a hearing request filed by Citizens Allied for Safe Energy, Inc. (CASE), and we granted a request from the Village of Pinecrest to participate as an interested local governmental body. *See* LBP-11-6, 73 NRC at 251. On March 29, 2012, we issued a decision (LBP-12-7, 75 NRC 503, 520 (2012)) dismissing CASE from this proceeding on the ground that it no longer had any contention or unresolved pleading pending before this Board.

[4] LBP-11-6 contains a description of the reclaimed wastewater system that FPL plans to construct and operate at proposed Turkey Point Units 6 and 7. *See* LBP-11-6, 73 NRC at 187-88. Briefly, FPL plans to use reclaimed wastewater from the Miami-Dade Water and Sewer Department (MDWASD) as the principal source of makeup cooling water for mechanical draft towers that would dissipate waste heat generated by proposed Units 6 and 7. *See id.* at 187. Using underground injection wells, FPL would ultimately discharge some of the reclaimed water into a region of the Lower Floridan Aquifer called the Boulder Zone, which is about 2800 feet belowground. *See id.* FPL's Environmental

(Continued)

> [T]he [Environmental Report (ER)] fails to analyze and discuss the potential impacts on groundwater quality of injecting into the Floridan Aquifer via underground injection wells heptachlor, ethylbenzene, toluene, selenium, thallium, and tetracholoroethylene, which have been found in injection wells in Florida but are not listed in FPL's ER as wastewater constituent chemicals.

LBP-11-6, 73 NRC at 190. In admitting this contention, we stated that Joint Intervenors had asserted, with adequate supporting information, that these "specified chemicals might be in the wastewater discharged via deep injection wells into the Boulder Zone of the Lower Floridan Aquifer, and that the wastewater could possibly migrate into the Upper Floridan Aquifer, contaminating the groundwater (including potential drinking water) with these chemicals." *Id.* at 191.

On December 16, 2011, FPL submitted to the NRC Revision 3 to its COL application for Turkey Point Units 6 and 7.[5]

On January 3, 2012, FPL moved to dismiss Contention NEPA 2.1 in light of Revision 3 to its COL application.[6] FPL argued that the contention was moot because: (1) contrary to the allegation in Contention NEPA 2.1, the chemicals "selenium" and "thallium" were included in Table 3.6-2 of the original version of the ER, and the environmental impacts from their release into the aquifer via the deep injection wells were assessed as "small" (*see* FPL Motion to Dismiss Contention 2.1, at 4); and (2) Revision 3 cured the omission identified in Contention NEPA 2.1 insofar as it modified Table 3.6-2 of the ER to add the estimated concentrations of the four missing chemicals (ethylbenzene, heptachlor, tetrachloroethylene, and toluene) and it assessed that the environmental impacts from their release into the aquifer via the deep injection wells would be small. *See id.* at 5.

On January 23, 2012, Joint Intervenors filed an answer opposing FPL's motion to dismiss Contention NEPA 2.1 as moot. *See* Joint Intervenors Motion at 4-11.

Report (ER) describes the Boulder Zone as "a highly transmissive zone of cavernous limestones and dolomites" (Turkey Point Units 6 & 7 COL Application, Part 3 — [ER], Rev. 3, at 2.3-33 [hereinafter ER Rev. 3]) that is capped by "thick confining units." *Id.* at 2.3-19. The Floridan Aquifer — which is divided into three levels known as the Upper Floridan Aquifer, the middle confining unit, and the Lower Floridan Aquifer (*see* LBP-11-6, 73 NRC at 187) — is "'a vertically continuous sequence of interbedded carbonate rocks of Tertiary age that are hydraulically interconnected by varying degrees and with permeabilities several orders of magnitude greater than the hydrogeologic systems above and below.'" *See id.* (quoting Turkey Point Units 6 & 7 COL Application, Part 3 — [ER], Rev. 0, at 2.3-15 [hereinafter ER Rev. 0]).

[5] *See* Letter from Mano K. Nazar, Executive Vice President and Chief Nuclear Officer, FPL, to U.S. Nuclear Regulatory Commission (Dec. 16, 2011) (ADAMS Accession No. ML11361A102).

[6] *See* [FPL's] Motion to Dismiss Joint Intervenors' Contention 2.1 as Moot (Jan. 3, 2012) [hereinafter FPL Motion to Dismiss Contention 2.1].

Alternatively, Joint Intervenors moved this Board to admit the following amended version of Contention NEPA 2.1:

> The ER fails to *adequately* analyze and discuss the potential impacts on groundwater quality of injecting into the Floridan Aquifer via underground injection wells heptachlor, ethylbenzene, toluene, selenium, thallium, and tetrachloroethylene, which have been found in injection wells in Florida but are not *accurately* listed in FPL's ER as wastewater constituent chemicals.

Id. at 12 (emphasis in original).

On January 26, 2012, we granted FPL's motion to dismiss Contention NEPA 2.1, ruling that it was a contention of omission that FPL's Revision 3 had rendered moot. *See* Licensing Board Memorandum and Order (Granting FPL's Motions to Dismiss Joint Intervenors' Contention 2.1 and CASE's Contention 6 as Moot) (Jan. 26, 2012) at 4-5 (unpublished). We refrained, however, from ruling on Joint Intervenors' motion to amend Contention NEPA 2.1 pending receipt of responsive and reply pleadings. *See id.* at 7.

On February 10, 2012, FPL filed an answer opposing admission of amended Contention NEPA 2.1, and the NRC Staff filed an answer supporting, in part, admission of the amended contention.[7]

On February 17, 2012, Joint Intervenors filed a reply to these answers.[8]

II. APPLICABLE LEGAL STANDARDS

A. Contention Admissibility

To be admissible, an amended contention must satisfy: (1) either the timeliness standards in 10 C.F.R. § 2.309(f)(2) or the balancing test in 10 C.F.R. § 2.309(c) for nontimely contentions; *and* (2) the general contention admissibility criteria in 10 C.F.R. § 2.309(f)(1). We discuss those standards in turn.

1. Standards In 10 C.F.R. § 2.309(f)(2) for Timely Amended Contentions

Amended contentions filed after the initial filing period has expired may be admitted only with leave of the Licensing Board on a showing that:

---

[7] *See* [FPL's] Response to Joint Intervenors' Motion to Amend Contention 2.1 (Feb. 10, 2012) [hereinafter FPL Answer]; NRC Staff's Answer to Joint Intervenors' Motion to Amend Contention NEPA 2.1 (Feb. 10, 2012) [hereinafter NRC Staff Answer].

[8] *See* Joint Intervenors' Reply to [FPL's] and [NRC] Staff's Responses to Joint Intervenors' Motion to Amend Contention 2.1 (Feb. 17, 2012) [hereinafter Joint Intervenors Reply].

> (i) The information upon which the amended . . . contention is based was not previously available;
> (ii) The information upon which the amended . . . contention is based is materially different than information previously available; and
> (iii) The amended . . . contention has been submitted in a timely fashion based on the availability of the subsequent information.

10 C.F.R. § 2.309(f)(2)(i)-(iii). In our Initial Scheduling Order and Administrative Directives, we advised that we would regard as being "submitted in a timely fashion" pursuant to 10 C.F.R. § 2.309(f)(2)(iii) any contention "filed within thirty (30) days of the date when the new and material information on which it is based first becomes available."[9]

2. Balancing Test in 10 C.F.R. § 2.309(c) for Nontimely Contentions

A contention that fails to satisfy timeliness standards in section 2.309(f)(2) may still be admitted pursuant to a balancing test governing nontimely filings that weighs the following factors set forth in section 2.309(c)(1):

> (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)(i)-(viii). The "good cause" factor is the "most important" and is entitled to receive the most weight. *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 261 (2009); *see*

---

[9] Licensing Board Initial Scheduling Order and Administrative Directives (Prehearing Conference Call Summary, Grant of Joint Motion Regarding Mandatory Disclosures, Initial Scheduling Order, and Administrative Directives) (Mar. 30, 2011) at 8 (unpublished) [hereinafter Initial Scheduling Order].

Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 NRC 460, 469 (1982) (describing good cause). Where a petitioner fails to show good cause, "petitioner's demonstration on the other factors must be particularly strong." *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 73 (1992) (internal quotations omitted). A petition that attempts to proffer a nontimely contention without addressing the balancing factors in section 2.309(c) may be summarily rejected. *See Oyster Creek,* CLI-09-7, 69 NRC at 260-61.

3. Admissibility Criteria in 10 C.F.R. § 2.309(f)(1)

In addition to satisfying the timeliness standards in 10 C.F.R. § 2.309(f)(2) or the balancing test in 10 C.F.R. § 2.309(c), an amended contention must satisfy the admissibility criteria in 10 C.F.R. § 2.309(f)(1), which require that a contention:

> (i) Provide a specific statement of the issue of law or fact to be raised or controverted . . . ;
> (ii) Provide a brief explanation of the basis for the contention;
> (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
> (iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
> (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; and
> (vi) [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 . . . 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). Failure to comply with any of these admissibility criteria is grounds for rejection of a contention. *USEC Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 437 (2006).

B. NEPA and the NRC's NEPA-Implementing Regulations

The regulations in 10 C.F.R. Part 51 implement the NRC's obligations arising from section 102(2) of NEPA, 42 U.S.C. § 4332(2). *See* 10 C.F.R. § 51.10(a).

Pursuant to Part 51 (*id.* § 51.50(c)), every COL application must be accompanied by an ER,[10] the purpose of which is to aid the Commission in its preparation of an Environmental Impact Statement (EIS). *See id.* § 51.14(a). The EIS must "disclose the significant health, socioeconomic and cumulative consequences of the environmental impact of a proposed action." *Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.,* 462 U.S. 87, 106-07 (1983).

Regarding the level of detail in an ER, the governing regulations require it to discuss environmental impacts "in proportion to their significance" (10 C.F.R. § 51.45(b)(1)), and it "should contain sufficient data to aid the Commission in its development of an independent analysis." *Id.* § 51.45(c). NEPA documents need consider only those environmental impacts that are "reasonably foreseeable" (*Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348-49 (2002)), not those that are "'remote and speculative possibilities.'" *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.,* 435 U.S. 519, 551 (1978) (quoting *Natural Resources Defense Council, Inc. v. Morton,* 458 F.2d 827, 837-38 (D.C. Cir. 1972)); *see also Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005) ("NEPA . . . does not call for certainty or precision, but an *estimate* of anticipated (not unduly speculative) impacts." (emphasis in original)).

III. ANALYSIS

Joint Intervenors seek to admit the following amended Contention NEPA 2.1:

> The ER fails to *adequately* analyze and discuss the potential impacts on groundwater quality of injecting into the Floridan Aquifer via underground injection wells heptachlor, ethylbenzene, toluene, selenium, thallium, and tetrachloroethylene, which have been found in injection wells in Florida but are not *accurately* listed in FPL's ER as wastewater constituent chemicals.

Joint Intervenors Motion at 12. In support of this contention, Joint Intervenors

[10] An ER must discuss: (1) the impacts of the proposed action on the environment; (2) adverse environmental effects of the proposed action that cannot be avoided; (3) alternatives to the proposed action; (4) the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity; and (5) any irreversible and irretrievable commitments of resources associated with the proposed action. *See* 10 C.F.R. § 51.45(b). Additionally, the ER shall "include an analysis that considers and balances the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects." *Id.* § 51.45(c). The ER "must also contain an analysis of the cumulative impacts of the activities to be authorized by the [COL] in light of . . . preconstruction impacts described in the [ER]." *Id.*

advance three arguments. First, they argue that FPL fails to identify the source of the data used to generate the revised list of constituent chemical concentrations in ER Table 3.6-2, rendering the accuracy and reliability of those concentrations suspect. *See id.* at 4-5, 7, 13-14. Second, they argue that the concentrations of thallium and tetrachloroethylene, as listed in ER Table 3.6-2, exceed the Environmental Protection Agency (EPA) maximum contaminant level (MCL) in drinking water for these chemicals, and that the concentration of selenium nearly exceeds the EPA MCL. *See id.* at 6, 13-14. Third, they argue that, in light of the potential inaccuracy and unreliability of the chemical concentration levels in the wastewater that FPL will discharge into the Boulder Zone, a concern exists regarding the impact these chemicals will have on groundwater if the wastewater migrates from the Boulder Zone to the Upper Floridan Aquifer. *See id.* at 8-9, 13-14.

We address these arguments in turn, and we conclude that amended Contention NEPA 2.1 is admissible in part as supported by the first and third arguments.

Preliminarily, however, we acknowledge that FPL is correct in stating (FPL Motion to Dismiss Contention 2.1, at 4-5) that Contention NEPA 2.1, as initially admitted in LBP-11-6, erred in alleging that (1) selenium and thallium were missing from Table 3.6-2 of the ER, and (2) the environmental impacts of their release into the aquifer via the deep injection wells were not assessed. Although Table 3.6-2 of the original ER omitted from the list of wastewater chemical constituents the other four chemicals identified in the original contention (i.e., ethylbenzene, heptachlor, tetrachloroethylene, and toluene), it did, in fact, include selenium and thallium, and it assessed their environmental impacts as "small." *See id.* at 4-5 (citing ER Rev. 0, tbl. 3.6-2, 5.2-23). As Joint Intervenors effectively concede (*see* Joint Intervenors Reply at 4 n.2), because Revision 3 to the ER provided no new information regarding selenium and thallium or their environmental impacts, it cannot form the basis for a timely amended Contention NEPA 2.1 with respect to any allegation concerning these two chemicals. *See supra* Parts II.A.1 and II.A.2. We therefore exclude those two chemicals from further consideration in our analysis of the amended contention.

We now examine the three arguments advanced by Joint Intervenors underlying amended Contention NEPA 2.1.

A. Source of Chemical Concentration Levels

In their first argument, Joint Intervenors assert that, with regard to ethylbenzene, heptachlor, tetrachloroethylene, and toluene, the ER improperly fails to identify the source of the data for the chemical concentrations in Table 3.6-2. Joint Intervenors claim that the source of the underlying data can affect the accuracy and reliability of these four chemical concentrations, which, in turn, can affect

the determination of their environmental impacts. *See* Joint Intervenors Motion at 4-5.

FPL opposes admitting this aspect of amended Contention NEPA 2.1. *See* FPL Answer at 5-6. The NRC Staff does not oppose admitting this aspect of the contention. *See* NRC Staff Answer at 12.

We agree with Joint Intervenors and the NRC Staff that this aspect of amended Contention NEPA 2.1 is admissible.[11] It satisfies section 2.309(f)(1)(i) through (iv) because: (1) as discussed above, it provides a specific statement of the issue to be raised (*see* 10 C.F.R. § 2.309(f)(1)(i)); (2) it provides a brief explanation of its underlying basis (*see id.* § 2.309(f)(1)(ii)); (3) the adequacy *vel non* of the ER is manifestly within the scope of this proceeding (*see id.* § 2.309(f)(1)(iii)); and (4) the inclusion of the data sources for the four chemical concentrations is material to the NEPA analysis that the NRC must perform, because the sources might affect the accuracy and reliability of the stated chemical concentrations which, in turn, could affect the stated environmental impact of the chemicals. *See id.* § 2.309(f)(1)(iv).[12] The contention also satisfies section 10 C.F.R. § 2.309(f)(1)(v), because Joint Intervenors provide alleged facts or expert opinions that support their position on the issue, together with references to supporting sources and documents.[13] Finally, as required by 10 C.F.R. § 2.309(f)(1)(vi), in light of the omission that Joint Intervenors identified, the contention raises a genuine dispute of material fact as to whether the wastewater discharged by FPL to the Boulder Zone of the Lower Floridan Aquifer will contain the chemical concentrations of ethylbenzene, heptachlor, tetrachloroethylene, and toluene that are indicated in ER Rev. 3 Table 3.6-2.[14]

We therefore admit amended Contention NEPA 2.1, as supported by Joint Intervenors' first argument, as follows: The ER is deficient in concluding that the environmental impacts from FPL's proposed deep injection wells will be "small" because the ER fails to identify the source data of the chemical concentrations in ER Rev. 3 Table 3.6-2 for ethylbenzene, heptachlor, tetrachloroethylene, and toluene.[15]

---

[11] Joint Intervenors correctly state (Joint Intervenors Motion at 15) that this aspect of the amended contention satisfies the timeliness standards in 10 C.F.R. § 2.309(f)(2). FPL's inclusion of these chemical concentrations for the first time in its recent revision to ER Table 3.6-2 constitutes new, materially different, and previously unavailable information. Contrary to FPL (*see* FPL Answer at 5-6), Joint Intervenors could not previously have advanced this particular challenge.

[12] *See* Joint Intervenors Motion at 13-14; *see also* NRC Staff Answer at 12.

[13] *See* Joint Intervenors Motion at 4-6, 14; *id.,* Attach., Affidavit of Mark A. Quarles at 2, 4-6 (Jan. 23, 2012) [hereinafter Quarles Affidavit]; *id.,* Attachs. 1-10, 13; *see also* NRC Staff Answer at 12.

[14] *See* Joint Intervenors Motion at 14; *see also* NRC Staff Answer at 12.

[15] Any belated challenge by Joint Intervenors to the accuracy and reliability of Table 3.6-2's listed

(Continued)

B. Chemical Concentrations Exceed EPA MCL

In their second argument underlying amended Contention NEPA 2.1, Joint Intervenors assert that the ER is deficient because the concentrations of thallium and tetrachloroethylene exceed the EPA MCL in drinking water for these chemicals, and the concentration of selenium nearly exceeds the EPA MCL. *See* Joint Intervenors Motion at 6, 13-14.

FPL and the NRC Staff argue that this aspect of the amended contention is not admissible. *See* FPL Answer at 7-8; NRC Staff Answer at 12-16. We agree.

To the extent this argument challenges the ER based on the predicted concentrations of thallium and selenium, Joint Intervenors have abandoned that argument (*see* Joint Intervenors Reply at 4 n.2), which, as discussed *supra* page 624, is unjustifiably nontimely in any event.[16]

To the extent Joint Intervenors argue that the concentration of tetrachloroethylene in ER Table 3.6-2 exceeds the EPA MCL, they fail — for three independent reasons — to demonstrate the existence of a genuine dispute with FPL's ER on a material issue of law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi).[17]

First, contrary to Joint Intervenors' assertion (*see* Joint Intervenors Motion at 6), the chemical concentration for tetrachloroethylene listed in ER Table 3.6-2 that will be discharged via deep injection wells into the Boulder Zone of the Lower Floridan Aquifer (i.e., 0.00359 mg/L) does *not* exceed the EPA MCL (i.e., 0.005 mg/L). *See* ER Rev. 3, at 3.6-2; FPL Answer at 8; Quarles Affidavit at 7. Joint Intervenors thus fail to raise a genuine dispute with FPL on a material issue of law or fact.

---

concentrations for chemicals beyond ethylbenzene, heptachlor, tetrachloroethylene, and toluene would be time-barred. *See supra* Parts II.A.1 and II.A.2. Nevertheless, because the NRC Staff has deemed this information to be material for ensuring the accuracy and reliability of the stated concentrations of these four chemicals, FPL — to promote consistency, and to ensure the accuracy and reliability of the stated concentrations of the other chemicals listed in Table 3.6-2 — might elect to include this information in the ER for the other chemicals. Alternatively, the NRC Staff might require FPL to include this information, or the Staff might acquire this information independently for its own analysis in the EIS. *Cf. Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 348-50 (1998) (describing NRC Staff's responsibilities, parallel to the adjudicatory process, to seek additional information from an applicant after docketing of pending license application).

[16] Although this aspect of the contention is time-barred from resolution through administrative adjudication, NEPA nevertheless obligates the NRC Staff to undertake a full and independent evaluation of the environmental impacts of FPL's proposed action. *See* 10 C.F.R. § 51.41; *see also USEC Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 448 (2006) (describing the NRC's NEPA responsibilities of conducting a "rigorous" and "objective" review).

[17] This determination, however, does not foreclose Joint Intervenors from challenging the accuracy and reliability of the stated concentration of tetrachloroethylene in ER Table 3.6-2 based on FPL's failure to identify the source data for that concentration. That challenge is embodied in the portion of amended Contention NEPA 2.1 that we concluded is admissible. *See supra* Part III.A.

Second, Joint Intervenors' argument that the concentration of discharged tetrachloroethylene will exceed the EPA MCL is based on measurements of chemical concentrations found in wastewater from the Central Dade County Facility (CDCF). *See* Joint Intervenors Reply at 10-12; Quarles Affidavit at 7. This argument ignores that FPL will *not* be using wastewater from the CDCF; rather, as discussed *supra* note 4, it will be using reclaimed wastewater from the MDWASD. Joint Intervenors provide no reason to conclude that the chemical concentration for tetrachloroethylene in reclaimed wastewater from the MDWASD is expected to be the same as that in wastewater from a different facility. Accordingly, their argument neither controverts the data in the ER nor raises a genuine dispute on a material issue of law or fact. *See* NRC Staff Answer at 14.

Finally, even if Joint Intervenors had shown an equivalency between the chemical concentrations of tetrachloroethylene in reclaimed wastewater from the MDWASD and the CDCF, their argument that the discharged concentration of tetrachloroethylene will exceed the EPA MCL fails to acknowledge that the concentrations listed in ER Table 3.6-2 are not based on chemical concentrations measured at the MDWASD. Rather, they are based on estimated chemical concentrations that will exist when the wastewater is discharged into the Boulder Zone via the deep injection wells, which will not occur until after several cycles in the cooling process, after which the wastewater will be diluted with other onsite water sources. *See* ER Rev. 3, at 3.4-2, 3.6-1.[18] Thus, Joint Intervenors' contention is based on an argument that, once again, neither controverts the data in the ER nor raises a genuine dispute on a material issue of law or fact. *See* NRC Staff Answer at 13-14.

Amended Contention NEPA 2.1, as supported by Joint Intervenors' second argument, is therefore not admitted.[19]

---

[18] As explained in the ER, the values listed in ER Table 3.6-2 reflect chemical concentrations of the wastewater in the blowdown sump (*see* ER Rev. 3, at 3.6-1), where it has been collected with water from other onsite sources:

> The waste effluent from the station demineralized water system, sanitary waste treatment plant, FPL reclaimed water treatment facility, filter backwash wastewater, and other nonradioactive drains throughout the station would be collected in the blowdown sump along with the blowdown from the circulating water and service water systems. The combined stream would be pumped to the deep injection wells. The combined stream would be controlled through engineering design and operational procedures to meet the requirements established in the underground injection control permits.

Id.

[19] In moving to amend Contention NEPA 2.1, Joint Intervenors argue for the first time that the ER improperly omits an analysis of the environmental impacts of degradation products from heptachlor (i.e., heptachlor epoxide) and tetrachloroethylene (i.e., trichloroethene and vinyl chloride). *See* Joint

(Continued)

C. Wastewater Migration to Upper Floridan Aquifer

In their third argument underlying amended Contention NEPA 2.1, Joint Intervenors assert that, in light of the potential inaccuracy and unreliability of the concentration levels of ethylbenzene, heptachlor, tetrachloroethylene, and toluene in the wastewater that FPL will discharge into the Boulder Zone, a concern exists regarding the impact these chemicals will have on groundwater if the wastewater migrates from the Boulder Zone to the Upper Floridan Aquifer. *See* Joint Intervenors Motion at 8-9, 13-14.

The NRC Staff argues that this aspect of the amended contention is nontimely (*see* NRC Staff Answer at 11-12), and both FPL and the NRC Staff argue that it fails, in any event, to satisfy the admissibility standards in section 2.309(f)(1). *See* FPL Answer at 9-13; NRC Staff Answer at 17-19. We disagree.

When we originally admitted Contention NEPA 2.1 as a contention of omission, we explained that Joint Intervenors had provided adequate alleged facts "to support the claims that the wastewater contains chemical contaminants that are not discussed in the ER, and that when FPL discharges the wastewater via the deep injection wells, the chemicals might migrate from the Boulder Zone to the Upper Floridan Aquifer." LBP-11-6, 73 NRC at 191.[20]

Although FPL's Revision 3 cured the ER's failure to mention the concentration

---

Intervenors Motion at 5-6. We agree with FPL and the NRC Staff (*see* FPL Answer at 7; NRC Staff Answer at 10-11) that this argument is inexcusably nontimely. In their reply, Joint Intervenors appear to explain that their purpose in advancing this argument was not to proffer a new contention of omission, but rather "to demonstrate the importance of FPL providing accurate, verifiable data to the NRC to assist the agency in determining the wastewater stream's impact to groundwater resources." Joint Intervenors Reply at 8. This latter concern is embodied in the portion of amended Contention NEPA 2.1 that we concluded is admissible. *See supra* Part III.A.

[20] As relevant here, we concluded in LBP-11-6:

> Joint [Intervenors] have shown that a genuine dispute of fact exists as to (1) whether the wastewater used by FPL will, like other wastewater found in Miami-Dade County, contain heptachlor, ethylbenzene, toluene, . . . and tetrachloroethylene, which are not listed in FPL's ER as wastewater constituent chemicals . . . ; and (2) whether the wastewater discharged via deep-well injection will, along with these particular chemical contaminants, migrate from the Boulder Zone to the Upper Floridan Aquifer. The ER fails to discuss these chemicals or their impact on the groundwater.

LBP-11-6, 73 NRC at 193 (citations omitted); *see also id.* at 191 ("Contention NEPA 2.1 includes 'a brief explanation of [its] basis' insofar as Joint [Intervenors] assert that there has been migration of fluid between the Boulder Zone and the Upper Floridan Aquifer and FPL's ER improperly fails to discuss the impact to the Upper Floridan Aquifer of the above-specified chemicals[.]" (citation omitted)). Plainly, the migration argument that Joint Intervenors advance now was a supporting component of their original contention of omission. To the extent they now raise an admissible amended contention of omission that challenges the accuracy and reliability of four chemical concentrations listed in ER Table 3.6-2 (*see supra* Part III.A), the migration argument continues to be a supporting component of the contention. *See infra* note 23.

of particular chemical contaminants that are likely to be contained in the wastewater (i.e., ethylbenzene, heptachlor, tetrachloroethylene, and toluene), it failed to identify the data source of those chemical concentrations — a new omission identified by Joint Intervenors that, as discussed *supra* Part III.A, might affect the accuracy and reliability of the chemical concentrations listed in ER Table 3.6-2, which, in turn, can affect the determination of the environmental impacts associated with these chemicals.

In short, because a concern continues to exist regarding the accuracy and reliability of the concentration levels of ethylbenzene, heptachlor, tetrachloroethylene, and toluene that will be discharged into the Boulder Zone, the other concern identified in LBP-11-6 regarding the possibility that contaminated wastewater can migrate to the Upper Floridan Aquifer and adversely impact the groundwater likewise continues to exist. Contrary to the NRC Staff (*see* NRC Staff Answer at 11-12), the latter concern remains as timely now as when we recognized it in LBP-11-6. *See* Joint Intervenors Motion at 13-15.[21]

Moreover, for substantially the same reasons that we originally found Contention NEPA 2.1 to be admissible (*see* LBP-11-6, 73 NRC at 190-94), we conclude that the portion of amended Contention NEPA 2.1 that we found admissible in Part III.A, *supra,* as supported by Joint Intervenors' migration argument, satisfies the admissibility requirements of section 2.309(f)(1). The amended contention, as we have revised it to promote clarity and efficiency,[22] is as follows:

> The ER is deficient in concluding that the environmental impacts from FPL's proposed deep injection wells will be "small" because the ER fails to identify the source data of the chemical concentrations in ER Rev. 3 Table 3.6-2 for ethylbenzene, heptachlor, tetrachloroethylene, and toluene. Such information is necessary to ensure the accuracy and reliability of those concentrations, so it might reasonably be concluded that those chemicals will not adversely impact the groundwater by migrating from the Boulder Zone to the Upper Floridan Aquifer.

First, we conclude that the above amended contention presents a "specific statement of the issue of law or fact to be raised." 10 C.F.R. § 2.309(f)(1)(i).[23]

---

[21] It bears emphasizing that Revision 3 did nothing to address the ER's failure to "exclude the possibility that wastewater can migrate to the Upper Floridan Aquifer." LBP-11-6, 73 NRC at 193.

[22] *See Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 552 (2009) ("Our boards may reformulate contentions to 'eliminate extraneous issues or to consolidate issues for a more efficient proceeding.'" (citations omitted)).

[23] Amended Contention NEPA 2.1, as we have framed it above, is a contention of omission which, like the original Contention NEPA 2.1 admitted in LBP-11-6, is *supported by the migration argument.* We express no view on whether the migration component of this amended contention would continue to support a litigable issue if FPL cured the omission and, as a result, was able reasonably to

(Continued)

Second, the amended contention, as supported by the migration argument, includes "a brief explanation of [its] basis." 10 C.F.R. § 2.309(f)(1)(ii). Joint Intervenors explain that, given the absence of source data for the four specified chemical concentrations, the accuracy and reliability of those concentrations are suspect, which, in turn, renders suspect any conclusion about the environmental impact on groundwater due to migration. *See* Joint Intervenors Motion at 5-6, 13-14; *see also* NRC Staff Answer at 12 ("[T]he accuracy and reliability of [the stated concentration levels in ER Table 3.6-2 for the four chemicals] may depend on their source, and the omission of the source of the data from the ER is material in that it could have an effect on the determination of [environmental] impact levels associated with these chemicals.").

Third, in satisfaction of 10 C.F.R. § 2.309(f)(1)(iii), amended Contention NEPA 2.1 is within the scope of this proceeding, because it raises a challenge to FPL's ER, which is a required portion of FPL's COL application. *See* 10 C.F.R. § 51.50(c).

Fourth, as supported by the migration argument, amended Contention NEPA 2.1 satisfies the materiality requirement of 10 C.F.R. § 2.309(f)(1)(iv). The ER must, *inter alia,* discuss reasonably foreseeable environmental impacts of the proposed action in proportion to their significance, as well as adverse environmental effects that cannot be avoided if the proposed plan is implemented. *See* 10 C.F.R. § 51.45(b)(1)-(2); *Private Fuel Storage,* CLI-02-25, 56 NRC at 348-49. Here, Joint Intervenors challenge the accuracy and reliability of the concentrations of four chemicals listed in ER Table 3.6-2 that will be in the wastewater that is injected into the Boulder Zone, arguing that it is reasonably foreseeable that the wastewater could migrate into the Upper Floridan Aquifer and contaminate the groundwater with these chemicals. As we stated in LBP-11-6, "[i]t cannot be gainsaid that, to the extent these chemicals are in the wastewater, their impact on groundwater — if significant — is material to the findings the NRC must make in deciding whether to grant FPL's COL Application." LBP-11-6, 73 NRC at 191.

Fifth, in satisfaction of 10 C.F.R. § 2.309(f)(1)(v), Joint Intervenors have provided alleged facts and expert opinions to support their position on this issue, principally the affidavit of a licensed professional geologist, Mark Quarles, who has experience evaluating the risks of environmental releases into limestone bedrock and has described in detail the concerns Joint Intervenors have presented regarding the sufficiency of ER Revision 3. *See* Quarles Affidavit at 1; Joint Intervenors Motion, Attach. 1, Mark Quarles [Curriculum Vitae] at 1. In addition to Mr. Quarles's affidavit and his curriculum vitae, Joint Intervenors have appended an article from the *Hydrogeology Journal* and a report from the Idaho National

---

demonstrate that the disputed chemical concentrations listed in ER Table 3.6-2 (1) were accurate and reliable, and (2) resulted in "small" environmental impacts when discharged through the injection wells.

Laboratory explaining the permeability of the Floridan Aquifer in response to deep injection wells, as well as several reports and manuals from government agencies and laboratories explaining the harmfulness of the chemicals at issue in this contention. *See* Attachs. 2-10, 13 appended to Joint Intervenors Motion; *see also* LBP-11-6, 73 NRC at 191-92. In our view, the alleged facts and expert opinions provided by Joint Intervenors satisfy section 2.309(f)(1)(v).

Finally, in satisfaction of 10 C.F.R. § 2.309(f)(1)(vi), Joint Intervenors have raised a genuine dispute of material fact or law regarding the adequacy of FPL's ER, pointing to particular portions of the application (namely, ER Rev. 3 Table 3.6-2 and ER Rev. 3 at 5.2-25) that they dispute. Specifically, Joint Intervenors have shown that a genuine dispute of fact exists as to: (1) whether the chemical concentrations listed in ER Table 3.6-2 are accurate for ethylbenzene, heptachlor, tetrachloroethylene, and toluene (*see supra* Part III.A); and (2) if those chemical concentrations in ER Table 3.6-2 are inaccurate, whether impacts on groundwater would be small in light of the possibility of wastewater migrating from the Boulder Zone to the Upper Floridan Aquifer.

As they did at an earlier stage of this proceeding (*see* LBP-11-6, 73 NRC at 193), FPL and the NRC Staff argue that migration and any related environmental impacts are unlikely due to the putative effectiveness of the monitoring programs FPL will employ, as well as the comprehensiveness of the Florida licensing process required to obtain permits for these deep injection wells. *See* FPL Answer at 11-13; NRC Staff Answer at 17-19. At this juncture and on this record, however, we do not view these monitoring programs as an adequate substitute for (1) the ER's failure to demonstrate the accuracy and reliability of the chemical concentrations in ER Table 3.6-2 of ethylbenzene, heptachlor, tetrachloroethylene, and toluene, and (2) the ER's corollary failure reasonably to support its conclusion that the environmental impact of these chemicals on groundwater would be small if the wastewater were to migrate from the Boulder Zone to the Upper Floridan Aquifer.[24]

---

[24] We stated in LBP-11-6:

> It is to be acknowledged that there is information in the record that tends to weaken a conclusion that wastewater will migrate to the Upper Floridan Aquifer and cause environmental harm. At this juncture, however, Joint [Intervenors] need not *prove* wastewater will migrate to the Upper Floridan Aquifer and adversely impact the environment. They need simply provide sufficient support to raise a genuine issue of disputed fact.

LBP-11-6, 73 NRC at 193 n.44 (citations omitted). We believe that Joint Intervenors have satisfied their burden of providing sufficient information to raise a genuine issue of disputed fact in their amended contention as supported by the migration argument. That the ER determines the impacts on groundwater will be "small" (*see* ER Rev. 3, at 5.2-10 to 5.2-13) does not alter our conclusion at this juncture, because, as discussed *supra* Part III.A, the omission from the ER of source data for the specified chemical constituent concentrations renders the stated concentrations questionable, which, in turn, renders the ER's environmental impact determination questionable.

We therefore conclude that amended Contention NEPA 2.1 is admissible in part, as revised by this Board *supra* page 629.

IV. CONCLUSION

For the reasons discussed above, we *admit* Joint Intervenors' amended Contention NEPA 2.1 in part, as revised *supra* page 629. We *revoke* our January 26, 2012 order suspending the mandatory disclosure obligations in 10 C.F.R. § 2.336(a). The parties shall resume their monthly mandatory disclosures pursuant to section 2.336(a) on June 8, 2012, which is the second Friday of that month. *See* Initial Scheduling Order at 3-6.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

E. Roy Hawkens, Chairman
ADMINISTRATIVE JUDGE

Dr. Michael F. Kennedy
ADMINISTRATIVE JUDGE

Dr. William C. Burnett
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 2, 2012

Cite as 75 NRC 633 (2012) **LBP-12-10**

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. 12-917-05-LR-BD01)

ENTERGY NUCLEAR GENERATION COMPANY and ENTERGY NUCLEAR OPERATIONS, INC.
(Pilgrim Nuclear Power Station) **May 24, 2012**

This proceeding concerns the application of Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc. for renewal of the operating license for its Pilgrim Nuclear Power Station, located in Plymouth, Massachusetts. After the Board disposed of the final outstanding contention and terminated the proceeding, Intervenor Pilgrim Watch, along with the Jones River Watershed Association, filed a motion to reopen the proceeding and admit a new contention concerning impacts on marine species. In this order, a majority of the Licensing Board denies the motion.

REOPENING

The reopening standard is intended to impose a deliberately heavy burden on parties seeking to supplement the evidentiary record at the 11th hour, after the record has closed.

MOTIONS TO REOPEN

The requirement that a motion to reopen be accompanied by supporting affidavits that specifically address the criteria of 10 C.F.R. § 2.326(a) is interpreted strictly.

ENDANGERED SPECIES ACT

Under the Endangered Species Act, an agency is to "review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat," 50 C.F.R. § 402.12(a), but formal consultation is only required if the acting agency makes a determination that its action may have such an effect, and "the determination of possible effects is ultimately the [acting] agency's responsibility," *Water Keeper Alliance v. U.S. Department of Defense,* 271 F.3d 21, 25 (1st Cir. 2001).

ENDANGERED SPECIES ACT

In the event that the Fish and Wildlife Service or the National Marine Fisheries Service disagrees with a finding by the NRC that an action is "not likely to adversely affect" or will have "no effect" on listed species or critical habitat, the question of whether or not the NRC Staff undertakes formal consultation depends upon the NRC's own regulations and its interpretation of its duty under the ESA to "insure that any action . . . is not likely to jeopardize" listed species or habitat. 16 U.S.C. § 1536(a)(2).

STATUTES: MAGNUSON-STEVENS ACT

The Magnuson-Stevens Fishery Conservation and Management Act imposes a direct obligation on the NRC to consult with the National Marine Fisheries Service if the NRC determines that approval of the requested license renewal "may adversely affect any essential fish habitat."

MOTIONS TO REOPEN

The board is not empowered to rehabilitate the failure of the submitted affidavits to address the reopening requirements and explain why each has been met.

ENDANGERED SPECIES ACT

The NRC satisfies its consultation obligations under the ESA when it submits to

the National Marine Fisheries Service (NMFS) a biological assessment concluding that the licensing action will have "no effect" on listed species or critical habitat, regardless of whether the NMFS concurs with the NRC's conclusions.

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

On March 8, 2012, petitioner Jones River Watershed Association (JRWA) and intervenor Pilgrim Watch (collectively, Challengers) jointly filed a petition to intervene respecting JRWA, which previously was not a party to this proceeding, and a motion to reopen the proceeding, accompanied by a new contention sponsored by both Challengers.[1] The contention challenges the application by Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc. (collectively, Entergy) for renewal of its operating license for the Pilgrim Nuclear Power Station (Pilgrim) for an additional 20-year period.[2] Specifically, the contention asserts that the NRC's environmental review of the application has not met the requirements of the Endangered Species Act (ESA) and the Magnuson-Stevens Fishery Conservation and Management Act (MSA). In this ruling, a majority of this licensing board, for the reasons discussed below, denies the petition and motion, finding, *inter alia,* that, although JRWA and Pilgrim Watch each has standing to intervene, Challengers have failed to satisfy the requirements for reopening the record under 10 C.F.R. § 2.326 and have failed to proffer an admissible contention under 10 C.F.R. § 2.309(f)(1).

I. PERTINENT BACKGROUND

The lengthy procedural background of this proceeding has been discussed in orders of the prior licensing board that presided over other aspects of this adjudication and need not be fully recounted here. In brief, Pilgrim Watch first petitioned to intervene in opposition to Entergy's license renewal application (LRA) in 2006.[3] The previous licensing board granted the petition[4] and, in

[1] [JRWA] 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 [JRWA] 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) [hereinafter Petition].

[2] *See* 71 Fed. Reg. 15,222, 15,222 (Mar. 27, 2006) [hereinafter Entergy's LRA].

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

[4] LBP-06-23, 64 NRC 257, 348-49 (2006).

the ensuing 6 years of litigation, adjudicated two of Pilgrim Watch's contentions following evidentiary hearings[5] and ruled on the admissibility of numerous others.[6] Most recently, in January of this year that licensing board ruled inadmissible Pilgrim Watch's final outstanding contention and terminated the proceeding before the board.[7]

Challengers filed the instant Petition on March 8, 2012. Because of their uncertainty as to the proper forum, Challengers filed the Petition before the Commission and attempted to file it before the prior licensing board, which at that time was no longer constituted. On March 15, Challengers submitted a Correction and Supplement to the Petition, also before the Commission and attempted before the previous board.[8] Pleadings thereafter were filed before the Commission only. Entergy[9] and the NRC Staff[10] filed their answers before the Commission on March 19th. The NRC Staff also submitted an answer to Challengers' Correction and Supplement.[11] Challengers replied to Entergy and the Staff's answers on March 26.[12]

On March 30, the Commission referred Challengers' Petition to the Atomic Safety and Licensing Board Panel,[13] and, on April 2, this licensing board was established.[14] On April 5, Entergy submitted to this board a Motion to Strike por-

---

[5] 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).

[6] *See* 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; the board found none of its contentions admissible.

[7] LBP-12-1, 75 NRC 1, 24 (2012). Pilgrim Watch's appeal of this decision is pending before the Commission.

[8] Correction and Supplement to [Petition] (Mar. 15, 2012) [hereinafter Supplement to Petition].

[9] Entergy's Answer Opposing [JRWA]'s and Pilgrim Watch's Motion to Reopen and Hearing Request (Mar. 29, 2012) [hereinafter Entergy Answer].

[10] NRC Staff's Answer to [JRWA] and Pilgrim Watch's Petitioner for Leave to Intervene and Motions to Reopen the Record (Mar. 19, 2012) [hereinafter NRC Staff Answer].

[11] NRC Staff's Answer to Correction and Supplement to [JRWA] and Pilgrim Watch's Petitions to Intervene and Motions to Supplement (Mar. 26, 2012) [hereinafter NRC Staff Supplement Answer].

[12] [JRWA] and Pilgrim Watch Reply to Answers of NRC Staff and Entergy to [JRWA] Petitions to Intervene and for Hearing Under 10 C.F.R. § 2.309 (Mar. 26, 2012) [hereinafter Challengers Reply].

[13] Memorandum from Andrew L. Bates, Acting Secretary, to E. Roy Hawkens, Chief Administrative Judge, Atomic Safety and Licensing Board Panel, at 1 (Mar. 30, 2012).

[14] 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.

tions of Challengers' reply as well as a reply affidavit submitted by Challengers;[15] Challengers answered the motion on April 16.[16]

Finally, on May 22, the Staff filed with this licensing board a response from the National Marine Fisheries Service (NMFS), dated May 17, concluding that "all effects to listed species will be insignificant or discountable" and that "the continued operation of Pilgrim under the terms of a renewed operating license is not likely to adversely affect any listed species under NMFS jurisdiction."[17] NMFS also made suggestions to, and requests of, the NRC Staff which we discuss in depth below.[18]

II. RULING ON STANDING

As the prior licensing board ruled in LBP-06-23 that Pilgrim Watch had established standing to intervene in the previous (presently closed) proceeding,[19] we too find that Pilgrim Watch has established standing sufficient for the present challenge. We must, however, address the standing of JRWA, which seeks for the first time to intervene.

An organization, such as JRWA, that seeks to establish standing to intervene under section 189a of the Atomic Energy Act (AEA),[20] may do so by demonstrating either organizational standing or representational standing. In order to establish organizational standing a group like JWRA must show that its interests will be harmed by the licensing action, while an organization seeking representational standing must demonstrate that the interests of at least one of its members will be harmed.[21] For an organization to establish representational standing, the organization must: (1) show that at least one of its members may be harmed by the licensing action and, accordingly, would have standing to sue in his or her own right; (2) identify that member by name and address; (3) show that the organization is authorized to request a hearing on behalf of that member, and (4)

---

[15] Entergy's Motion to Strike Petitioners' Affidavit and Portions of Petitioners' Reply (Apr. 5, 2012) [hereinafter Entergy Motion to Strike].

[16] Petitioners' Opposition to Entergy's Motion to Strike Petitioners' Affidavit and Portions of Petitioners' Reply (Apr. 16, 2012).

[17] Letter from Daniel S. Morris, NMFS Acting Regional Administrator, to Andrew S. Imboden, Chief, Environmental Review and Guidance Update Branch, Office of Nuclear Reactor Regulation (May 17, 2012) at 30 [hereinafter NMFS Letter].

[18] *Id.* at 31.

[19] *See* LBP-06-23, 64 NRC at 269-71.

[20] 42 U.S.C. § 2239(a)(1)(A). The Commission has implemented the standing requirement in its regulations at 10 C.F.R. § 2.309.

[21] *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998).

show that the interests that the representative organization seeks to protect are germane to its own interests.[22]

Commission precedent relative to reactor operating license renewal proceedings provides for a "proximity presumption," respecting standing for an individual who resides within a 50-mile radius of a nuclear power plant.[23] Under that precedent, an individual who resides within that radius is not required to specifically plead injury, causation, and redressability to establish his or her standing to intervene.[24]

Because JRWA's representative, E. Pine duBois, satisfies the requirements of the "proximity presumption," and because she has authorized JRWA to represent her herein,[25] the NRC Staff does not dispute that JRWA has demonstrated representational standing.[26] Likewise, Entergy does not challenge JRWA's standing to participate in this proceeding.[27] In addition, JWRA satisfies the fourth part of the test set out above because the interests it seeks to protect are germane to its own interests.

Given these circumstances, we find that JRWA has demonstrated representational standing to participate under AEA § 189a and the Commission's rules.[28]

III. APPLICABLE LEGAL STANDARDS

A. Motion to Reopen the Record and Contention Admissibility

Because the previous licensing board terminated the adjudicatory proceeding that was convened to consider challenges to the Pilgrim operating license application, Challengers must satisfy the stringent requirements of 10 C.F.R. § 2.326 in order to reopen that proceeding so that their request to admit a new contention can be considered. Those requirements are as follows:

> (1) The motion must be timely. However, an exceptionally grave issue may be considered in the discretion of the presiding officer even if untimely presented;
> (2) The motion must address a significant safety or environmental issue; and

---

[22] *See Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 409 (2007).

[23] *See Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Plant, Unit 3), CLI-09-20, 70 NRC 911, 916-17 (2009); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plants, Units 3 and 4), LBP-01-6, 53 NRC 138, 146-50 (2001).

[24] *See Calvert Cliffs,* CLI-09-20, 70 NRC at 915.

[25] *See* Affidavit of E. Pine duBois (Mar. 6, 2012) at 1-2 [hereinafter duBois affidavit].

[26] *See* NRC Staff Answer at 6.

[27] Entergy makes no mention of standing in its Answer.

[28] *See, e.g.,* 10 C.F.R. § 2.309(d); *Yankee,* CLI-98-21, 48 NRC at 195; *Georgia Tech,* CLI-95-2, 42 NRC at 115; *Turkey Point,* LBP-01-6, 53 NRC at 146-50.

(3) The motion must demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially.[29]

The reopening standard "is intended to impose a 'deliberately heavy' burden on parties seeking to supplement the evidentiary record at the 11th hour, after the record has closed."[30]

Further, as the prior board noted in several rulings, a motion to reopen must be "accompanied by affidavits that set forth the factual and/or technical bases for the movant's claim that the criteria of paragraph (a) of this section have been satisfied."[31] In such affidavits, "*[e]ach of the criteria must be separately addressed, with a specific explanation of why it has been met.*"[32] These requirements are interpreted strictly.[33]

Additionally, because the motion in this instance "relates to a contention not previously in controversy among the parties, [Challengers] must also satisfy the requirements for nontimely contentions in [10 C.F.R.] § 2.309(c)."[34] Those factors likewise are discussed in their entirety in the previous rulings referred to above.

Finally, any new contention such as the one proposed here must also satisfy the admissibility requirements of 10 C.F.R. § 2.309(f)(1).

B. Endangered Species Act

The Endangered Species Act of 1973 (ESA) requires each federal agency to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species."[35] In making the determination that the action is not likely to jeopardize species or modify habitat, the acting agency is to proceed "in consultation with and with the assistance of the Secretary" of Interior or Commerce.[36] The NRC's own regulations refer to the ESA in 10 C.F.R.

---

[29] 10 C.F.R. § 2.326(a).

[30] CLI-12-10, 75 NRC at 495.

[31] *Id.* § 2.326(b).

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

[33] *See* CLI-12-3, 75 NRC at 145 n.86 ("Litigants seeking to reopen a record must comply fully with [section] 2.326(b)"); *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 222 (2011) (motion to reopen "could have been rejected solely on the basis of the Appellants' failure" to address the reopening standards in the supporting affidavit).

[34] *Id.* § 2.326(d).

[35] Endangered Species Act of 1973 § 7(a)(2), 16 U.S.C. § 1536(a)(2).

[36] *Id.* In practice the Secretaries of Interior and Commerce have delegated these responsibilities to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, respectively.

Part 51, Table B-1 of Appendix B to Subpart A, requiring that a supplemental environmental impact statement (EIS) be prepared, but the actual mechanics of the consultation process are delineated in the regulations of the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS; collectively, the Services), the agencies with primary responsibility for administering the Act. Those regulations effectuate the legislative intent underpinning the ESA by requiring the Services to, among other things, make appropriate recommendations to other affected agencies.[37]

The joint regulations set out procedures for agencies to follow in consulting with the FWS or the NMFS.[38] Those procedures provide that each agency proposing to take an action that might be covered by the ESA is to "review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat."[39] "*Formal consultation" is only required if the acting agency makes a determination that its action may have such an effect.*[40] Moreover, "the determination of possible effects is ultimately the [acting] agency's responsibility."[41]

Where the acting agency is engaged in "major construction activities," the regulations of the Services provide that the acting agency is to evaluate whether the action is "likely to adversely affect" species or habitat through preparation of a "biological assessment" (BA).[42] To prepare the BA, the acting agency must first request from the Services a list of endangered or threatened species or habitat that may be present in the area of the action, or provide to the Services

---

[37] *See Babbitt v. Sweet Home,* 515 U.S. 687, 708 (1995) ("When it enacted the ESA, Congress delegated broad administrative and interpretive power to the Secretary.") (citing 16 U.S.C. §§ 1533, 1540(f) ("The Secretary [is] authorized to promulgate such regulations as may be appropriate to enforce this chapter.")). Those regulations, as we note below, reflect the separate jurisdictions of the various federal agencies as well as the separate nature of authority of various state agencies, and provide that the Services will make "recommendations" to other agencies.

[38] In general, FWS implements the ESA with respect to terrestrial species, while NMFS is concerned with marine species.

[39] 50 C.F.R. § 402.12(a).

[40] *Id.; see also Center for Biological Diversity v. U.S. Department of Interior,* 563 F.3d 466, 475 (D.C. Cir. 2009) ("If the agency determines that its action will not affect any listed species or critical habitat, however, then it is not required to consult with NMFS."). Formal consultation includes the preparation of a biological opinion by the Service, detailing the likely effects of the action on listed species or habitat as well as mitigation alternatives. *Id.* § 402.14(g)-(h).

[41] *Water Keeper Alliance v. U.S. Dept. of Defense,* 271 F.3d 21, 25 (1st Cir. 2001) (citing Interagency Cooperation — Endangered Species Act of 1973, as Amended; Final Rule, 51 Fed. Reg. 19,926, 19,949 (June 3, 1986)).

[42] *Id.* § 402.12(a), (b)(1); *see also* ESA § 7(c), 16 U.S.C. § 1536(c). A "major construction activity" is defined as "a construction project (or other undertaking having similar physical impacts) which is a major Federal action significantly affecting the quality of the human environment as referred to in the National Environmental Policy Act [NEPA, 42 U.S.C. 4332(2)(C)]." 50 C.F.R. § 402.02.

its own list for their review.[43] Upon completion, the acting agency submits its BA to the appropriate Service and awaits its determination of concurrence or nonconcurrence, which under the Services' regulations is to be returned within 30 days.[44] In the present case, the NRC Staff prepared a BA in 2006 and a supplemental BA in February 2012 to reflect recent modifications in categorization of certain aquatic species. In these assessments, the NRC Staff determined that "continued operation of [Pilgrim] for an additional 20 years would not have any adverse impact on any threatened or endangered marine aquatic species."[45]

If the acting agency makes a "likely to affect" determination in the BA, the regulations of the Services provide that it is required to enter into "formal consultation" with the appropriate Service.[46] If, on the other hand, the acting agency concludes in the BA that the action is not likely to affect listed habitats or species, and the Service concurs, the regulations provide that the acting agency need not enter formal consultation.[47] If the Service does not concur with the agency's "not likely to affect" determination, it may *request* that the acting agency enter into formal consultation.[48] The regulations of the Services do not purport to mandate that the acting agency enter into formal consultation at the Service's request. NMFS and FWS acknowledge that "[t]he Service performs strictly an advisory function under section 7" of the ESA, and "the Federal agency [here, NRC] makes the ultimate decision as to whether its proposed action will satisfy the requirements of section 7(a)(2)."[49] Indeed, the Services' Consultation Handbook plainly states that "[t]he Services cannot force an action agency to

---

[43] 50 C.F.R. § 402.12(c), (d).

[44] *Id.* § 402.12(j).

[45] "Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Pilgrim Nuclear Power Station — Final Report," NUREG-1437, Supplement 29, at E-73 (2007) [hereinafter Pilgrim FSEIS]; *see also* Request for Concurrence on Determination of Effects Concerning Atlantic Sturgeon at Pilgrim Nuclear Power Station, Enclosure (Feb. 29, 2012) at 3 (ADAMS Accession No. ML12047A119) [hereinafter Supplemental BA]. The NRC Staff made a finding with respect to each listed species known to be present in the area of Pilgrim that relicensing would have "no effect." *See* Pilgrim FSEIS at E-67 (no effect on loggerhead turtle or Kemp's ridley turtle), E-68 (no effect on leatherback turtle), E-69 (no effect on green sea turtle), E-70 (no effect on North Atlantic right whale), E-71 (no effect on humpback whale or fin whale), E-72 (no effect on sei whale or sperm whale), E-73 (no effect on shortnose sturgeon); Supplemental BA at 3 (no effect on Atlantic sturgeon).

[46] *See id.* §§ 402.12(k), 402.14(a). Formal consultation includes the preparation of a biological opinion by the Service, detailing the likely effects of the action on listed species or habitat as well as mitigation alternatives. *Id.* § 402.14(g)-(h).

[47] *Id.* § 402.14(b)(1).

[48] *Id.* § 402.14(a).

[49] Interagency Cooperation — Endangered Species Act of 1973, as Amended; Final Rule, 51 Fed. Reg. 19,926, 19,928 (June 3, 1986).

consult."[50] Thus the question of whether or not the NRC Staff undertakes formal consultation with the Services in the event that they disagree with a finding by the NRC of "no effect" or "not likely adversely to affect" depends upon the NRC's own regulations and its interpretation of its duty under the ESA to "insure that any action . . . is not likely to jeopardize" listed species or habitat.[51]

The NRC's internal regulations require that license renewal applicants "assess the impact of the proposed action on threatened or endangered species in accordance with the Endangered Species Act" as part of their Environmental Report.[52] The regulations also acknowledge that the agency will consult to determine the impact of renewing a license on listed species. Specifically, the regulations provide that "consultation with appropriate agencies would be needed at the time of license renewal to determine whether threatened or endangered species are present and whether they would be adversely affected."[53] This obligation as to the determination of presence is satisfied by the NRC seeking and obtaining a list of such species from the Services. As to the portion of this obligation respecting consultation regarding whether a present and listed species is adversely affected, where a "no effect" determination has been made by the NRC, our regulations do not mandate further consultation.[54]

C. Magnuson-Stevens Fishery Conservation and Management Act

Like the ESA, the Magnuson-Stevens Fishery Conservation and Management Act (MSA) mandates interagency coordination for the purposes of conservation. The goal of the MSA is to preserve commercial and recreational fishery resources through the protection of "Essential Fish Habitat" (EFH).[55] The MSA provides that "[t]he Secretary [of Commerce] shall coordinate with and provide information to other Federal agencies to further the conservation and enhancement of essential fish habitat" and "[e]ach Federal agency shall consult with the Secretary with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency *that may adversely affect any essential fish habitat,*" thereby imposing a direct consultation obligation on the NRC if the NRC determines that the approval of the requested license renewal

---

[50] U.S. Fish &Wildlife Service and National Marine Fisheries Service, Endangered Species Consultation Handbook 2-10 (1998) [hereinafter Consultation Handbook].

[51] ESA § 7(a)(2), 16 U.S.C. § 1536(a)(2).

[52] 10 C.F.R. § 51.53(c)(3)(ii)(E).

[53] 10 C.F.R. Part 51, Table B-1 of Appendix B to Subpart A.

[54] As more fully described below, in this circumstance NRC undertook "informal consultation" with NMFS.

[55] *See* 16 U.S.C. § 1801.

"may adversely affect any essential fish habitat."[56] As with the ESA, the NMFS has issued regulations implementing its responsibilities under the MSA and setting out the mechanics of the consultation process.[57]

The NMFS regulations specifically provide that the consultation duty applies to license renewals[58] and should be initiated by the acting agency "as early as practicable."[59] In particular, "[f]or any federal action that may adversely affect EFH, Federal agencies must provide NMFS with a written assessment of the effects of that action on EFH."[60] The EFH Assessment must describe the action, its potential effects on EFH, and proposed mitigation activities, if any.[61] When the preparation of the Assessment is consolidated with other environmental review procedures such as those under the National Environmental Policy Act (NEPA) or the ESA, NMFS regulations provide that it is to have "timely notification of actions that may adversely affect EFH," and "[w]henever possible, NMFS should have at least 60 days notice prior to a final decision on an action."[62] In response to the acting agency's EFH Assessment, similar to the process under the ESA, NMFS issues "recommendations" (referred to therein as "Conservation Recommendations") to that agency, and, while not explicitly emphasizing that it makes "recommendations" only, the regulations note another limitation of its authority: "NMFS will not recommend that state or Federal agencies take actions beyond their statutory authority."[63] In this instance, the NMFS has indeed made requests and suggestions of NRC,[64] discussed in more depth below.

D. National Environmental Policy Act

NEPA requires that before implementing any "major federal action significantly affecting the quality of the human environment," the agency must prepare an EIS that describes the action, its effects, and alternatives to the proposed action.[65] Under NEPA, agencies must take a "hard look" at the environmental

---

[56] *Id.* § 1855(b)(1)(D), (b)(2) (emphasis added). The details of the consultation process are not, however, delineated in the MSA.

[57] The Act states that "The Secretary may promulgate such regulations . . . as may be necessary . . . to carry out any other provision of this Act." 16 U.S.C. § 1855(d).

[58] 50 C.F.R. § 600.905(a)(1).

[59] *Id.* § 600.905(a)(3).

[60] *Id.* § 600.920(e)(1).

[61] *Id.* § 600.920(e)(3).

[62] *Id.* § 600.920(f)(1).

[63] *Id.* § 600.925(a)-(b)).

[64] NMFS Letter at 31.

[65] 42 U.S.C. § 4332(2)(C).

consequences of an action before proceeding.[66] For power plant license renewals, the NRC Staff prepares a supplement to its generic EIS, NUREG-1437.[67] Under NRC regulations, matters respecting endangered/threatened species are a "Category 2" issue that requires site-specific analysis in the supplemental EIS.[68]

The regulations adopted by the Services implementing the ESA and MSA consultation procedures encourage agencies to incorporate these procedures into their NEPA review.[69] However, no provision of NEPA, nor any regulation of the NRC, requires that an agency complete a consultation required by another statute as a condition of complying with NEPA.[70]

IV. CHALLENGERS' NEW CONTENTION

Challengers' new contention generally charges that the NRC may not relicense Pilgrim because it has not fulfilled its duties under the ESA, the MSA, and NEPA. Specifically, the contention consists of the following four components:

- The NRC has failed to complete the § 7 consultation process under the Endangered Species Act (ESA), 16 U.S.C. §§ 1531 *et seq.,* for ten listed endangered and threatened species (five whales, four turtles, and the Atlantic sturgeon).
- Contrary to the NMFS Consultation Handbook and recommendations in the ESA regulations, NRC Staff and Entergy have failed to conduct a specific assessment of the impact of relicensing on river herring, the third most commonly impinged species at PNPS, and have not considered ways to avoid or minimize adverse effects to river herring.
- The NRC Staff has failed to comply with the Magnuson-Stevens Fishery Conservation and Management Act (MSA) of 1976., 15 U.S.C. §§ 1801 *et seq.,* and

[66] *See Natural Resources Defense Council, Inc. v. Morton,* 458 F.2d 827, 838 (D.C. Cir. 1972).

[67] 10 C.F.R. § 51.95(c). The findings of the GEIS are codified in 10 C.F.R. Part 51, Appendix B.

[68] 10 C.F.R. Part 51, Table B-1 of Appendix B to Subpart A.

[69] *See* 50 C.F.R. § 402.06(a) ("Consultation, conference, and biological assessment procedures under section 7 may be consolidated with interagency cooperation procedures required by other statutes, such as the National Environmental Policy Act (NEPA). . . . Satisfying the requirements of these other statutes, however, does not in itself relieve a Federal agency of its obligations to comply with the procedures set forth in this part or the substantive requirements of section 7."); *Id.* § 600.920(e) ("Federal agencies may incorporate an EFH Assessment into documents prepared for other purposes such as . . . National Environmental Policy Act (NEPA) documents.").

[70] NEPA requires that prior to preparing an EIS, "the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved." 42 U.S.C. § 4332(C). But the mechanics of this consultation are not defined, and thus need not accord with the consultation required by the ESA or the MSA.

implementing regulations at 50 C.F.R. 600.905 *et seq.* with regard to the PNPS relicensing.

- The environmental impact statement for PNPS is *prima facie* defective because a final EIS can only be issued following the completion of the ESA § 7 process and an essential fish habitat consultation and assessment under the MSA. Further, NEPA requires that new and significant information must be considered before the PNPS may be re-licensed. 10 C.F.R. § 51.92.[71]

Challengers expand upon and explain these assertions as follows:

A. ESA Consultation — 2006 Biological Assessment

Challengers argue that the NRC's consultation process under the ESA is incomplete principally because the NMFS has not responded to a BA submitted by NRC in December 2006 and included in the final supplemental environmental impact statement (FSEIS) for Pilgrim.[72] Challengers note that the NRC determined in the BA that the relicensing of Pilgrim would have no adverse impact on listed species;[73] however, Challengers assert that NMFS has failed to fulfill a commitment made in January 2007 correspondence to the NRC to provide comments on the BA.[74]

Challengers submit that in December 2011, JRWA staff "began research to try to ascertain the results of the consultation," and that they had not done so earlier because they had "relied upon the statements in the NRC and NMFS correspondence that the ESA § 7 consultation was pending."[75] On February 29, 2012, NRC Staff wrote to NMFS asking for concurrence on the 2006 BA. Thus, assert Challengers, "[t]he NRC expressly acknowledged that the ESA § 7 consultation is incomplete for the 2006 BA."[76]

Challengers further argue that, until NRC receives concurrence from NMFS, its consultation obligations under the ESA are not complete, and thus the renewed license for Pilgrim cannot issue:

---

[71] Petition at 3-4.

[72] *Id.* at 19-20, 24-25.

[73] *Id.* at 18 (citing Pilgrim FSEIS at E-73). Challengers also object to the NRC's failure to include a determination of the effect of relicensing on critical habitat for the North Atlantic right whale. *Id.*

[74] *See id.* (citing Pilgrim FSEIS at E-44 to -45). In the letter from NMFS, which primarily responded to the EFH Assessment included in the Draft EIS, NMFS wrote to NRC that its comments relative to ESA Section 7 consultation would be provided under separate cover. However, no such comments have yet been received by the NRC.

[75] *Id.* at 19.

[76] *Id.* at 20.

> While consultation with NMFS is ongoing, ESA § 7(d) prohibits the Federal agency or project applicant from making an "irreversible or irretrievable" commitment of resources "which has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative" to the agency action. ESA Section 7(d); 1536 U.S.C. § 1536(d); 50 C.F.R. 402.09. Entergy admits that "continued operation of [Pilgrim] for the period of extended operation will result in irreversible and irretrievable resource commitments . . . ." Entergy ER § 6.4.2. Therefore, until the § 7 consultation is completed and the PNPS EIS properly supplements, [Pilgrim] cannot be relicensed.[77]

Challengers assert that because NMFS has not responded to NRC's BA, consultation is "ongoing" and NRC's obligations under the ESA will not be complete until it obtains NMFS' written concurrence.[78] Additionally, they point to a provision of the NRC's regulations concerning NEPA that states "consultation with appropriate agencies would be needed at the time of license renewal to determine whether threatened or endangered species are present and whether they would be adversely affected."[79] Thus, Challengers seem to claim, as they argue elsewhere, that in addition to being out of compliance with the ESA, NRC's relicensing of Pilgrim without a supplemental EIS that takes into account the completed consultation would violate NEPA.[80]

In response, Entergy argues that the NRC was not required to initiate any consultation with NMFS because it concluded in its BAs and in the FSEIS that relicensing Pilgrim would have "no effect" on threatened or endangered species.[81] Entergy asserts that NMFS' 5-year delay in responding to the 2006 BA should be deemed a waiver of its concurrence, especially since, under ESA § 7, "[t]he Service performs strictly an advisory function."[82]

The NRC Staff, for its part, does not argue that the agency was not required to conduct any consultation, but rather that it fulfilled its consultation obligation when it submitted the 2006 BA.[83] The Staff cites to federal case law holding

---

[77] *Id.* at 25.

[78] *See id.* at 8, 25. We note that after the filing of all pleadings in this hearing, and during the period of our deliberations, the NMFS did indeed (finally) file its written response to NRC, in substance concurring with the NRC's findings (disagreeing only in that NRC found that relicensing would have "no effect" on listed species, whereas NMFS concluded that relicensing is "not likely to adversely affect" species, coupled with a variety of specific findings that the effects are insignificant, or discountable or extremely unlikely). NMFS Letter at 12-14, 20-25.

[79] *Id.* at 8 (citing 10 C.F.R. Part 51, Table B-1 of Appendix B to Subpart A).

[80] *See id.* at 26 ("NEPA requires that the PNPS EIS be supplemented with information from a completed ESA § 7 process.").

[81] *See* Entergy Answer at 31-32.

[82] *Id.* at 33 (citing Interagency Cooperation — Endangered Species Act of 1973, as Amended; Final Rule, 51 Fed. Reg. at 19,928).

[83] *See* NRC Staff Answer at 8-12.

that "formal consultation follows only if a biological assessment shows that the action 'may affect listed species or critical habitat.'"[84] Because the 2006 BA concluded that renewing the Pilgrim license would have "no effect" on listed species, the Staff asserts that formal consultation was not required. Consequently, in the Staff's view, "it is unnecessary for the NRC . . . to wait for a written concurrence from NMFS" before granting the license renewal.[85] The foregoing notwithstanding, the NMFS indeed responded to the NRC's finding of no effect on May 17, 2012, stating that although NMFS does not agree with the NRC's "no effect" determination, it does agree that "continued operation of Pilgrim may affect, but is not likely to adversely affect, any species listed as endangered or threatened by NMFS."[86] NMFS goes on to conclude in a detailed species-by-species analysis, with respect to each species and with respect to all critical habitat that the effects are insignificant and, in many instances discountable, and as to habitat effects, extremely unlikely to have an adverse effect.[87]

In addition to highlighting the procedural deficiencies of the consultation procedure, Challengers now attack the sufficiency and scientific credibility of the 2006 BA. They submit that "at the time the 2006 BA was prepared, a wide and varied body of information concerning endangered species in Cape Cod Bay [existed] which was not used in preparing the 2006 BA," and that these sources reveal "the presence of large numbers of endangered right whales within the 'critical area'" of Pilgrim operations, contrary to the conclusion of the BA.[88]

Entergy argues that the information presented by Challengers fails to demonstrate that the conclusions of the 2006 BA are wrong. Rather, Entergy asserts that the Challengers "offer at most some vague and speculative criticism of the 2006 BA without ever showing that an ESA-listed species is likely to be affected."[89] In particular, Entergy charges that the Petition and the supporting affidavit of Alex Mansfield fail to show how an increased presence of North Atlantic right whales would contradict NRC's conclusion that Pilgrim's operations would not affect them.[90] Entergy includes its own affidavit to rebut the data and conclusions

---

[84] *Water Keeper Alliance v. U.S. Department of Defense,* 271 F.3d 21, 31-32 (1st Cir. 2001).

[85] NRC Staff Answer at 11.

[86] NMFS Letter at 2.

[87] *Id.* at 12-14, 20-27.

[88] *Id.* at 20-21 (citing Affidavit of Alex Mansfield ¶¶ 10-20 (Mar. 6, 2012) [hereinafter Mansfield Affidavit]).

[89] Entergy Answer at 21.

[90] *Id.* at 21-22.

used by Mr. Mansfield and defends the NRC's analysis in the EIS and BA as "complete, comprehensive, and searching."[91]

The NRC Staff contests the Challengers' assertion that the 2006 BA did not evaluate the impact of relicensing Pilgrim on critical habitat of the North Atlantic right whale. The Staff argues that it described in the 2006 BA the lack of intersection between Pilgrim's thermal plume and the critical habitat area, and that, at any rate, its conclusion that renewing the license would have no effect on the North Atlantic right whale encompasses a finding that the action would not affect critical habitat.[92] Additionally, the Staff argues that the Petition and the Mansfield Affidavit do not present any information that NRC was required to consider in its review, and that the information does not call into doubt NRC's conclusion that the relicensing will not affect any listed species.[93]

B. Atlantic Sturgeon Consultation

Challengers also allege that the ESA consultation process is incomplete as to the Atlantic sturgeon, which was listed as threatened in February 2012, with an effective date of April 6, 2012.[94] The NRC prepared a supplemental BA respecting the Atlantic sturgeon and submitted it to NMFS on February 29, 2012, seeking concurrence on its finding that the relicensing will have no effect on the Atlantic sturgeon. At the time of the Petition, no reply from NMFS had been received.[95] Without concurrence, assert Challengers, the NRC has failed to comply with the ESA, for the same reasons it asserts failure respecting the 2006 BA. Challengers also note that the final EIS, published in 2007, does not address the information contained in the 2012 supplemental BA, although they acknowledge that the EIS did address the sturgeon, albeit briefly.[96]

---

[91] *Id.* at 23-26; *see also* Affidavit of Michael D. Scherer, Ph.D. in Support of Entergy's Answer Opposing [JRWA]'s and Pilgrim Watch's Motion to Reopen and Hearing Request (Mar. 19, 2012) [hereinafter Scherer Affidavit].

[92] *See* NRC Staff Answer at 12-13; put plainly, the Staff's argument boils down to a statement of the obvious; if there is no overlap between the area affected by the thermal plume and the habitat at issue, then there cannot be any effect of that plume on the habitat.

[93] *Id.* at 15-17.

[94] *See* Endangered and Threatened Wildlife and Plants; Threatened and Endangered Status for Distinct Population Segments of Atlantic Sturgeon in the Northeast Region, 77 Fed. Reg. 5880 (Feb. 6, 2012).

[95] *See* Petition at 20. This despite the requirement of their own regulations that they respond within 30 days. *See* 50 C.F.R. § 402.12(d).

[96] *Id.* The EIS states that "[p]opulations of Atlantic sturgeon have been documented in the Merrimack and Taunton Rivers in eastern Massachusetts; however, none have been observed in the Plymouth area." Pilgrim FSEIS at 2-86.

Entergy and the NRC Staff both argue that because NRC prepared a supplemental BA concluding that the Pilgrim license renewal would have no effect on the Atlantic sturgeon, and because NRC has submitted that supplemental BA to NMFS, the agency has fulfilled its consultation obligations.[97]

C. River Herring Consultation

A final deficiency under the ESA alleged by the Challengers is the failure of the NRC to seek consultation as to the effects of relicensing Pilgrim on alewife herring and blueback herring, two species collectively referred to as "river herring."[98] Challengers assert that "ESA regulations and policy require assessment of the adverse impacts of [Pilgrim] operations on river herring."[99] This assertion rests on the November 2011 response by NMFS to a petition from the Natural Resources Defense Council requesting that river herring be listed as threatened, in which NMFS determined that listing may be warranted and designated the two species of river herring as "candidate species."[100] In support of their position, Challengers point to the Consultation Handbook, which recommends discussing ways to reduce adverse effects on candidate species during the consultation process.[101] They also highlight a finding in the EIS that the alewife herring "is one of the most commonly impinged species" at Pilgrim."[102] Despite this, assert Challengers, "[t]he record contains no evidence that Entergy or NRC Staff has ever consulted with NMFS on river herring under the ESA § 7."[103]

Entergy argues that, because the river herring species have not been listed as threatened or endangered, and are merely "candidate species," they have no legal protection under the ESA and the NRC is not obligated to take any action with respect to them.[104] Because the issue is raised that the river herring may be listed in the future, Entergy asserts that Challengers' claim on this point is unripe. Additionally, Entergy notes that the Challengers do not challenge the discussion of river herring in the EIS.[105]

---

[97] *See* Entergy Answer at 34-35; NRC Staff Answer at 13-14.

[98] *See* Petition at 9.

[99] *Id.* at 5.

[100] Listing Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition to List Alewife and Blueback Herring as Threatened Under the Endangered Species Act, 76 Fed. Reg. 67,652, 67,656 (Nov. 2, 2011).

[101] Petition at 10 (citing Consultation Handbook at 3-7).

[102] *Id.* at 21 (citing Pilgrim FSEIS at 2-34).

[103] *Id.* at 22.

[104] *See* Entergy Answer at 38.

[105] *Id.* at 38-39.

The NRC Staff also contends that there is no legal obligation under the ESA to address candidate species, such as the river herring.[106] The Staff characterizes this portion of the contention as an inadmissible policy argument that lacks a legal or factual basis.[107]

D. MSA Consultation

Challengers argue next that the NRC has failed to complete the required consultation under the MSA. They point to language in the January 2007 letter from NMFS to NRC stating that "our issues of concern relative to living marine resources and EFH would be most appropriately addressed through the EPA's NPDES permit renewal process. As such, NMFS will not be providing the NRC with EFH conservation recommendations regarding the License Renewal for [Pilgrim]."[108] Challengers assert that this means that "NRC has attempted to defer its mandatory MSA duties to the EPA NPDES permit process," which, Challengers observe, will not be complete prior to the expiration of the current license for Pilgrim.[109] Despite the statement by NMFS in its correspondence that it had "conclud[ed] the EFH consultation" process with NRC,[110] in Challengers' view the alleged deferral of consultation under the MSA to another permitting process is unlawful under both the MSA and NEPA.[111]

In their Supplement to the Petition, Challengers admit to a factual error regarding the NRC Staff's preparation of an EFH. Contrary to their arguments in the Petition, Challengers now note that the NRC had in fact submitted an EFH Assessment to NMFS, which was included in the 2007 Final EIS.[112] But because "[t]here is no record that the EFH consultation process under the MSA has been completed," Challengers maintain that their contention is unaffected by the factual correction.[113] Additionally, Challengers attempt to critique the EFH Assessment on substantive grounds.[114]

Entergy argues that the January 2007 letter from NMFS did not deflect NRC's obligations under the MSA to EPA, but rather expressed NMFS' decision not to provide conservation recommendations to NRC, along with a separate decision to "potentially provide EFH conservation recommendations" to EPA during the

---

[106] NRC Staff Answer at 14.
[107] *Id.* at 15.
[108] *Id.* at 23 (citing Pilgrim FSEIS at E-44).
[109] *Id.*
[110] Pilgrim FSEIS at E-45.
[111] *See id.* at 25-26.
[112] Supplement to Petition at 2.
[113] *Id.*
[114] *Id.* at 3-6.

NPDES permit review.[115] Entergy claims that NMFS' decision not to provide NRC with recommendations was consistent with the MSA regulations, which provide that "NMFS will not recommend that . . . Federal agencies take actions beyond their statutory authority."[116] Entergy further asserts that even if NMFS was required to provide conservation recommendations, NRC does not have authority to superintend the administrative reviews of other agencies, and therefore this issue is outside the scope of this proceeding.[117] Further, Entergy argues that the Challengers' supplementary arguments against the substance of the EFH Assessment do not present any information that is materially different from that which NRC already has considered, or that contradicts NRC's conclusion of a minimal adverse effect on EFH.[118]

The NRC Staff argues that the MSA consultation process was completed when it submitted its EFH Assessment and NMFS responded in January 2007 that it was "concluding the EFH consultation process."[119] The Staff asserts that the January 2007 letter reflects that NMFS was not required to provide NRC with conservation recommendations.[120] Finally, the Staff argues that none of the information put forward by Challengers in their Supplement presents a genuine dispute with the findings of the EFH Assessment.[121]

V. RULING ON NEW CONTENTION

For this new contention to be admissible, there are several legal thresholds to be passed: the requirements of 10 C.F.R. § 2.326; the requirements for a nontimely contention set out in 10 C.F.R. § 2.309(c); and all of the requirements for an admissible contention under 10 C.F.R. § 2.309(f)(1).

A. The New Contention Fails to Satisfy the Requirements for Reopening

1. 10 C.F.R. § 2.326(b): Affidavits

We begin with the requirements respecting affidavits because for each of the contentions submitted to the prior Pilgrim licensing board following closing of

[115] *See* Entergy Answer at 35-36 (citing Pilgrim FSEIS at E-45).

[116] *Id.* at 36 (citing 50 C.F.R. § 600.925(a)).

[117] *Id.* at 37.

[118] *See id.* at 26-28.

[119] NRC Staff Answer at 21-23; NRC Staff Supplement Answer at 6.

[120] *See* NRC Staff Answer at 24-26; NRC Staff Supplement Answer at 6. In this regard, NRC Staff states that the statutory authority to implement mitigation measures rests with EPA, not NRC.

[121] *See* NRC Staff Supplement Answer at 6-10.

the record before that board, the absence of sufficient affidavits was found to be fatal to the pleadings.[122] A motion to reopen the record must be accompanied by affidavits that specifically address each of the criteria of 10 C.F.R. § 2.326(a) and explain why each has been met.[123] As with the earlier post-record-closing petitions, the affidavits submitted by Challengers here[124] fail to do so. As Entergy and the NRC Staff each observe,[125] none of the affidavits even mentions the reopening standards. While the information offered in the affidavits appears to address, at least in part, the technical matters in Challengers' contention, and may be relevant to the section 2.326(a) factors, they fail on their face to satisfy the requirements of section 2.326(b).[126] This board is not empowered to rehabilitate that failure; indeed, as the Commission recently declared in this Pilgrim relicensing proceeding, in a ruling upholding the licensing board's denial of a motion to reopen on the basis of an identical failure of the affidavits to comply with the reopening standards, "[w]e do not expect boards to search the pleadings for information that would satisfy our reopening requirements."[127] "Litigants seeking to reopen a record must comply fully with section 2.326(b)."[128] Accordingly, the failure of the affidavits to specifically address the reopening criteria is a flaw fatal to the admissibility of the entirety of Challengers' contention.

In an effort to rehabilitate the failure of the affidavits, in their reply to the Answers of Entergy and the NRC Staff, Challengers include a table that seeks to relate specific sections of the affidavits to the section 2.326(a) factors.[129] We find that the table does not cure the defects in the Petition. Moreover, even had we accepted the concept that such a reference table could, as a matter of substance over form, salvage the affidavits and overcome binding holdings of

---

[122] *See* LBP-12-1, 75 NRC at 17; LBP-11-35, 74 NRC 701, 753-56; LBP-11-23, 74 NRC at 303-04; LBP-11-20, 74 NRC at 75-76, 81.

[123] 10 C.F.R. § 2.326(b).

[124] *See* Mansfield Affidavit; duBois Affidavit; Affidavit of Anne Bingham (Mar. 6, 2012) [hereinafter Bingham Affidavit]. Challengers also submitted a "Reply Affidavit" of Alex Mansfield as a rebuttal to the Scherer Affidavit accompanying Entergy's Answer. Because this affidavit did not accompany the motion to reopen, we do not consider it in determining whether Challengers have satisfied section 2.326(b).

[125] *See* Entergy Answer at 14; NRC Staff Answer at 45.

[126] *See AmerGen Energy Co. LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 287 (2009) (movant has burden to present information in a manner that complies with section 2.326(b)).

[127] CLI-12-3, 75 NRC 132, 145 n.86 (2012) (affirming LBP-11-23); *see also Vogtle,* CLI-11-8, 74 NRC at 222 (Boards should not "hunt for information that the agency's procedural rules require be explicitly identified and fully explained."). The previous board also denied motions to reopen for failure of the affidavits to address the reopening standards in LBP-11-20, which was upheld by the Commission on appeal.

[128] *Id.* (internal quotation omitted).

[129] *See* Challengers Reply at 22.

the Commission requiring the criteria be explicitly satisfied, we find that the cited portions of the affidavits do not themselves address (and therefore do not satisfy) the requirements of section 2.326(b). For example, the table cites portions of the duBois Affidavit as addressing the timeliness requirements of 10 C.F.R. § 2.326(a)(1). The cited paragraphs put forth facts related to JRWA's communications with EPA and NMFS, but nowhere explain, nor even address, why these facts render the contention timely, as required by section 2.326(b).[130] Similarly, Challengers' table refers us to portions of the Mansfield Affidavit as addressing the requirement of section 2.326(a)(2) that their claim with respect to river herring would likely have produced a materially different result if considered initially by the NRC. But that affidavit only gives facts as to impingement rates of river herring and its food sources, and how the herring is addressed in the GEIS;[131] it fails to articulate a basis for, or to make, any assertion that these facts would likely produce a materially different result.

2. Only the Portion of the Contention Respecting the Atlantic Sturgeon Satisfies the Timeliness Requirements of 10 C.F.R. § 2.326(a)(1)

In addition to failing to satisfy the affidavit requirements for reopening the record, which in and of itself is fatal to the petition, all but one of the individual claims of the contention fail to meet the criteria of section 2.326(a).

We find that the portion of Challengers' contention dealing with the Atlantic sturgeon is timely. Challengers' claim of an incomplete consultation process for the Atlantic sturgeon stems from the submission to NMFS on February 29, 2012, of the NRC's supplemental BA, to which NMFS had not yet responded when Challengers filed their petition. Although the conclusion of the supplemental BA that the relicensing of Pilgrim will have no effect on the Atlantic sturgeon does not differ from conclusions in the FSEIS, the reclassification of the Atlantic sturgeon reflected in the supplemental BA constitutes new and significant information with respect to Challengers' consultation claim, and Challengers filed their contention promptly after its issuance.

Moreover, the motion is untimely with respect to all other aspects of the contention. First, the motion is untimely with respect to its claim of deficiencies in the 2006 BA. The NRC Staff completed the BA and submitted it to NMFS in December 2006, and included it in the Final EIS that was published in July 2007. Any challenge to the substantive validity of that BA, such as the one Challengers raise now about the North Atlantic right whale, should have and could have been raised within a reasonable time after the FSEIS was published. Boards have

---

[130] *See* duBois Affidavit ¶¶ 2, 21, 23-25.

[131] *See* Mansfield Affidavit ¶¶ 23-29.

typically found new contentions to be timely when filed within 30 days of the date that asserted foundational information became available.[132] Therefore, the filing by Challengers nearly 6 years after the latest date plausibly argued to present foundational new information cannot be considered timely.

The claim that ESA § 7 consultation is not complete with respect to the 2006 BA is similarly untimely (as well as now being, as explained below, moot), and we find unavailing Challengers' arguments that their 5-year tardiness is justified by their reliance "upon the statements in the NRC and NMFS correspondence that the ESA § 7 correspondence was pending," and that they "relied on written NRC Staff statements in 2007 that the ESA § 7 consultation was being conducted."[133] Such reliance might have justified waiting to see the correspondence, but waiting 5 years after expiration of the 30-day deadline in the NMFS regulations for the response from NMFS without so much as a peep belies the assertion of reliance.[134] Further, the fact that the NRC Staff requested, in February 2012, that NMFS provide the promised comments, cannot serve to rehabilitate Challengers' delay.

For essentially the same reasons, Challengers' claim now that the NRC has not completed the required consultation under the MSA is similarly untimely. Years have elapsed since the communication from NMFS to NRC that Challengers say "defer[red] the EFH Assessment to the EPA NPDES permit renewal process."[135] Challengers have put forward no reasonable justification for this delay.

Finally, Challengers' claim regarding river herring is also inexcusably untimely. To begin, as we noted above, there is no presently adjudicable issue because the designation as an endangered or threatened species has not occurred. If, however, the designation as a "candidate species" would give rise to an adjudicable issue, that designation took place on November 2, 2011 — more than 4 months prior to the filing of this contention by Challengers. Challengers have provided no explanation for their delay beyond the customary 30-day period.[136]

Moreover, nothing in the affidavits supplied in connection with the Petition addresses these timeliness requirements.[137]

---

[132] *See, e.g., Vogtle,* CLI-11-8, 74 NRC at 218 & n.8.

[133] Petition at 19, 46.

[134] The publication of the FSEIS in July 2007, which included the BA but no concurrence from NMFS, should certainly have served as sufficient notice of the absence of concurrence of which Challengers now complain.

[135] *Id.* at 25.

[136] We note that Challengers' arguments as to good cause for late filing concentrate on the 2006 BA and make no reference to the river herring.

[137] Because the vast majority of the contention is untimely and based on information that was previously available, we also find that it fails to satisfy the criteria of 10 C.F.R. § 2.309(f)(2)(i)-(iii) for submitting new or amended contentions.

3. Challengers' Contention Presents Neither an Exceptionally Grave Issue nor a Significant Environmental Issue

Challengers next argue that even if the contention is untimely, they satisfy the alternative requirement of section 2.326(a)(1) by showing that they have raised an "exceptionally grave issue" which the Board should admit in its discretion.[138] They allege that because "consultations and preparation of relevant information required by the ESA and MSA have not been completed . . . the [Pilgrim] EIS [is] *prima facie* invalid."[139] Challengers state that the alleged failure to comply with the mandatory procedures of the ESA, MSA, and NEPA runs counter to the public policy concerns that led Congress to enact those statutes. They assert this failure to be exceptionally grave, and argue that it is *ipso facto* a "significant environmental issue" under section 2.326(a)(2).[140]

Entergy disputes that Challengers have presented "any issue that could be characterized as a sufficiently grave threat to public safety."[141] Entergy further argues that the petition presents no significant environmental issue, summarizing its assertions as follows:

> Petitioners have come forward with no credible evidence that any ESA-listed species will be affected by Pilgrim's continued operation. Nor have Petitioners provided any evidence disputing the NRC Staff's conclusion that continued operation of Pilgrim will have minimal adverse effect on EFH within the Cape Cod Bay ecosystem. Likewise, Petitioners fail to show that effects to river herring will be any different than the impacts described in the FSEIS, or that continued operation of Pilgrim will have any substantial impact on the river herring population.[142]

Likewise, the NRC Staff argues that, because Challengers' allegations do not call into question the safety of Pilgrim's operations, the Petition does not present an exceptionally grave issue.[143] Additionally, the Staff asserts that the Petition presents no significant environmental issue because, where a motion to reopen is

---

[138] *Id.* at 36. However, elsewhere in the Petition, Challengers claim that the "affidavits, accompanying documents, and documentation from the NRC record, establish that the motion is timely as required by § 2.326(a)(1)."

[139] *Id.*

[140] *Id.* at 37. These assertions, therefore rest upon the premise that the failure to complete consultations establishes a *prima facie* deficiency in the EIS that precludes the agency from taking the licensing action that is the subject of the EIS. But not only is there no failure of the NRC Staff to undertake necessary consultation, Challengers offer only bare unsupported assertions for their premise that such a failure would constitute *prima facie* evidence of an invalid EIS which creates, *ipso facto,* a significant environmental issue.

[141] Entergy Answer at 20.

[142] *Id.* at 20-21.

[143] NRC Staff Answer at 41-42.

untimely, "the § 2.326(a)(1) 'exceptionally grave' test supplants the § 2.326(a)(2) 'significant safety or environmental issue' test."[144] Even if the claims are timely, the Staff argues that the Challengers have not met the Commission's test of showing that the proffered information would "paint a *seriously* different picture of the environmental landscape" that would require supplementation of an EIS.[145]

In this circumstance we find binding the Commission's definition of the relevant legal standard: an exceptionally grave issue is one which raises "a sufficiently grave threat to public safety."[146] Nothing averred by the Challengers, and nothing set out in the supplied affidavits, supports a proposition that the failure to consider the information referred to by Challengers raises any grave threat to public safety respecting the Pilgrim plant.[147]

Further, as the NRC Staff correctly states, and as is pertinent to this particular contention, the Commission has delineated the standard for when an environmental issue is "significant" for the purposes of reopening a closed record, equating it to the standards for when an environmental impact statement (EIS) is required to be supplemented — there must be new and significant information that will paint "a seriously different picture of the environmental impact of the proposed project from what was previously envisioned."[148] Nothing presented by Challengers, beyond the bare assertions noted above, indicates that further consultation could cause any change in the environmental impact of the proposed license extension with respect to any of the asserted failures (including the reclassification of the Atlantic sturgeon).[149] Challengers fail to present information upon which we could reach such a conclusion. Moreover, as we discuss below, as a matter of law, the NRC has fulfilled its obligations under the ESA, the MSA, and NEPA, so there is no legal basis for any such assertion.

The NRC fully satisfied its obligations under the ESA regulations upon submittal of its two biological assessments setting out a "no effect" determination. As Entergy correctly observed, "[n]either formal nor informal consultation are required by the ESA if an agency determines that its proposed activity 'will not

---

[144] *Id.* at 43 (citing *Vogtle,* CLI-11-8, 74 NRC at 225 n.44).

[145] *Id.* (citing *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-06-3, 63 NRC 19, 29 (2006)).

[146] Criteria for Reopening Records in Formal Licensing Proceedings, 51 Fed. Reg. 19,535, 19,536 (May 30, 1986).

[147] We find that the failure to receive replies from the Services respecting the NRC's finding of no effect cannot reasonably be considered to raise either any grave threat to public safety or any significant environmental issue as the term has been interpreted by the Commission.

[148] *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 167-68 (2011).

[149] Indeed, the NMFS Letter bears out this assertion, as the NMFS reached conclusions having the same substantive effect as those of the Staff.

affect' any listed species or critical habitat."[150] The ESA regulations provide that "[a] Federal agency need not initiate formal consultation if, as a result of the preparation of a biological assessment . . . the Federal agency determines, with the written concurrence of the Director, that the proposed action is not likely to adversely affect any listed species or critical habitat." This cannot be read to imply the inverse: the present regulatory provision that consultation is not necessary if the Director concurs with the acting agency's "not likely to adversely affect" determination cannot be inverted to impose a requirement that the acting agency *must* initiate formal consultation if the Director fails to provide concurrence. Even if NMFS disagrees with the agency's determination, the ESA regulations provide only that it may *request* that NRC enter formal consultation, and nothing in the regulations of the Services or of the NRC requires NRC to consent to the request.[151]

We concur with the NRC Staff's position that the only mandatory trigger for initiating formal consultation is if the acting agency itself determines that its action "may affect listed species or critical habitat."[152] In the present circumstances, where the NRC has made the opposite determination with respect to all species and habitat at issue, there is no additional legal obligation imposed on NRC regarding further consultation; i.e., there is no requirement that the NRC enter into formal consultation whether or not NMFS disagreed with the NRC's conclusions.[153] That said, the NMFS did concur with the NRC that the relicensing action is "not likely to affect" listed species and critical habitat, concluding that any

---

[150] Entergy Answer at 4 (citing *Center for Biological Diversity v. U.S. Department of Interior,* 563 F.3d 466, 475 (D.C. Cir. 2009)).

[151] 50 C.F.R. §§ 402.12(k)(2), 402.14(a). And, as we noted above, in any event, the Services have made no such request.

[152] *Id.* § 402.14(a).

[153] Challengers err in their assertions that the consultation process does not terminate, and Pilgrim cannot be relicensed, until the NMFS has given its written concurrence on the NRC's BAs. Challengers' reliance upon cases that essentially restate the provisions in 50 C.F.R. § 402.12(a) and (b), providing that formal consultation is required when the acting agency concludes that the action "may affect" listed species or habitat, is misplaced. *See* Reply at 4-5. None of the cited cases addresses the issue presented here: whether an acting agency must wait for the appropriate Service's concurrence on its "no effect" determination before proceeding with the action. A closer analogue to the present case is found in *Southwest Center for Biological Diversity v. U.S. Forest Service,* 100 F.3d 1443 (9th Cir.1996). There, the Forest Service prepared a BA that determined the proposed action (a timber sale) would have "no effect" on listed species. The court relied on Ninth Circuit precedent that "if the agency determines that a particular action will have no effect on an endangered or threatened species, the consultation requirements are not triggered," and held that the finding of no effect "obviates the need for formal consultation under the ESA." *Id.* at 1447 (citing *Pacific Rivers Council v. Thomas,* 30 F.3d 1050, 1054 n.8 (9th Cir.1994). Here, the NRC similarly concluded in its 2006 BA and the Supplemental BA that relicensing Pilgrim would have no effect on listed species or habitat.

effects would be "insignificant" and "extremely unlikely."[154] NMFS ended the informal consultation process with NRC without requesting that NRC enter formal consultation.[155]

Although each of the BAs concludes with a "no effect" determination, Challengers claim that a contrary determination made in one portion of the 2006 BA that listed species may be affected is tantamount to a determination that triggers the consultation requirement.[156] And indeed, the 2006 BA does state that the NRC Staff had identified, based on its correspondence with NMFS, ten listed species "that have a reasonable potential to occur in the vicinity of [Pilgrim], and, therefore, may be affected by continuing operations of [Pilgrim]."[157] We find, however, that Challengers' arguments overreach regarding the substance of the referenced statement in that they fail to address explicit contradictory statements in the BA that essentially superseded the referenced superficial observation with a detailed finding in the BA for each species at issue that relicensing would have "no effect." The 2006 BA reflects that the NRC Staff began its analysis with a presumption that the identified species may be affected, but its further examination led Staff to the *determination* that the action would have no effect.

Finally, Challengers insist that, under section 7(a)(2) of the ESA, an agency cannot "unilaterally" determine that an action will not jeopardize listed species.[158] But NRC has not acted unilaterally. NRC has followed the consultation procedures set out in NMFS regulations, first by requesting NMFS to identify species that might be in the area of Pilgrim, and then by preparing its BA, in which it set forth its determination as to each species, and submitting it to NMFS. Having made and submitted to NMFS a "no effect" determination, no more was required of the NRC. And the NMFS Letter reflects that the two agencies indeed entered into informal consultations and that, although the NMFS could not agree with the NRC's finding of "no effect," it agreed that the requested renewed license was not likely to adversely affect any listed species or critical habitat.[159]

---

[154] NMFS Letter at 30.

[155] The Services' ESA regulations classify as "informal consultation" any communication between the acting agency and one of the Services designed to assist the acting agency in determining whether formal consultation is required. 50 C.F.R. § 402.13(a).

[156] *See* 50 C.F.R. § 402.14(a).

[157] Pilgrim FSEIS at E-73.

[158] *See* Reply at 5-6 (citing *Washington Toxics Coalition v. U.S. Department of Interior,* 457 F. Supp. 2d 1158, 1179-80 (W.D. Wash. 2006)).

[159] We note that, as a purely scientific matter, we do not see how any finding of "no effect" can be made, as even *de minimis,* miniscule, immaterial, and unmeasurable physical conditions discussed regarding the listed species and habitat would have some effect. Thus we find to be perfectly scientifically reasonable NMFS findings that they cannot agree with a "no effect" determination, but that they agree that license renewal is not "likely to adversely effect" and their detailed findings that specific phenomena of interest have insignificant, sometimes undetectable, effects.

We likewise find that Challengers' additional claim, that the NRC failed in its duty to consult in regard to the river herring, fails to raise an adjudicable issue because no such duty exists. The two species of river herring have been designated "candidate species," and neither the ESA nor the regulations of the Services imposes any obligation on an acting agency with respect to candidate species; a fact that Challengers' own Petition makes clear.[160] In addition to noting the provisions of the ESA regulations, Challengers reference the Services' Consultation Handbook, which states that although the Services "*may* recommend ways [for the acting agency] to reduce adverse effects" on candidate species, "[l]egally, the action agency does not have to implement such recommendations."[161]

In addition to their consultation-related concerns, Challengers observe that because a decision on whether to list the river herring as threatened or endangered is due on August 2, 2012, after the Pilgrim license expires, "NMFS could list river herring . . . before the NRC makes its decision" to relicense Pilgrim.[162] "By addressing candidate river herring now," Challengers note, "NRC Staff can make informed decisions about relicensing [Pilgrim]."[163] But this also fails to raise a litigable challenge. As the Commission succinctly noted, "an application-specific NEPA review represents a 'snapshot' in time[, and while] NEPA requires that we conduct our environmental review with the best information available today[, i]t does not require that we wait until inchoate information matures into something that later might affect our review."[164] The NRC Staff need only assess the river herring as it is currently classified; a speculative reclassification is simply not a matter that comes within the scope of this proceeding.

Finally, Challengers err in their claim that the MSA consultation process is incomplete. The NRC submitted its EFH Assessment in December 2006, as the Challengers now acknowledge. The NMFS responded on January 23, 2007, with a letter declaring that "NMFS is concluding the EFH consultation."[165] Since NRC and NMFS agree that the consultation is complete, the requirements of the MSA have been fulfilled, and NRC has no further obligation.[166]

---

[160] Challengers, quoting directly from the ESA regulations, observe that "candidate species have no legal status and are accorded no protection under the Act." Petition at 9 (quoting 50 C.F.R. § 402.12(d)).

[161] *Id.* at 10 (quoting Consultation Handbook at 3-7).

[162] Petition at 9.

[163] *Id.* at 28.

[164] *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 391-92 (2012).

[165] Pilgrim FSEIS at E-45.

[166] Challengers complain that consultation was unlawfully deferred to EPA; this "deferral" was done at NMFS' initiative in consideration of NRC's observation that "operational activities including the

(Continued)

For the reasons set forth above, as a matter of law, the NRC has fulfilled its obligations under the ESA, the MSA, and NEPA. Because Challengers' contention questioning NRC Staff compliance with these statutory provisions has no basis in law or fact, that contention fails to present the "seriously different picture of the environmental impact of the proposed project" which is the gravamen of a significant environmental issue. For the foregoing reasons, we find that Challengers fail to present an exceptionally grave issue, or a significant environmental issue which could reasonably be construed to satisfy the requirements of section 2.326(a)(2).

Moreover, the Challengers' argument that consultation is incomplete is now moot because of the content and context of the recently supplied NMFS Letter setting out explicit findings of the NMFS respecting all listed species and all relevant habitat (including those relating to the Atlantic sturgeon). In that letter, NMFS makes specific requests, suggestions and recommendations to NRC, as is permitted by the relevant legislation, and concludes the consultation.[167] As we noted above, the NRC had completed its consultation obligations by supplying the BA and the supplement thereto making its determinations of "no effect" on listed species and relevant habitat. But there can be no doubt that the responses of the NMFS to the NRC's findings complete the consultation process between the NMFS and the NRC under both the ESA and the MSA. Any response which the NRC may elect to make to the suggestions, requests and recommendations of the NMFS is outside of that consultation, and purely optional on the part of the NRC. Therefore, because the consultation process is complete in all aspects, any claim that it is not is moot.

Challengers also raise substantive objections to the conclusions of the EFH Assessment in their Correction and Supplement to the Petition. Although consideration of these arguments is unnecessary for the conclusions we have reached herein, we note that were we to consider these arguments we would find them untimely and without an adequate explanation or justification for their lateness.

---

intake of cooling water, the discharge of heated effluent, and/or mitigation conditions are under the sole authority of the US Environmental Protection Agency." *Id.* at E-44. The MSA regulations give the NMFS the authority to consult with other agencies if, "for example, only one of the agencies has the authority to implement measures necessary to minimize adverse effects on EFH and that agency does not act as the lead agency." 50 C.F.R. § 600.920(b). Here, NMFS permissibly identified EPA as the agency with authority to mitigate impacts on EFH. NRC's responsibilities are complete, and this portion of the contention presents no environmental issue.

[167] *See* NMFS Letter at 31.

4. There Is No Demonstration of the Likelihood of a Materially Different Result

As to the requirements of section 2.326(a)(3), Challengers claim that their motion demonstrates that a "materially different result would be or would have been likely had the newly proffered evidence been considered initially." They explain:

> Specifically, a materially different result would have been likely because: (1) there would be a completed ESA § 7 process for the ten endangered and threatened species in the 2006 BA and for Atlantic sturgeon, and there is not; (2) there would be information in the record about river herring documentation of compliance with NMFS guidelines and regulations, and there is not; (3) there would be a record of an essential fish habitat assessment, and there is not, and (4) the NEPA SEIS would contain the information in (1) to (3).[168]

Thus, argue Challengers, the insertion of additional information from the completed consultations and an EIS with additional analyses would be in and of themselves a materially different result.[169]

Entergy asserts that the Challengers have not met the heavy burden to *demonstrate* the likelihood of a materially different result. Entergy cites several Commission decisions that stress the high level of support needed to succeed on a motion to reopen, including the Commission's statement in this proceeding that "the level of support required . . . is greater than that required for a contention under the general admissibility requirements of 10 C.F.R. § 2.309(f)(1)."[170] Entergy further asserts that Challengers' claims concerning consultation "are simply wrong," and therefore Challengers cannot and have not shown that a materially different outcome would result from any of their allegations.[171]

The NRC Staff also disagrees with Challengers' assertions that a different result would be likely: "the ESA consultation process is complete, the NRC is not required to consider the river herring, there is an EFH assessment, and the FSEIS adequately addresses these topics."[172] The Staff argues that because Challengers' claim of likelihood is conclusory, with no attempt to show *how* they would be likely to prevail, the motion to reopen "falls far short" of meeting the requirements of section 2.326(a)(3).[173]

---

[168] Petition at 37.

[169] *Id.* ("[H]ad Petitioners' newly proffered evidence been considered initially . . . the [Pilgrim] EIS would have been more likely to be in compliance with NEPA.")

[170] Entergy Answer at 30-31 (citing CLI-12-6, 75 NRC 352, 367 (2012)).

[171] *Id.* at 30.

[172] NRC Staff Answer at 44.

[173] *Id.* at 44-45 (citing *Oyster Creek,* CLI-09-7, 69 NRC at 290-91).

We find that Challengers have failed to demonstrate that a materially different result would be likely had their newly proffered evidence been considered initially. To begin with, the Contention rests upon the faulty premise that consultation obligations remain for the NRC, but there are (even without considering the impact of the NMFS Letter) no such remaining consultation obligations. Moreover, for there to be any different result, there must be some reason to believe that further discussion or consultation between the NRC and the Services could cause that change, but Challengers have not provided any reasoning to support that premise nor have they provided any legal foundation for their assertion that the mere fact of additional analysis is itself a materially different result. Indeed, as with the failures of affidavits presented to the previous board, the absence of discussion of this matter within the affidavits submitted by Challengers here deprives us of the opportunity to evaluate either the foundation for their assertions or the "likelihood" of any such different result.

Additionally, Challengers do not demonstrate how the FSEIS conclusions regarding the impact of Pilgrim on any species are in error. The Petition and the Mansfield Affidavit allege that, contrary to a statement in the FSEIS, North Atlantic right whales have been spotted in the immediate vicinity of Pilgrim.[174] But even if this information is reliable and accurate, the Challengers present no information or analysis which addresses how the presence of the whales near Pilgrim could affect the species. The Mansfield Affidavit similarly falls well short of the requisite level of information with its claim, without citation to any credible scientific authority and without scientific explanation, that climate change could cause listed sea turtles to adjust their migratory range to include the area around Pilgrim. This otherwise unsupported assertion simply fails to offer any information which might enable us to determine that these turtles could be affected.[175] Read in their totality, the supplied affidavits present no facts or data, and no analysis, that disputes the NRC's findings; they cannot be read to provide information which can reasonably be said to "demonstrate" that a materially different result would be, or would have been, likely had the newly proffered evidence been considered initially.[176]

That said, we note that the NMFS has, in its letter confirming that formal consultation under the ESA is not required, performed an in-depth analysis of the environmental impacts of the relicensing action upon the listed species and their critical habitat. NMFS informed NRC that it had identified additional information

---

[174] *See* Petition at 21; Mansfield Affidavit at 3-6.

[175] *See* Mansfield Affidavit at 7.

[176] As the previous board stated, "the absence of such [expert-supported] information directly causes a failure to *demonstrate* (as is required) (and therefore deprives us of the ability — even the opportunity — to substantively consider whether) a materially different result would be obtained, as is required by our reopening standards." LBP-11-20, 74 NRC at 81.

that would be useful for characterizing the effect of the Pilgrim facility, and "[w]hile this information was not necessary to complete this consultation, we request that you consider adding conditions to any new license for Pilgrim to require:

> (i) (1) monitoring and reporting zooplankton entrainment, including copepods (particularly, *Calanus finmarchus, Pseudocalanus* spp. and *Centropages* spp); (2) monitoring zooplankton at nearfield and farfield locations to serve as a check on [the NRC's] determination that the effects of Pilgrim on zooplankton are small and localized; (3) establishing a monitoring program for ambient water temperatures and thermal effluent to better understand how any changes in ambient water temperatures during the relicensing period, which may partly related to global and/or regional climatological changes, may change the characteristics and distribution of the thermal plume; and (4) revising the species sampled in the REMP to include species that serve as forage for listed species and species that occupy similar ecological niches as Atlantic sturgeon, whales and sea turtles and could be surrogate species for radionuclide testing . . . [and]
>
> (ii) [As to blueback herring and alewife, which] are candidate species that could be listed under the ESA in the future, we encourage you to work with Entergy to minimize effects to these species to the maximum extent possible. Monitoring requirements for these species should be incorporated into the new license."[177]

We see no reason to believe that the NRC is under any obligation to implement any of the elements it has been requested to consider. The mere fact that these requests have been made cannot serve, and could not have served if the NMFS Letter had been available to the Parties during their preparation of pleadings in this matter, to satisfy the requirements for demonstrating the likelihood of a materially different result.

B. No Portion of the Contention Satisfies the General Contention Admissibility Standards

For any contention to be admissible, regardless of when it is filed, it must satisfy each of the six criteria of 10 C.F.R. § 2.309(f)(1). For the same reasons discussed in Part V.A.3, above, that establish that the contention now before us does not present a significant environmental issue, we find that the contention likewise is inadmissible under 10 C.F.R. § 2.309(f)(1)(vi) for failing to raise a genuine dispute with the license application on a material issue of law or fact.

---

[177] NMFS Letter at 31.

This contention rests upon the premise that the NRC has outstanding consultation obligations, but the NRC has no such outstanding obligations under either the ESA or the MSA, and, because the NRC has completed the required consultations, no supplement to the FSEIS is necessary under NEPA. Challengers' contention thus presents no material issue of law.

Moreover, as we discussed above, Challengers' asserted factual disputes with the FSEIS do not raise a genuine, material issue of fact as to impacts on any marine species.[178] Because the contention is inadmissible for its failure to satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(vi), we need not examine the remaining admissibility factors.

C. If There Were a Substantively Admissible Contention, Only the Portion Respecting the Atlantic Sturgeon Meets the Requirements for Nontimely Contentions

Challengers argue that the Petition satisfies the requirements of section 2.309(c) for nontimely contentions.[179] As we discussed in Part V.A.2, above, Challengers' good cause argument with regard to the reclassification of the Atlantic sturgeon is sufficiently based upon new information to pass muster as to good cause, but fails with respect to all the other claims. With the exception of the 2012 Supplemental BA, all of the information supporting the contention was available well before the date of the Petition, and Challengers have failed to justify the delays. Challengers' assertion that they should be excused from timely filing their contention due to reliance on statements by NRC and NMFS that consultation was ongoing is without merit given that the lack of an NMFS response, which has been apparent for some considerable period, is ultimately at the heart of their contention. We therefore find that Challengers have not established good cause to raise any portion of the contention except those respecting the Atlantic

[178] As discussed above, the Mansfield Affidavit raises concerns about the presence of North Atlantic right whales near Pilgrim and the effect of climate change on sea turtles, but offers no explanation as to how these alleged facts, if true, call into question the NRC Staff's conclusion that relicensing Pilgrim will have no effect on those species. The Petition and the Mansfield Affidavit also purport to criticize the discussion in the FSEIS of river herring, but they do not suggest that any of the data in the FSEIS are incorrect. *See* Petition at 21-23; Mansfield Affidavit at 8-12. Rather, Challengers state that the FSEIS "minimizes" the impact from Pilgrim operations on river herring. They do not, however, offer any guide to what additional information the NRC Staff should have included. Because the Challengers do not contest the accuracy of the FSEIS' information regarding river herring, and because they fail to specify any omissions in the FSEIS, the contention does not present a genuine dispute of material fact with regard to the river herring.

[179] This requirement is triggered because the motion to reopen relates to a contention not previously in controversy. *See* 10 C.F.R. § 2.326(d).

sturgeon.[180] As to the portion of the contention that concerns that species, good cause lies. However, as we noted in Part III.B and ruled in Part V.A.3, above, the NRC has fully satisfied its consultation obligations so that Challengers have failed to raise an admissible contention.

VI. CONCLUSION AND ORDER

For the foregoing reasons, we find that Pilgrim Watch and JRWA's new contention:

a. Fails to satisfy the criteria for reopening a closed record under 10 C.F.R. § 2.326; and

b. Fails to satisfy the contention admissibility criteria of 10 C.F.R. § 2.309(f)(1).

Each of these failures separately requires denial of this request for hearing by Pilgrim Watch and JRWA. The petition to intervene and motion to reopen are therefore both DENIED. The evidentiary record in this proceeding remains closed.

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 July 3, 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 to have exhausted 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).

---

[180] Good cause is the most important of the factors in the 2.309(c) balancing test, and in the absence of good cause, a party must make an especially strong showing on the other factors to justify admission of a nontimely contention. *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 565 (2005). Challengers have not made such a showing, with the exception of their timely filed claim regarding Atlantic sturgeon.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[181]

Dr. Paul B. Abramson
ADMINISTRATIVE JUDGE

Dr. Richard F. Cole
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 24, 2012

[181] Judge Young's concurring opinion follows.

Administrative Judge Ann Marshall Young, Concurring

I concur that Petitioners have standing but have submitted no new admissible contention in their March 8, 2012, filing. I find some issues they pose warrant some concern, however, and write separately to focus attention on these aspects of the matters raised.

Introduction

The issues raised by Petitioners are, I agree, untimely and/or otherwise inadmissible in this adjudicatory proceeding under relevant NRC rules. But I find Petitioners have raised several concerns that the NRC Staff might appropriately choose to address in a supplement to the FSEIS. Although the life of this case has extended significantly longer than those of most other NRC proceedings, if inherently valid issues warrant continued attention as matters of common sense and/or in the public interest in environmental protection, this would be of value and may indeed be required under NEPA. As I have previously observed,[1] because Entergy's license for the Pilgrim plant remains in effect until action is taken on its renewal application, no significant harm should ensue from any such action on the part of the NRC Staff. Indeed, in comparison to the 16 years that Pilgrim's National Pollutant Discharge Elimination System (NPDES) permit has apparently remained in effect pending a determination on the renewal application for it,[2] any such period in question herein may be expected to be relatively insignificant, even given some delays in this proceeding beyond those more typical in such cases.

As to the matters now at issue, as noted by the Majority, Petitioners have raised four claims in their new contention. In the first two, based on the Endangered Species Act (ESA), it is alleged (A) that the ESA "§ 7 consultation process for listed and candidate species and critical habitat is incomplete," and (B) that ESA-required "assessment of the adverse impacts of [Pilgrim Nuclear Power Station] operations on river herring, newly identified as 'candidate species' . . . has not occurred." In the third claim, it is alleged (C) that the NRC has "unlawfully attempted to defer" certain requirements of the Magnuson-Stevens Fisheries Act (MSA), regarding consultation with the National Marine Fisheries Service (NMFS) and preparation of an essential fish habitat (EFH) assessment before relicensing the plant, to the federal Clean Water Act NPDES permit renewal process for the plant. Finally, based on the first three claims, it is alleged (D) that the EIS for the plant must be revised and supplemented under requirements of

[1] LBP-12-1, 75 NRC 1, 38 (2012) (Dissent of Administrative Judge Ann Marshall Young) [hereinafter LBP-12-1, Young Dissent].

[2] *See infra* note 41 and accompanying text.

the National Environmental Policy Act (NEPA).[3] Petitioners seek the following relief:

> Essentially, . . . complete the ESA § 7 process for Atlantic sturgeon and river herring, obtain concurrence on the NRC staff BA, conduct a EFH assessment, and add this information to the NEPA record. These are narrow issues, and steps that should have been taken by regulatory agencies and Entergy in the past six years upon filing the renewal application.[4]

Endangered Species Act Consultation

Petitioners' claim that required ESA consultation is not complete is based on their assertion that concurrence by the appropriate ESA consultation agency must be sought and received.[5] This claim involves both the NRC's 2006 biological assessment with respect to several listed endangered species of whales and sea turtles, and a supplemental assessment on the Atlantic sturgeon, a species that was newly listed as endangered in January 2012. As noted by the Majority, in both of these assessments, the NRC Staff concluded that continued operation under a renewed Pilgrim license would have "no effect" on the relevant listed species, and both Staff and Applicant argue that no consultation is required by the ESA if an agency finds that a proposed activity "will not affect" any listed species or critical habitat. Petitioners argue that such a unilateral determination of no effect is inconsistent with the law, citing a Supreme Court case[6] and a Federal District Court case[7] in support of their position.

I note first that the consultation issue does, as the majority states, appear to be moot at this point, based on the recent letter from NMFS that was provided to

---

[3] *See* Jones River Watershed Association [hereinafter JRWA] 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 [JRWA] and Pilgrim Watch [hereinafter PW] Motion to Reopen Under 10 C.F.R. § 2.326 and Request for Hearing Under 10 C.F.R. § 2.309(a) and (d) in Above Captioned License Renewal Proceeding (Mar. 8, 2012) at 5 [hereinafter Petition].

[4] *Id.* at 51.

[5] *Id.* at 8. The two agencies that are responsible for implementing ESA consultation requirements are the National Marine Fisheries Service (NMFS), a part of the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce, and the Fish and Wildlife Service (FWS), a part of the Department of the Interior. NMFS is the agency responsible for the consultation in question in this proceeding.

[6] *Tennessee Valley Authority v. Hill,* 437 U.S. 154 (1978), *cited in* [JRWA] and [PW] Reply to Answers of NRC Staff and Entergy to [JRWA] Petitions to Intervene and for Hearing Under 10 C.F.R. § 2.309 [hereinafter JRWA Reply] at 1 (Mar. 26, 2012).

[7] *Washington Toxics Coalition v. U.S. Department of Interior,* 457 F. Supp. 2d 1158 (W.D. Wash. 2006), *cited in* JRWA Reply at 5.

us on May 22, 2012.[8] In this letter NMFS responds to the Staff's two biological assessments and "provide[s its] justification for concluding consultation informally."[9] Assuming, however, that any issue remains on the consultation question (and recognizing, for example, that NMFS in its letter speaks of the possible need for "reinitiation" of consultation in various circumstances[10]), I note that all parties have presented interesting arguments on a matter that I find to be more subtle than it might seem on the surface.

I begin my own analysis by looking to the actual wording of ESA § 7, which states in relevant part as follows:

> Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available.[11]

Petitioners in their first claim are concerned with the consultation required under this section, which is initiated by NRC as the "action" agency with, in this instance, NMFS as the ESA consultation agency.

As to compliance with substantive ESA requirements, it appears to be undisputed that it is the "action" agency — here the NRC — that is ultimately responsible for such compliance. As Entergy has pointed out, the background comments accompanying the 1986 promulgation of implementing rules by the Departments of Interior and Commerce, through FWS and NMFS, provide some elucidation on the respective roles of the "action" and "consulting" agencies:

> The Service [i.e. NMFS or FWS] performs strictly an advisory function under section 7 by consulting with other Federal agencies to identify and help resolve conflicts between listed species and their critical habitat and proposed actions. As part of its role, the Service issues biological opinions to assist the Federal agencies in conforming their proposed actions to the requirements of section 7. However, the Federal agency makes the ultimate decision as to whether its proposed action will

---

[8] Letter to Administrative Judges from Susan L. Uttal (May 22, 2012), Attached Letter to Andrew S. Imboden from Daniel S. Morris (May 17, 2012) [hereinafter NMFS 5/17/12 Letter].

[9] NMFS 5/17/12 Letter at 2.

[10] *See id.* at 28-32.

[11] 16 U.S.C. § 1536(a)(2).

> satisfy the requirements of section 7(a)(2). The Service recognizes that the Federal agency has the primary responsibility for implementing section 7's substantive command, and the final rule does not usurp that function.[12]

A few years earlier, in 1978, the Supreme Court had addressed, among other things, the "substantive command," or purpose, of Section 7. As pointed out by Petitioners, the Court in *Tennessee Valley Authority* emphasized that:

> [o]ne would be hard pressed to find a statutory provision whose terms were any plainer than those in § 7 of the Endangered Species Act. Its very words affirmatively command all federal agencies "to *insure* that actions *authorized, funded, or carried out* by them do not *jeopardize* the continued existence" of an endangered species or "*result* in the destruction or modification of habitat of such species . . . ." 16 U.S.C. § 1536 (1976 ed.). (Emphasis added.) This language admits of no exception.[13]

More generally, the Court observed:

> As it was finally passed, the Endangered Species Act of 1973 represented the most comprehensive legislation for the preservation of endangered species ever enacted by any nation. Its stated purposes were "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved," and "to provide a program for the conservation of such . . . species . . . ." 16 U.S.C. § 1531(b) (1976 ed.). In furtherance of these goals, Congress expressly stated in § 2(c) that "all Federal departments and agencies *shall seek to conserve endangered species* and threatened species . . . ." 16 U.S.C. § 1531(c) (1976 ed.). Lest there be any ambiguity as to the meaning of this statutory directive, the Act specifically defined "conserve" as meaning "to use and the use of *all methods and procedures which are necessary to bring any endangered species or threatened species* to the point at which the measures provided pursuant to this chapter are no longer necessary." § 1532(2). Aside from § 7, other provisions indicated the seriousness with which Congress viewed this issue: Virtually all dealings with endangered species, including taking, possession, transportation, and sale, were prohibited, 16 U.S.C. § 1538 (1976 ed.), except in extremely narrow circumstances, see § 1539(b). The Secretary was also given extensive power to develop regulations and programs for the preservation of endangered and threatened species.[14]

The Court in TVA also considered the history of the ESA as it informed its

---

[12] Interagency Cooperation — Endangered Species Act of 1973, as Amended (Final Rule), 51 Fed. Reg. 19,926, 19,928 (June 3, 1986); *see* Entergy's Answer Opposing [JRWA]'s and [PW]'s Motion to Reopen and Hearing Request at 4 (Mar. 19, 2012) [hereinafter Entergy Answer].

[13] *TVA,* 437 U.S. at 173 (emphasis in original), *quoted in* JRWA Reply at 2.

[14] *Id.* at 180, *quoted in* JRWA Reply at 3.

purposes, noting that the 1973 Act removed certain qualifying language that was in the earlier 1966 Act:

> Section 7 of the Act . . . provides a particularly good gauge of congressional intent. As we have seen, this provision had its genesis in the Endangered Species Act of 1966, but that legislation qualified the obligation of federal agencies by stating that they should seek to preserve endangered species only "*insofar as is practicable and consistent with the[ir] primary purposes . . .*"
>
> . . . .
>
> What is very significant . . . is that the final version of the 1973 Act carefully omitted all of the reservations described above.[15]

In the *Washington Toxics Coalition* case, also cited by Petitioners, the U.S. District Court for the Western District of Washington addressed the consultation requirement of section 7 with respect to certain rules that permitted the Environmental Protection Agency (EPA) to make "not likely to adversely affect (NLAA)" determinations without consultation or concurrence of NMFS or the Fish and Wildlife Service (FWS).[16] The Court, relying on various decisions of the Ninth Circuit Court of Appeals, stated that it could not conclude "that the plain meaning of 'consultation' contemplates the joint creation of a process by which action agencies may unilaterally make the critical section 7(a)(2) determination regarding NLAA actions," and found the regulations in question, which "permit[ed] no [NMFS or FWS] consultation on NLAA actions," not to be in accordance with the law."[17] The Court did not, however, address the "no effect" determination question at issue herein.[18]

Although the general reasoning of the *Washington Toxics* court on "not likely to affect" determinations might arguably be logically applied to the "no effect" issue, this does not appear to have occurred. To the contrary, several Circuit Courts of Appeal have spoken, in dicta at least, on the issue of the need for consultation on an action agency's "no effect" determination, indicating that the need for consultation is *not* triggered under the ESA when the action agency determines its proposed activity will have no effect on any listed species or critical habitat.[19] There appears to be no relevant authority to the contrary.

---

[15] *Id.* at 181-82 (emphasis in original).

[16] *Washington Toxics Coalition,* 457 F. Supp. 2d at 1163.

[17] *Id.* at 1179-80.

[18] The Court noted in passing that "[n]o consultation is required for actions that have no effect on listed species," *id.* at 1163, but did not address the issue in any detail, as it was not before the court.

[19] *See Center for Biological Diversity v. Department of Interior,* 563 F.3d. 466, 475 (D.C. Cir. 2009); *Newton County Wildlife Association v. Rogers,* 141 F.3d 803, 810-11 (8th Cir. 1998); *Southwest*

(Continued)

As the NRC Staff has asserted, the conclusion that no consultation is required in such instances is also supported by the literal language of 50 C.F.R. § 402.14(a), which provides in relevant part that "[e]ach Federal agency shall review its actions at the earliest possible time to determine whether any action *may affect* listed species or critical habitat. *If such a determination is made,* formal consultation is required."[20] In addition, there are references in 50 C.F.R. § 402.12 to the action agency's biological assessment being used *by the Federal agency* in "determining *whether* formal consultation or a conference is necessary."[21]

Center for Biological Diversity v. U.S. Forest Svc., 100 F.3d 1443, 1447-48 (9th Cir. 1996); *Pacific Rivers Council v. Thomas,* 30 F.3d 1050, 1054 n.8 (9th Cir. 1994) ("[I]f the agency determines that a particular action will have no effect on an endangered or threatened species, the consultation requirements are not triggered."), *cert. denied,* 514 U.S. 1082 (1995).

[20] 50 C.F.R. § 402.14(a) (emphasis added); *see* NRC Staff's Answer to [JRWA and PW]'s Petitions for Leave to Intervene and Motions to Reopen the Record (Mar. 19, 2012) at 8 n.39. Section 402.14(a), on the requirement for formal consultation, states in full:

> Each Federal agency shall review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat. If such a determination is made, formal consultation is required, except as noted in paragraph (b) of this section. The Director may request a Federal agency to enter into consultation if he identifies any action of that agency that may affect listed species or critical habitat and for which there has been no consultation. When such a request is made, the Director shall forward to the Federal agency a written explanation of the basis for the request.

Section 402.14(b) states:

> A Federal agency need not initiate formal consultation if, as a result of the preparation of a biological assessment under § 402.12 or as a result of informal consultation with the Service under § 402.13, the Federal agency determines, with the written concurrence of the Director, that the proposed action is not likely to adversely affect any listed species or critical habitat. . . .

An agency may also choose to engage in "informal consultation," which is an optional process that includes all discussions, correspondence, etc., between the Service and the Federal agency . . . , designed to assist the Federal agency in determining whether formal consultation or a conference is required." 50 C.F.R. § 402.13(a). The NRC Staff's communications with NMFS, *see supra* note 8, *infra* note 22, fall within this designation.

[21] 50 C.F.R. § 402.12(a) (emphasis added); *see* 50 C.F.R. § 402.12(k). A conference is required on any action "likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat." 50 C.F.R. §§ 402.10(a).

I note that the contention at issue herein is distinguishable from that admitted in *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), Memorandum and Order (Ruling on Pending Motions for Leave to File New and Amended Contentions) (July 6, 2011) (Unpublished Licensing Board Issuance at 60-72), in that the contention in *Indian Point* concerned a biological assessment in which the NRC Staff recognized that there *was* a potential for an adverse effect on a listed species, in contrast to the Staff's finding of "no effect" in the instant case. *See* Riverkeeper Inc. Consolidated Motion for Leave to File a New Contention and New Contention Concerning NRC Staff's Final Supplemental Environmental Impact Statement (Feb.3, 2011) at 7; NRC Staff's Answer to Riverkeeper, Inc.'s Motion for Leave to File a New Contention, and New Contention EC-8 Concerning NRC Staff's Final Supplemental Environmental Impact Statement (Mar. 7, 2011) at 9.

Interestingly, notwithstanding the preceding considerations and as indicated above, the NRC Staff chose to initiate "informal consultation" and seek NMFS concurrence on its "no effect" determinations, and NMFS has responded, as noted above, most recently "concluding the consultation informally."[22] In any event, any challenge regarding the 2006 assessment is untimely and, although I agree that the challenge to the assessment on the Atlantic sturgeon is timely, I must also agree that relevant ESA rules require nothing further of the NRC in this regard at this point, leaving no genuine dispute on the matter. As the Majority notes, NMFS has found that "all effects to listed species will be insignificant or discountable."[23]

NMFS has further indicated that it has "identified several areas where additional and/or more recent information would be helpful to better characterize effects of the Pilgrim facility," and has also, as noted by the Majority, requested that the NRC consider adding certain conditions to Pilgrim's renewed license with respect to listed species, which would require:

> (1) monitoring and reporting zooplankton entrainment, including copepods (particularly, *Calanus finmarchus, Pseudocalanus* spp. and *Centropages* spp);
>
> (2) monitoring zooplankton at nearfield and farfield locations to serve as a check on your determination that effects of Pilgrim on zooplankton are small and localized;
>
> (3) establishing a monitoring program for ambient water temperatures and the thermal effluent to better understand how any changes in ambient water temperatures during the relicensing period, which may partly be related to global and/or regional climatological changes, may change the characteristics and distribution of the thermal plume; and
>
> (4) revising the species sampled in the REMP to include species that serve as forage for listed species and species that occupy similar ecological niches as Atlantic sturgeon, whales and sea turtles and could be considered surrogate species for radionuclide testing.[24]

---

[22] NMFS 5/17/12 Letter at 2; *see also* Petition, Attached Letter to Patricia A. Kurkul, NMFS, from Andrew S. Imboden, NRC (Feb. 29, 2012); NRC Staff's Answer to Correction and Supplement to [JRWA] and [PW]'s Petitions to Intervene and Motions to Supplement (Mar. 26, 2012) at 5 n.15 and Attached Letter to Andrew S. Imboden from Daniel S. Morris, Acting Regional Administrator, U.S. Dept. of Commerce, NOAA, NMFS (Mar. 26, 2012).

I note that NMFS in its most recent letter indicates that the "agencies agreed . . . to engage in informal consultation to determine *whether formal consultation was necessary* or if consultation could be concluded with a 'not likely to adversely affect' finding." NMFS 5/17/12 Letter at 30. Under its rules NMFS may "request the [NRC] to initiate formal consultation" if it finds this to be appropriate. *See* 50 C.F.R. §§ 402.12(k)(2), 402.14(a).

[23] NMFS 5/17/12 Letter at 30.

[24] *Id.* at 31.

Requiring these proposed conditions would be in the discretion of the NRC, but NMFS's request and reasoning therefore might well be construed to constitute new and significant information warranting further consideration under NEPA. In this regard, I note that NMFS in its letter also states that if there is any incidental "take" of a listed species "reinitiation of consultation would be required,"[25] and directs that any instance of whales, sea turtles, or Atlantic sturgeon being "observed at or near Pilgrim, including in the discharge canal, at the trash racks or on the intake screens" be "immediately reported."[26] Petitioners have not, however, shown that any such conditions or other considerations must be addressed in the context of the adjudicatory proceeding.

Endangered Species Act Assessment Regarding River Herring

Petitioners are also concerned about the "alewife (*Alosa pseudoharengus*) and blueback herring (*Alosa aestivalis*), collectively referred to as 'river herring,'" with respect to which NMFS on November 2, 2011, issued a "90-day finding on a petition to list" the species and to "designate critical habitat concurrent with any listing.'"[27] The final decision on the proposed listing is due within 12 months of the August 5, 2011 petition to list the species that prompted the 90-day finding.[28]

In support of this claim Petitioners present facts including that river herring larvae have been found in entrainment samplings at Pilgrim, despite it being "contrary to normal river herring breeding patterns to find larvae in a saltwater environment like [Pilgrim's] salt-water intake, several miles from suitable fresh-water habitat in the area" in two rivers.[29] Petitioners also cite among other things an NMFS regulation that provides as follows:

> In addition to listed and proposed species, [NMFS] will provide a list of candidate species that may be present in the action area. Candidate species refers to any species being considered by the Service for listing as endangered or threatened species but not yet the subject of a proposed rule. Although candidate species have no legal status and are accorded no protection under the Act, their inclusion will alert the Federal agency of potential proposals or listings.[30]

This language contains both the answer to the question with respect to river

---

[25] *Id.* at 30. NMFS explains that "take" is "is defined in the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." *Id.*

[26] *Id.* at 30-31.

[27] Petition at 9 (citing 76 Fed. Reg. 67,652 (Nov. 2, 2011)).

[28] 76 Fed. Reg. at 67,656.

[29] Petition at 21.

[30] 50 C.F.R. § 402.12(d), *cited in* Petition at 9.

herring — having "no legal status and . . . no protection under the Act," they are not legally required to be addressed by the NRC at this time — and the kernel of a different issue, whether the NRC *should* nonetheless consider the effect of continued operation of the Pilgrim plant on these fish. Petitioners quote an NMFS handbook in which it is stated that NMFS biologists "should notify agencies of candidate species in the action area" and "urge other Federal agencies to address candidate species in their Federal programs," and that "[a]ddressing candidate species at this stage of consultation provides a focus on the overall health of the local ecosystem and may avert potential future conflicts."[31]

In its May 17 letter, NMFS includes a section entitled, "Technical Assistance for Candidate Species," indicating that a "status review" for the blueback herring and alewife "is currently ongoing."[32] NMFS notes that "Blueback herring and alewife are impinged annually and occasionally entrained at Pilgrim," and "encourage[s the NRC] to work with Entergy to minimize effects to these species to the maximum extent possible."[33] In addition, it recommends that "[m]onitoring requirements for these species should be incorporated into the new license," asks that "any monitoring reports produced that contain information on these species be provided" to NMFS, and requests that NRC "work with Entergy to investigate why early life stages (larvae) of alewife are present near the intakes (as evidenced by entrainment.)"[34] Because "[a]lewife normally spawn in freshwater and presence of early life stages in marine waters, such as the Pilgrim intake, is unexpected," NMFS states that further investigation is warranted "to determine if the operations of Pilgrim contribute to this unusual behavior or if it is due to unrelated factors."[35] Finally, NMFS states that, "[s]hould either species be listed under the ESA in the future, reinitiation of consultation would be necessary."[36]

I must agree with my colleagues that Petitioners are untimely in presenting their

---

[31] Endangered Species Consultation Handbook, *Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act,* U.S. Fish & Wildlife Service, [NMFS] (March 1998), at 3-7 *available at* http://www.fws.gov/endangered/esa-library/pdf/esa_section 7_handbook.pdf (last consulted April 19, 2012), *quoted and cited in* Petition at 10, 28.

[32] NMFS 5/17/12 Letter at 31. NMFS also indicates that the definition for "Candidate Species" has been revised, *id.* (citing 69 Fed. Reg. 19, 975 (April 15, 2004), 71 Fed. Reg. 61,022 (Oct. 17, 2006)), *but see supra* text accompanying note 30, which quotes the current rule.

[33] NMFS 5/17/12 Letter at 31.

[34] *Id.* NMFS cites the FSEIS, NUREG-1437, Supp. 29 (2007) (ADAMS Accession No. ML-071990020), for the information on entrainment of the river herring, and indeed, it appears to be undisputed that the "alewife is common in Cape Cod Bay, and is one of the most commonly impinged species at PNPS," having "the third highest number of individuals impinged at PNPS, based on annual extrapolated totals," over the 25-year period from 1980 through 2005." FSEIS at 2-34 to -35; *see id.* at 4-30.

[35] NMFS 5/17/12 Letter at 31.

[36] *Id.*

claim relating to the river herring and ESA consultation. Also, as noted above, NRC is not required under ESA to take any further action at this point with respect to either species of river herring. However, I do find that Petitioners' concerns regarding these small fish have some merit, even if not in this adjudicatory proceeding. NMFS's recommendations of further actions and investigation, which track fairly closely the concerns of Petitioners, would seem to be warranted under the "hard look" requirement of NEPA.[37]

Magnuson-Stevens Fisheries Act Consultation and Essential Fish Habitat Assessment

After filing their initial Petition, Petitioners filed a "Correction and Supplement," in which they acknowledge that the NRC did actually submit the EFH assessment at issue,[38] but still assert that the EFH consultation process is not complete, and that there has been inadequate scrutiny of related water quality issues. As to their initial MSA-related arguments, Petitioners cite NRC regulations requiring license renewal applicants whose plants use once-through cooling systems, as Pilgrim does,[39] to provide "a copy of current Clean Water Act 316(b) determinations and, if necessary, a 316(a) variance in accordance with 40 CFR part 125, or equivalent State permits and supporting documentation."[40] Petitioners further note that "Entergy's 'current' 316(b) determination and 316(a) variance, contained in its Clean Water Act (CWA) NPDES permit, expired 16 years ago, although it has been administratively extended."[41] In Petitioners' view, this does not satisfy certain requirements on consultation and fish habitat assessments found in the Magnuson-Stevens Fishery Conservation and Management Act of 1976 (MSA). The purpose of this Act, as they point out, is "to promote the protection of essential fish habitat in the review of projects conducted under Federal permits, licenses, or other authorities that affect or have the potential to affect such habitat."[42] The need for the Act arose out of Congress's finding that "one of the greatest long-term threats to the viability of commercial and recreational fisheries is the

---

[37] *See infra* section on NEPA.

[38] Correction and Supplement to: [JRWA] 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 [JRWA] and Pilgrim Watch [hereinafter PW] Motion to Reopen Under 10 C.F.R. § 2.326 and Request for Hearing Under 10 C.F.R. § 2.309(a) and (d), Originally Filed on March 8, 2012 in Above Captioned License Renewal Proceeding (Mar. 15, 2012) at 2 [hereinafter Correction and Supplement].

[39] *See* FSEIS at 2-7.

[40] 10 C.F.R. § 51.53(c)(3)(ii)(B).

[41] Petition, Attached Affidavit of Anne Bingham ¶ 5 [hereinafter Bingham Aff.]; Correction and Supplement at 4. There appears to be no dispute that the NPDES permit is currently administratively extended pending final determination on a 1995 renewal application. *See* Entergy Answer at 18-19.

[42] 16 U.S.C. §§ 1801(b)(7).

continuing loss of marine, estuarine, and other aquatic habitats," which warranted "increased attention for the conservation and management of fishery resources of the United States."[43] Petitioners point out that the Massachusetts Supreme Judicial Court has noted the harms associated with cooling water intake structures,[44] and are concerned that these harms are not adequately being addressed.

The NRC Staff insists that Petitioners have presented no material issue with respect to their MSA-related allegations.[45] Staff agrees that section 305(b)(2) of the MSA "requires all Federal agencies to consult with the NMFS on any proposed actions that may adversely affect essential fish habitat [EFH]," and that NMFS implement these requirements and related procedures in its regulations.[46] Agencies are advised to "consult with NMFS as early as practicable for any federal action that may adversely affect EFH, including renewals of licenses,"[47] and it is required that they "provide a written assessment of the effects of that action on EFH."[48] Staff argues, however, that, while NMFS recommends to agencies measures to conserve EFH that might be "adversely affect[ed]," which require detailed responses, NMFS regulations "do not require a federal agency to implement conservation recommendations where that agency does not have the statutory authority to implement those recommendations."[49] The regulations in question provide that, where there are overlapping responsibilities among more than one agency, and the "agency acting as the lead agency does not have the statutory authority to implement the conservation recommendations, the lead agency will prepare the EFH Assessment but NMFS will not provide them with conservation recommendations," and instead the agency with authority to implement conservation recommendations must consult with NMFS on implementation of any conservation recommendations.[50]

The NRC prepared an EFH assessment, provided it to NMFS[51] — which Staff contends concluded the consultation process for the NRC — and documented this in the EIS in July 2007.[52] Moreover, as Staff points out, NMFS noted

---

[43] 16 U.S.C. § 1801(a)(9).

[44] Petition at 23-24 (citing *Entergy Nuclear Generation Co. v. Department of Environmental Protection,* 949 N.E.2d 1027, 1037 (Mass. 2011)).

[45] NRC Staff's Answer to [JRWA] and [PW]'s Petitions for Leave to Intervene and Motions to Reopen the Record (Mar. 19, 2012) at 19.

[46] *Id.* (citing 16 U.S.C. § 1855(b)(3); 50 C.F.R. §§ 600.905, 600.920(a)(1)-(3)).

[47] *Id.*

[48] *Id.* (citing 50 C.F.R. § 600.920(a)(1)-(3), (e)(1-4)).

[49] *Id.* at 20 (citing 16 U.S.C. § 1855(b)(4)(A); 50 C.F.R. §§ 600.925(a), 600.920(k)).

[50] *Id.* (citing 50 C.F.R. § 600.920(b), 600.925(a)).

[51] Letter from P.T. Kuo, NRC, to P. Colosi, NMFS, Biological Assessment and Essential Fish Habitat Assessment for License Renewal of Pilgrim Nuclear Power Station (Dec. 8, 2006) (ADAMS Accession No. ML063390166); *see also* FSEIS at E-44 to -45, E-51, E-80.

[52] Staff Answer at 21-22 (citing FSEIS, App. E).

Staff's position that the EPA "had sole authority over operational conditions and mitigation conditions affecting the EFH," and specifically stated in a January 2007 letter that it "determined that our issues of concern relative to living marine resources and EFH would be most appropriately addressed through the EPA's NPDES [National Pollutant Discharge Elimination System] permit renewal process."[53] NMFS therefore did not provide the NRC with EFH conservation recommendations on the Pilgrim license renewal, but instead stated that it would "perform a detailed review of the proposed project within the NPDES permit renewal process and potentially provide EFH conservation recommendations at that time," and that it was "concluding the EFH consultation process [with NRC] without providing conservation recommendations."[54] In its letter to the NRC, NMFS indicated that EPA was "currently in the process of developing a demonstration document for reissuance of the NPDES permit."[55]

I agree that Petitioners, in not addressing information that was available in 2007, are untimely in their arguments on MSA requirements; nor does there appear to be a question that the NRC complied with relevant requirements in this regard. What appears to most concern Petitioners is the apparently undisputed circumstance that the Pilgrim plant received its first NPDES permit in 1991, but that it expired in 1996 and has not been renewed since that time, remaining instead in effect administratively until such time as action is taken on the renewal by the EPA.[56]

Although Applicant did apparently inquire about Clean Water Act requirements relating to the renewal in 2005,[57] it is not altogether clear what has happened since that time. Petitioners, through the Affidavit of Ms. Anne Bingham, former senior attorney for the Massachusetts Department of Environmental Protection, Division of Water Pollution Control, assert that nothing is happening with respect to the pending permit application,[58] and that no permit can be issued "unless Massachusetts issues a 'water quality certification' stating that EPS's permit does not violate the state water quality standards."[59] According to Ms. Bingham, it is unlikely that a new NPDES permit can be issued by June 2012, when the current license expires.[60]

Although the NPDES permitting process does not excuse NRC from addressing

---

[53] *Id.* at 22 (citing FSEIS, E-44 to -45; 50 C.F.R. § 600.920(b)).

[54] *Id.* at 22-23 (citing 50 C.F.R. § 600.920(b); FSEIS at E-44 to -45, E-135, A-114).

[55] FSEIS at E-44.

[56] *See* Petition, Attached Affid. of Anne Bingham ¶ 5.

[57] *See id.* ¶ 6.

[58] *Id.* ¶¶ 6, 7.

[59] *Id.* ¶ 8.

[60] *Id.* ¶¶ 8-11.

relevant water quality issues in its EIS,[61] Petitioners herein have not raised such issues in an appropriate manner or at an appropriate time for them to be admitted into this adjudication proceeding. To the extent the issues they raise are valid, of course, the NRC should address them, as it should address any significant water quality or other environmental issue as part of its responsibility under NEPA. The Massachusetts Court has noted what it appears to consider significant issues with the cooling water intake structure used at Pilgrim,[62] and it may be that the NRC itself should undertake to look further into such issues prior to making a final determination on the pending renewal Application.[63] Further, I note that NMFS has provided EPA with a copy of its May 17, 2012, letter, and states in its letter to the NRC that, "[i]f in the future EPA issues a revised NPDES permit for this facility, reinitiation of this consultation, involving both EPA and NRC, is likely to be necessary."[64] In addition, NMFS notes its understanding that "revised CWA 316(b) regulations may be issued by EPA in 2012," stating that, "[i]f there are any modifications to the Pilgrim facility resulting from the implementation of these regulations, reinitiation of this consultation is likely to be necessary."[65]

NEPA and Asserted Requirement for Supplement to EIS

I have previously noted the requirement, also herein argued by Petitioners,[66] that a "'hard look' [must be taken] at the environmental consequences"[67] of renewing the license for the Pilgrim plant. I have also recognized NEPA's "'dual purpose' [of] ensur[ing] that federal officials *fully take into account* the environmental consequences of a federal action *before* reaching major decisions, and . . . inform[ing] the public, Congress, and other agencies of those consequences,"[68] further noting that NEPA exists in part to "ensure[ ] that important effects will not

---

[61] *See Calvert Cliffs Coordinating Committee, Inc. v. AEC,* 449 F.2d 1123 (D.C. Cir. 1971); *Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 278-79 (2009).

[62] *See supra* note 44.

[63] With respect to the requirement for a State water quality certification and the impact of this on NRC's authority to issue a renewed license, a dispute relating to the Vermont Yankee license renewal is currently before the D. C. Circuit Court of Appeals In the Matter of *Vermont Department of Public Service v. NRC,* Nos. 11-1168, 11-1177, oral argument on which was heard May 9, 2012. On May 14, Petitioners filed a new contention raising matters specifically including the water quality certification issue.

[64] NMFS 5/17/12 Letter at 32.

[65] *Id.*

[66] *See* Petition at 12-14.

[67] *Baltimore Gas & Electric Co v. Natural Resources Defense Council, Inc.,* 462 U.S. 87, 97 (citing *Kleppe v. Sierra Club,* 427 U.S. 390, 410 n.21 (1976)); *see* LBP-12-1, Young Dissent, 75 NRC at 35.

[68] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC

(Continued)

be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast."[69] Given the outcomes on Petitioners' first three claims, they have little to support a favorable conclusion on their fourth, in this adjudicatory proceeding at this time. However, even though such matters may not be admissible in this adjudicatory proceeding, concerns have been raised, both by Petitioners and by NMFS, that may well warrant a "hard[er] look" than they have received to this point.

For example, the NRC in the Pilgrim FSEIS has a section on the alewife, in which it describes the fish, stating that "[a]lewife larvae and juveniles have been collected in the PNPS entrainment sampling," that "[j]uveniles and/or adults have been consistently collected in the PNPS impingement sampling program," and that, "[o]ver the last 25 years (1980 to 2005), alewives have had the third highest number of individuals impinged at PNPS, based on annual extrapolated totals."[70] The FSEIS does not, however, address the questions, raised by both Petitioners and NMFS, *why* alewife larvae are present near Pilgrim's cooling water intakes and whether this is due to the operations of the Pilgrim plant.[71] Although it would be inappropriate for me to direct the NRC Staff in its actions, the Staff might appropriately choose to proceed with a supplemental EIS in which these questions might be among the issues addressed.[72]

340, 348 (2002) (emphasis added) (citing *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 349 (1989); *Baltimore Gas & Elec.,* 462 U.S. at 97; *Dubois v. U.S. Department of Agriculture,* 102 F.3d 1273, 1291 (1st Cir. 1996)); *see* LBP-12-1, Young Dissent, 75 NRC at 34.

[69] *Robertson,* 490 U.S. at 349; *see* LBP-12-1, Young Dissent, 75 NRC at 36. As I noted in my Dissent to LBP-12-1, at 36 n.48, Pilgrim Watch has previously cited *Marsh v. Oregon Natural Resources Council,* 490 U.S. 360, 371 (1989), for the principle that "it would be incongruous with NEPA's 'action-forcing' purpose to allow an agency to put on 'blinders to adverse environmental effects,' just because the EIS has been completed."

[70] FSEIS at 2-34 to -35.

[71] *See supra* notes 32-35 and accompanying text.

[72] Although the various license conditions proposed by NMFS are not part of the matters now at issue before us, the letter containing this information has been provided to us to consider in our deliberations on the current contention, the information is obviously related to aspects of the contention, and as such, these matters would also seem to be appropriate subjects for further consideration by NRC Staff under NEPA, as would any occurrence of any of the circumstances recounted by NMFS that might warrant reinitiation of ESA consultation. *See supra* note 10.

Cite as 75 NRC 681 (2012) **CLI-12-13**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of **Docket Nos. 50-275-LR**
50-323-LR

PACIFIC GAS AND ELECTRIC COMPANY
(Diablo Canyon Nuclear Power Plant, Units 1 and 2) **June 7, 2012**

ENVIRONMENTAL REPORT, LICENSE RENEWAL APPLICATIONS

Compliance with the National Environmental Policy Act (NEPA) is ultimately the responsibility of the NRC. However, license renewal applicants must submit an environmental report to aid the Staff in its preparation of a supplemental environmental impact statement.

REFERRED RULINGS

We encourage our licensing boards to refer rulings that raise significant and novel legal or policy issues, the resolution of which would materially advance the orderly disposition of the proceeding.

CONTENTIONS, TIMELINESS

In adjudicatory proceedings, regardless of whether the applicant comes forward with supplemental information, our rules of practice place the initial burden of

raising issues based on such new information on petitioners and intervenors. In other words, the "trigger point" for the timely submission of new or amended contentions is when new information becomes available, and our process places on the intervenor the obligation to raise new contentions based on such information.

CONTENTIONS, TIMELINESS

By participating in our proceedings, intervenors accept the obligation of uncovering relevant, publicly available information.

CONTENTIONS, TIMELINESS

We expect intervenors to file contentions on the basis of the applicant's environmental report and not delay their contentions until after the Staff issues its environmental analysis.

REVIEW, INTERLOCUTORY

We grant interlocutory review only upon a showing of extraordinary circumstances. That is, a petition for interlocutory review must show that the issue to be reviewed: (i) Threatens the party adversely affected by it with immediate and serious irreparable impact which, as a practical matter, could not be alleviated through a petition for review of the presiding officer's final decision; or (ii) affects the basic structure of the proceeding in a pervasive or unusual manner.

REVIEW, INTERLOCUTORY

We have long held that routine contention admissibility decisions do not affect the basic structure of a proceeding in a "pervasive or unusual manner."

MEMORANDUM AND ORDER

The Licensing Board has referred to us a portion of its decision that rejected a proposed new contention filed by the San Luis Obispo Mothers for Peace (SLOMFP) relating to the Fukushima Dai-ichi accident in Japan.[1] SLOMFP has petitioned for interlocutory review of the remaining portion of the Board's

[1] LBP-11-32, 74 NRC 654 (2011).

decision.[2] For the reasons set forth below, we decline review of the Board's ruling. We also deny SLOMFP's petition for review without prejudice.

I. BACKGROUND

In response to a notice of opportunity for hearing published in the *Federal Register,*[3] SLOMFP timely filed a request for hearing and petition for leave to intervene, submitting five proposed contentions, as well as a related waiver petition.[4] The Board granted SLOMFP's hearing request, admitting four of SLOMFP's contentions.[5] The Board also found that SLOMFP had demonstrated a prima facie case for waiver as to one of the contentions, and certified the waiver petition to us for a decision on the merits.[6] On appeal, we affirmed in part, and reversed in part, the Board's decision.[7] Specifically, we affirmed the Board's ruling on Contention EC-1, an environmental contention asserting that Pacific Gas and Electric Company's (PG&E) severe accident mitigation alternatives (SAMA) analysis fails to consider seismic information from the nearby Shoreline Fault.[8] We reversed the Board's rulings on the other admitted contentions and denied the waiver petition.[9] Contention EC-1 currently remains pending before the Board.

On March 11, 2011, a 9.0 magnitude earthquake, followed by a devastating tsunami, occurred off the eastern coast of Japan, severely damaging the Fukushima Dai-ichi Nuclear Power Station. In response to these tragic events, the agency, among other lessons-learned efforts, established a Near-Term Task Force "to conduct a methodical and systematic review of our processes and regulations to determine whether the agency should make . . . improvements to our regulatory

---

[2] San Luis Obispo Mothers for Peace's Petition for Partial Interlocutory Review of LBP-11-32 (Dec. 5, 2011) (Petition).

[3] Notice of Acceptance for Docketing of the Application, Notice of Opportunity for Hearing for Facility Operating License Nos. DPR-80 and DPR-82 for an Additional 20-Year Period; Pacific Gas & Electric Company, Diablo Canyon Nuclear Power Plant, Units 1 and 2; and Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information (SUNSI) for Contention Preparation, 75 Fed. Reg. 3493, 3493 (Jan. 21, 2010).

[4] Request for Hearing and Petition to Intervene by San Luis Obispo Mothers for Peace (Mar. 22, 2010); San Luis Obispo Mothers for Peace's Petition for Waiver of 10 C.F.R. Part 51 Subpart A Appendix B and 10 C.F.R. § 51.53(c)(2) (Mar. 22, 2010); Declaration by Diane Curran in Support of Petition for Waiver of 10 C.F.R. Part 51 Subpart A Appendix B and 10 C.F.R. § 51.53(c)(2) (Mar. 22, 2010).

[5] LBP-10-15, 72 NRC 257, 345-46 (2010).

[6] *Id.*

[7] CLI-11-11, 74 NRC 427, 459 (2011).

[8] *See id.* at 444.

[9] *See id.* at 459.

system and make recommendations to the Commission for its policy direction."[10] As relevant here, the Task Force issued its findings and recommendations on July 12, 2011, in its Near-Term Report.[11] One month later, SLOMFP submitted a proposed new contention, which the Board labeled "Contention EC-5."[12] Contention EC-5 challenges PG&E's Environmental Report, asserting that it is deficient for failing to consider the Task Force's findings and recommendations.[13] According to SLOMFP, the Near-Term Report raises "new and significant information" that must be considered for the purposes of satisfying the requirements of the National Environmental Policy Act (NEPA).[14] Compliance with NEPA is ultimately the responsibility of the NRC.[15] However, license renewal applicants must submit an environmental report to aid the Staff in its preparation of a supplemental environmental impact statement (draft SEIS).[16] Because the Staff has not yet issued the draft SEIS for Diablo Canyon, SLOMFP thus asserted that PG&E must update its Environmental Report to account for this information.[17]

The Board rejected the new contention on two independent grounds. First, the Board determined that NRC regulations do not impose on a license renewal applicant a continuing duty to supplement its Environmental Report to address

---

[10] Staff Requirements — COMGBJ-11-0002 — NRC Actions Following the Events in Japan (Mar. 21, 2011) at 1 (ADAMS Accession No. ML110800456). *See also* "Charter for the Nuclear Regulatory Commission Task Force to Conduct a Near-Term Evaluation of the Need for Agency Actions Following the Events in Japan" (Mar. 30, 2011) (ADAMS Accession No. ML11089A045).

[11] "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) (transmitted to the Commission via "Near-Term Report and Recommendations for Agency Actions Following the Events in Japan," Commission Paper SECY-11-0093 (July 12, 2011) (ADAMS Accession No. ML11186A950) (package)) (Near-Term Report).

[12] 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); Contention Regarding NEPA Requirement to Address Safety and Environmental Implications of the Fukushima Task Force Report (Aug. 11, 2011) (New Contention); Declaration of Dr. Arjun Makhijani Regarding Safety and Environmental Significance of NRC Task Force Report Regarding Lessons Learned from Fukushima Daiichi Nuclear Power Station Accident (Aug. 8, 2011); LBP-11-32, 74 NRC at 657. SLOMFP filed a separate petition for rulemaking that is currently pending before the Staff. *See* Taxpayers and Ratepayers United et al., Environmental Impacts of Severe Reactor and Spent Fuel Pool Accidents, 76 Fed. Reg. 70,067, 70,069 (Nov. 10, 2011) (Docket No. PRM-51-15) (stating that "[t]he NRC will consider the issues raised by [this rulemaking petition] through the process the Commission has established for addressing the recommendations from the [Near-Term] Report and is not providing a separate opportunity for public comment on the [rulemaking petition] at this time").

[13] New Contention at 4.

[14] *Id.* at 4-5.

[15] *See* 42 U.S.C. § 4332(2); 10 C.F.R. § 51.10.

[16] *See* 10 C.F.R. § 51.53(c).

[17] *See* New Contention at 9-10. *See generally* 10 C.F.R. § 51.53(c).

new and significant information.[18] Based on this reasoning, the Board found that PG&E had no duty to supplement its Environmental Report, and thus found "no legal theory to support" SLOMFP's contention.[19] Second, and alternatively, the Board found that even if PG&E had a duty to supplement its Environmental Report, the contention was inadmissible because "SLOMFP offer[ed] nothing to link the outcome of the Fukushima events to either [Diablo Canyon or the license renewal application]," and thus failed "to show any dispute with the application."[20]

The Board referred to us the portion of its ruling regarding its determination that PG&E has no legal duty to supplement the Environmental Report.[21] Also before us is SLOMFP's petition for interlocutory review of the Board's alternative ground for dismissing the contention. PG&E and the Staff oppose the petition for interlocutory review.[22]

II. DISCUSSION

A. The Referred Ruling

We encourage our licensing boards to refer rulings that raise "significant and novel legal or policy issues," the resolution of which "would materially advance the orderly disposition of the proceeding."[23] According to the Board, there are three "significant consequences" of its ruling.[24] First, the Board expresses concern that if it incorrectly determined that PG&E has no legal duty to supplement the Environmental Report, PG&E's reliance on this potentially incorrect ruling will cause PG&E not to be in compliance with our regulations.[25] Second, the Board observes that its ruling "means that the onus is on the . . . Staff to capture and discuss, in its [draft SEIS], any new and significant information that arises after

---

[18] *See* LBP-11-32, 74 NRC at 666-68.

[19] *Id.* at 668-69.

[20] *Id.* at 671 (citing 10 C.F.R. § 2.309(f)(1)(vi)).

[21] *See id.* at 671-72. Although Judge Abramson concurred in the decision overall, he would not have referred this portion of the Board's ruling. *See id.* at 674 (Abramson, J., concurring). In his view, the ruling "raises no novel legal or policy issue," and the referral potentially "casts a cloud over what is a straightforward and obvious result." *Id.*

[22] Pacific Gas and Electric Company's Reply to Petition for Partial Interlocutory Review (Dec. 15, 2011); NRC Staff's Answer to Petition for Review of LBP-11-32 (Dec. 15, 2011).

[23] 10 C.F.R. § 2.341(f)(1). *See also Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 170 (2011) (advising that "should a licensing board decision raise novel legal or policy questions, we encourage the boards to certify to us, in accordance with 10 C.F.R. §§ 2.319(*l*) and 2.323(f), those questions that would benefit from our consideration"); *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 72 (2009).

[24] LBP-11-32, 74 NRC at 672.

[25] *Id.*

the [Environmental Report]."[26] Third, the Board expresses concern that its ruling might mislead SLOMFP as to the appropriate timing for submitting a contention based on "new and significant information."[27]

Although the Board's approach to SLOMFP's new contention is novel, and we appreciate the Board's bringing the matter to our attention, we do not find that resolution of the issue whether PG&E independently is required to supplement its Environmental Report to account for new and significant information will "materially advance the orderly disposition" of this adjudication. As an initial matter, the Board's decision does not hinge on the Board's novel interpretation of an applicant's obligations; the Board also provided an alternate basis for disposition of Contention EC-5[28] — failure "to 'provide sufficient information to show that a genuine dispute exists . . . on a material issue of law or fact' as required by 10 C.F.R. § 2.309(f)(1)(vi)."[29]

More importantly, because of how our contention admissibility requirements are structured, it is not necessary for us to define precisely the license renewal applicant's obligations after initial submission of its application. In adjudicatory proceedings, regardless of whether the applicant comes forward with supplemental information, our rules of practice place the initial burden of raising issues based on such new information on petitioners and intervenors.[30] In other words, the "trigger point" for the timely submission of new or amended contentions is when new information becomes available, and our process places on the intervenor the obligation to raise new contentions based on such information. For these reasons, we find that consideration of the Board's question will not materially advance this proceeding, and we decline to review the Board's ruling.[31]

---

[26] *Id.*

[27] *Id.* (reasoning that the "earliest possible moment at which SLOMFP [would] be obliged to file an environmental contention based on any 'new and significant information'" is 30 days after the Staff issues the draft SEIS, or after PG&E voluntarily supplements its Environmental Report).

[28] As we explain in Section II.B, we decline to grant SLOMFP's petition for interlocutory review of this alternative ground for the Board's dismissal of Contention EC-5; accordingly, we express no opinion on this aspect of the Board's decision.

[29] LBP-11-32, 74 NRC at 671.

[30] As we stated in our 1998 policy statement on adjudications, "[a] contention's proponent . . . is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for the admission of contentions." *Statement of Policy on Conduct of Adjudicatory Proceedings,* CLI-98-12, 48 NRC 18, 22 (1998). *See generally* 10 C.F.R. § 2.309(c), (f)(2). By participating in our proceedings, intervenors accept the obligation of uncovering relevant, publicly available information. *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1048 (1983).

[31] Our decision to decline review of the referred question does not constitute an endorsement of the Board's views on the question of an applicant's duty to supplement. *See Baltimore Gas & Electric*

(Continued)

The Chairman's partial dissent does not persuade us otherwise. As explained above, in the context of this litigation, there is no need to accept the referral and address the referred issue of whether PG&E has a legal duty to supplement the Environmental Report.[32] However, we note that the Chairman joins the majority in reaffirming that our rules require the filing of contentions on new information as early as possible after the information becomes available. We therefore expect the Board to act accordingly.

B. SLOMFP's Petition for Interlocutory Review

We likewise are not inclined to grant interlocutory review of the Board's alternative ground for dismissing SLOMFP's new contention. We grant interlocutory review only upon a showing of "extraordinary circumstances."[33] That is, a petition for interlocutory review must show that the issue to be reviewed:

> (i) Threatens the party adversely affected by it with immediate and serious irreparable impact which, as a practical matter, could not be alleviated through a petition for review of the presiding officer's final decision; or

---

Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 343 n.3 (1998) (explaining that unreviewed board rulings have no precedential value). We note, however, that applicants "may submit a supplement to an environmental report at any time." 10 C.F.R. § 51.45(a). Regardless of whether there is an affirmative duty to supplement an environmental report, applicants still face a continuing possibility of contentions in adjudicatory proceedings based upon omissions or deficiencies in their environmental report (as long as the contention meets all applicable contention admissibility criteria) because "our rules require the filing of contentions as early as possible." *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-4, 59 NRC 31, 45 (2004). We also note that an environmental report "should contain sufficient data to aid the Commission in its development of an independent analysis." 10 C.F.R. § 51.45(c). We expect "intervenors [to] file contentions on the basis of the applicant's environmental report and not delay their contentions until after the Staff issues its environmental analysis." *Private Fuel Storage,* CLI-04-4, 59 NRC at 45. *See also Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 429 (2003); *Catawba,* CLI-83-19, 17 NRC at 1048-50 ("While all environmental contentions may, in a general sense, ultimately be challenges to the NRC's compliance with NEPA, factual aspects of particular issues can be raised before the [draft EIS] is prepared. . . . [T]he Commission expects that the filing of an environmental concern based on the [environmental report] will not be deferred because the [S]taff may provide a different analysis in its [draft EIS]. Should that circumstance transpire, there will be ample opportunity to either amend or dispose of the contention."). The Board's schedule for the submission of new Fukushima-related contentions in this proceeding ignores these long-standing principles.

[32] Apart from this adjudication, we will ask the Staff to review generically an applicant's duty to supplement or correct its environmental report.

[33] *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-09-6, 69 NRC 128, 133 (2009) (and cases cited therein).

(ii) Affects the basic structure of the proceeding in a pervasive or unusual manner.[34]

SLOMFP relies on the second prong of our interlocutory review standard, arguing that the Board's ruling will have a "pervasive and unusual effect" on this — and other — proceedings.[35]

Pointing to the Board's discussion of CLI-11-5, SLOMFP asserts that the Board found its contention "premature," and claims that such a finding "creat[es] great uncertainty regarding the appropriate timing" for filing new environmental contentions based on the Fukushima events.[36] SLOMFP also cites licensing board decisions in other proceedings that rejected similar contentions based on prematurity, again pointing to uncertainty concerns.[37] In addition to reversal of the Board's decision, SLOMFP requests our guidance on the appropriate timing of Fukushima-related contentions.[38]

As an initial matter, SLOMFP misinterprets the Board's contention admissibility finding. The Board did not base its ruling on prematurity; rather, it found that SLOMFP had failed to show a genuine dispute with PG&E's license renewal application, as required by 10 C.F.R. § 2.309(f)(1)(vi), because SLOMFP had not demonstrated a specific link between the Fukushima events and Diablo Canyon (and, particularly, the license renewal application).[39] Further, SLOMFP has not shown that interlocutory review is warranted here. We have long held that routine contention admissibility decisions do not affect the basic structure of a proceeding in a "pervasive or unusual manner."[40] We see nothing here that would persuade

---

[34] 10 C.F.R. § 2.341(f)(2).

[35] Petition at 10.

[36] *Id.* at 6, 10.

[37] *Id.* at 10-11.

[38] *Id.* at 11.

[39] *See* LBP-11-32, 74 NRC at 670 ("[W]e fail to see, and SLOMFP has not shown, how the[Task Force] recommendations in and of themselves . . . constitute 'new and significant information' that 'present[s] a seriously different picture of the environmental impact of the project from what was previously envisioned.'" (quoting *Callaway,* CLI-11-5, 74 NRC at 167-68 (last alteration in original)). As an aside, the Board observed that at this time "[t]he impacts of the Task Force recommendations remain uncertain and unpredictable." *Id.* at 671. It also noted that any "Fukushima contentions may still be premature." *Id.* at 670 n.35 (emphasis omitted). But the Board ultimately rejected the contention based on SLOMFP's failure to meet the requirements of section 2.309(f)(1)(vi). *See id.* at 671 ("Thus, we conclude that EC-5 is inadmissible because SLOMFP has failed to 'provide sufficient information to show that a genuine dispute exists . . . on a material issue of law or fact' as required by 10 C.F.R. § 2.309(f)(1)(vi)." (omission in original)).

[40] *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-08-2, 67 NRC 31, 35 (2008); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-2, 51 NRC 77, 79-80 (2000); *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-94-2, 39 NRC 91, 94 (1994).

us to take review now, considering that SLOMFP will have an opportunity to challenge the Board's contention admissibility decision at the end of the case.[41]

As to SLOMFP's request for guidance on the submission of further contentions associated with the Fukushima events, we addressed this question initially in CLI-11-5. There, we observed that licensing boards applied existing procedural rules to new contentions and motions to reopen filed in response to the Three Mile Island accident and the September 11, 2001, terrorist attacks.[42] In keeping with past practice, we declined to establish "new procedures [ ]or a separate timetable for raising . . . issues related to the Fukushima events."[43] We find no reason to revisit that ruling today. The agency has made, and continues to make, significant progress in its lessons-learned review. However, lessons-learned activities are proceeding, and will continue to proceed, in parallel, and on varying schedules.[44] It is therefore not practicable today to set a single "deadline" or other timetable for new or amended Fukushima-related contentions. But neither is it necessary. As tangible lessons from the events in Japan emerge, Fukushima-related contentions may be raised that are appropriate for litigation in an individual case such as this one (except to the extent that those lessons are addressed in a generic fashion). Our rules of practice provide the procedural flexibilities needed to address such contentions as new information becomes available. As we determined in CLI-11-5, and recently reiterated,[45] our rules "contain ample provisions through which litigants may seek admission of new or amended contentions."[46] As discussed above, SLOMFP — like any intervenor — retains the responsibility to raise new or amended contentions as new information becomes available if they wish

---

[41] *See* 10 C.F.R. § 2.341(b); *Pilgrim,* CLI-08-2, 67 NRC at 35-36. To be sure, if SLOMFP ultimately files a petition for review, it may challenge either of the two grounds for the Board's rejection of the contention, or both.

[42] *See Callaway,* CLI-11-5, 74 NRC at 170 & n.120.

[43] *Id.* at 171. We stated at that time that we would "monitor our ongoing adjudicatory proceedings" and would "reassess this determination if it becomes apparent that additional guidance would be appropriate." *Id.*

[44] *See generally* Staff Requirements — SECY-11-0124 — Recommended Actions to Be Taken Without Delay from the Near-Term Task Force Report (Oct. 18, 2011) (ADAMS Accession No. ML112911571) (Staff Requirements — SECY-11-0124); Staff Requirements — SECY-11-0137 — Prioritization of Recommended Actions to Be Taken in Response to Fukushima Lessons Learned (Dec. 15, 2011) (ADAMS Accession No. ML113490055); Staff Requirements — SECY-12-0025 — Proposed Orders and Requests for Information in Response to Lessons Learned from Japan's March 11, 2011, Great Tohoku Earthquake and Tsunami (Mar. 9, 2012) (ADAMS Accession No. ML120690347). We have directed, among other things, that the agency "should strive to complete and implement the lessons learned from the Fukushima accident within 5 years — by 2016." Staff Requirements — SECY-11-0124, at 1.

[45] *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-3, 75 NRC 132, 141 (2012).

[46] *Callaway,* CLI-11-5, 74 NRC at 170. *See, e.g.,* 10 C.F.R. §§ 2.309(f)(2), 2.326.

to litigate those issues.[47] In accordance with these principles, the Board has the responsibility to determine whether such contentions are timely raised and adequately supported.[48]

III. CONCLUSION

For the reasons set forth above, we *decline* review of the Board's referred ruling. We *deny* SLOMFP's petition for interlocutory review without prejudice.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

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

---

[47] *See Catawba,* CLI-83-19, 17 NRC at 1048.

[48] On April 27, 2012, SLOMFP filed two new Fukushima-related contentions, which are currently pending before the Board. *See* San Luis Obispo Mothers for Peace Motion to Admit Contentions Regarding Failure of Environmental Report to Address Post-Fukushima Investigations and Modifications (Apr. 27, 2012).

Chairman Gregory B. Jaczko, Concurring in Part and Dissenting in Part

I fully agree with the majority that our rules require the filing of contentions on new information as early as possible after the information becomes available. As the majority observes, this means that the appropriate "trigger point" for submitting new contentions is when the new information becomes available and the intervenor has the obligation to raise new contentions on new information. Having reached that conclusion, I disagree with my colleagues that we should not take interlocutory review of the Board's ruling.

The majority opinion leads to one obvious conclusion — that the Board committed clear error in ruling that the earliest time at which an intervenor could be obligated to file an environmental contention based on new information (relating to Fukushima) would be after (1) the NRC issues an environmental review document or (2) the applicant voluntarily supplements the environmental report to address the new information. After identifying this error in the Board's ruling, I see no reason to allow it to remain uncorrected. I believe the Commission should take review, correct the error, and overturn the Board's decision.

I believe Commission review is particularly important here because this error is premised upon what I consider another error — the Board's premise that applicants have no responsibility to correct or update an environmental report after the application is submitted. Because we are not responsible for the action, we must rely on our applicants to provide information necessary for our review. The integrity of our licensing process depends on our ability to rely on that information. It is for this reason that our regulations require that applicants provide information that is accurate and complete. From the standpoint of sound regulatory policy and simple logic, that obligation should apply as long as the application remains pending. Therefore, applicants should be responsible for correcting and updating the information in the application, including the environmental report, as long as the Staff review continues.

Nevertheless, I recognize that the adjudicatory record on these obligations is limited because the Board reached these novel interpretations in the context of a specific license renewal and without obtaining full briefing from the parties. Therefore, I support the proposal by my colleagues to direct the Staff, outside of this proceeding, to examine the laws, regulations, policies, guidance, and practices associated with updating and correcting environmental reports by license applicants. This will allow us to consider this important issue generically and provide any appropriate Commission clarification or direction.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman
Kristine L. Svinicki
George Apostolakis
William D. Magwood, IV
William C. Ostendorff

In the Matter of **Docket No. 52-017-COL**
(Combined License Application)

VIRGINIA ELECTRIC AND POWER COMPANY d/b/a DOMINION VIRGINIA POWER and OLD DOMINION ELECTRIC COOPERATIVE
(North Anna Power Station, Unit 3) **June 7, 2012**

MOTIONS TO REOPEN

It is the Commission's longstanding practice in our proceedings that, once all contentions have been decided, the contested proceeding is terminated. *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-3, 75 NRC 132, 140-41 (2012); *Luminant Generation Co., LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-11-9, 74 NRC 233, 236 (2011); *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 217 n.1 (2011). The courts of appeals have approved the Commission's practice of closing the hearing record after resolution of the last live contention, and of holding new contentions to the higher reopening standard. *See, e.g., New Jersey Environmental Federation v. NRC,* 645 F.3d 220, 232-33 (3d Cir. 2011); *State of Ohio v. NRC,* 814 F.2d 258, 262-64 (6th Cir. 1987); *Oystershell Alliance v. NRC,* 800 F.2d 1201, 1207-08 (D.C. Cir. 1986).

MEMORANDUM AND ORDER

Virginia Electric and Power Company, d/b/a Dominion Virginia Power (Dominion), has petitioned for review of the Atomic Safety and Licensing Board's decision denying its request to terminate the contested portion of the proceeding on its combined license (COL) application.[1] For the reasons given below, we grant review and reverse the Board's decision.[2]

I. BACKGROUND

Dominion holds an early site permit to build additional nuclear power reactors at the North Anna site, about 40 miles north-northwest of Richmond, Virginia.[3] In November 2007, Dominion applied for a COL to construct and operate one new reactor at the site (North Anna Unit 3).

The COL proceeding before the Board has been pending since 2008. The issues in the adjudication have changed as the applicant has amended its COL application and as the intervenor, Blue Ridge Environmental Defense League (BREDL), has raised new challenges. Dominion's petition before us today, as explained below, was brought during an interval when there were no unresolved contentions awaiting consideration. This interval closed, however, with BREDL's filing of a new proposed contention on the implications of the August 23, 2011, earthquake in Virginia centered approximately 11 miles from the North Anna facility.[4] That contention is currently being held in abeyance by consent of the parties while Dominion considers the earthquake's impact on its COL application.[5]

A. Litigation History

BREDL filed a timely request for a hearing and petition to intervene, which included eight proposed contentions.[6] In May 2008, the Board found that BREDL had demonstrated standing, and admitted one contention relating to long-term onsite storage of low-level radioactive waste (LLRW).[7] The Board rejected the

---

[1] Dominion's Petition for Review of LBP-11-22 (Sept. 16, 2011) (Petition for Review).

[2] LBP-11-22, 74 NRC 259 (2011).

[3] *See* North Anna Early Site Permit, ESP-003 (Nov. 27, 2007) (ADAMS Accession No. ML-073180440).

[4] Request to Admit Intervenor's New Contention (Sept. 22, 2011).

[5] Consent Motion to Hold BREDL's New Contention in Abeyance (Oct. 12, 2011).

[6] Petition for Intervention and Request for Hearing by the Blue Ridge Environmental Defense League (May 9, 2008).

[7] LBP-08-15, 68 NRC 294 (2008).

remaining proposed contentions.[8] Shortly thereafter, the Board issued a scheduling order governing the timing of future pleadings, including setting a timetable for BREDL to propose new contentions on the Staff's Final Safety Evaluation Report (FSER) and Final Supplemental Environmental Impact Statement (SEIS).[9]

Dominion amended its application to address the concerns in BREDL's sole admitted contention, and soon thereafter moved to dismiss the contention as moot.[10] In response, BREDL filed a "Motion to Submit a New Contention," but did not file the new contention — Contention 10, challenging the specifics of Dominion's new plan for long-term LLRW storage — until 2 weeks later.[11] After BREDL filed its motion but before BREDL filed the contention itself, the Board ruled on Dominion's motion to dismiss.[12] The Board dismissed BREDL's original contention as moot, but said it would retain jurisdiction to consider the admissibility of Contention 10.[13] The Board admitted BREDL's new Contention 10 in a separate decision shortly thereafter.[14]

In June 2010, Dominion revised its COL application to change the referenced reactor design from the Economic Simplified Boiling Water Reactor (ESBWR) to the U.S. Advanced Pressurized Water Reactor (US-APWR).[15] In response, BREDL submitted a proposed new Contention 11, arguing that amending a COL application to reference a completely different reactor design was improper.[16] Dominion opposed the contention[17] and, on the same day, moved to dismiss Contention 10 as moot because, due to the change in reactor design, its application no longer made the claims on which Contention 10 was based.[18]

In September 2010, the Board dismissed Contention 10 and declined to admit Contention 11.[19] At that point in the proceeding, no contentions remained. A supplemental scheduling order, however, gave BREDL until October 4, 2010, to

---

[8] *Id.*

[9] *See* Order (Establishing Schedule to Govern Further Proceedings) (Sept. 10, 2008) (unpublished).

[10] *See* Grecheck, Eugene S., Vice-President of Nuclear Dev., Dominion Energy, Inc., Letter to U.S. Nuclear Regulatory Comm'n (May 21, 2009) at 1 (ADAMS Accession No. ML0915206360); Dominion's Motion to Dismiss BREDL's Contention 1 as Moot (June 1, 2009).

[11] Intervenor's Motion to Submit New Contention (June 8, 2009); Intervenor's Amended Contention Ten (June 26, 2009).

[12] Order (Dismissing Contention 1 as Moot) (Aug. 19, 2009) (unpublished).

[13] *See id.* at 3-4.

[14] LBP-09-27, 70 NRC 992 (2009).

[15] Lewis, David R., Counsel for Dominion, Letter to Atomic Safety and Licensing Board (June 29, 2010) (advising Board and parties of change in application).

[16] Intervenor's New Contention Eleven (June 17, 2010).

[17] Dominion's Opposition to BREDL's New Contention 11 (July 12, 2010). *See also* NRC Staff's Answer to the Blue Ridge Environmental Defense League's New Contention Eleven (July 2, 2010).

[18] Dominion's Motion to Dismiss BREDL's Contention 10 as Moot (July 12, 2010).

[19] LBP-10-17, 72 NRC 501, 507-08, 509-17 (2010).

file new contentions based on the new reactor design referenced in Dominion's revised COL application.[20]

Under this schedule, BREDL timely filed two new contentions — Contentions 12 and 13 — related to the revised COL application.[21] In LBP-11-10, the Board rejected both new contentions. The Board declined to admit Contention 12 on the ground that it raised issues resolved in the ESP proceeding, and declined to admit Contention 13 on the ground that it failed to raise a genuine dispute with the revised application.[22]

Although, at this point, there were no contentions pending in the proceeding, the Board did not terminate the proceeding. Instead, the Board stated that any contentions based on new information arising later, including new information in the NRC Staff's as-yet unreleased Safety FSER or SEIS, should be filed within the time periods set forth in the Board's previous scheduling orders.[23] The Board also suspended the mandatory disclosure obligations under 10 C.F.R. § 2.336(a) until further notice.

B. Denial of Dominion's Motion for Clarification

According to Dominion, the Board's order should have included a statement terminating the contested portion of the hearing, because there were no longer any contentions at issue in the case. Dominion filed a "Motion for Clarification" asking the Board to "clarify" that it had, in fact, terminated the contested proceeding in

---

[20] Order (Setting Deadline for Filing New Contentions Based on New Information in the Applicant's June 29, 2010 Revision to the License Application) (Aug. 11, 2010) (unpublished).

[21] Intervenors New Contentions (Oct. 2, 2010). Although BREDL designated these Contentions One and Two, the Board referred to them as Contentions 12 and 13 for clarity. Proposed Contention 12 argued that the new US-APWR reactor design would use more fresh water and release more heated water into Lake Anna as compared to the ESBWR design originally referenced, and that the harmful impacts of the design — increased thermal discharges, consumptive water use, and water quality effects resulting from the discharge of pollutants in the blowdown from Unit 3 — justified reconsidering the use of a dry cooling tower for Unit 3. Proposed Contention 13 argued that Dominion "improperly requested a site-specific exemption from the Design Control Document (DCD) Tier 1" for Unit 3, relative to the site-specific safe shutdown earthquake peak ground acceleration. *Id.*

[22] LBP-11-10, 73 NRC 424 (2011).

[23] *Id.* at 453. *See* Order (Establishing Schedule to Govern Further Proceedings) (Sept. 10, 2008) (establishing schedule for proceedings with respect to Contention One, and setting deadlines for other filings in accord with the model milestones in 10 C.F.R. Part 2, App. B, for Subpart L proceedings); Order (Updating Schedule Governing Proceeding) (Mar. 22, 2010) (setting deadlines relating to Contention Ten and setting deadline for other filing in accord with the model milestones).

LBP-11-10.[24] In response, the Board ordered the parties to brief the law relating to the timing and effect of closing agency adjudicatory proceedings.[25]

After receiving those briefs, the Board denied Dominion's motion, which it treated as a request to terminate the contested proceeding.[26] This is the Board ruling (LBP-11-22) that is the subject of Dominion's instant petition for review. The Board reasoned that if it closed the record, BREDL would have to meet the elevated procedural requirements for reopening a closed proceeding before it could propose any new contention.[27] The Board pointed out that the Staff's review was still ongoing, and its final review documents (SER or SEIS) were still outstanding. These documents could, theoretically, contain significant new information upon which new contentions might be grounded. The Board further pointed out that, as long as the license review is ongoing, the licensing "proceeding" is still in existence.[28] The Board said that it would not be appropriate to require BREDL to meet the agency's "reopening" procedural standards, which are more stringent than for an ordinary late-filed contention, should the Staff's review documents give rise to a new issue.[29] The Board reasoned that, in this situation, adding the reopening standards to NRC's already-strict contention-admissibility standards would impose such a high burden on the intervenors as to risk a conflict with the Atomic Energy Act § 189a requirement (42 U.S.C. § 2239(a)) that the public be given the opportunity for a hearing.[30] The Board also reasoned that keeping the adjudicatory proceeding open before the Board while the license review is ongoing was an efficient means to provide a forum for future filings.[31]

The Board rejected arguments by Dominion and the NRC Staff that either Commission case law or its regulations required termination. First, the Board

---

[24] Dominion's Motion for Clarification of LBP-11-10 (Apr. 18, 2011).

[25] Order (Regarding Dominion's Motion for Clarification of LBP-11-10) (Apr. 22, 2011) (unpublished).

[26] LBP-11-22, 74 NRC at 261-62.

[27] LBP-11-22, 74 NRC at 269-70 (citing 10 C.F.R. § 2.326).

[28] *Id.* at 267 (citing *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-1, 35 NRC 1, 6 n.5 (1992)).

[29] *Id.* at 269-70.

[30] *Id.* at 281-82.

[31] *Id.* at 270-72. The Board also pointed to an "Emergency Petition," in which BREDL joined with several intervenors and petitioners in other matters to file directly with the Commission in response to the Fukushima Dai-ichi accident. *See id.* at 273. The petition asked us, among other things, to suspend licensing actions pending the agency's investigation in response to the Fukushima Dai-ichi accident. *See generally* Virginia Electric and Power Co. d/b/a/ Dominion Virginia Power and Old Dominion Electric Cooperative (North Anna, Unit 3), 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 (Apr. 18, 2011). At the time of the Board's ruling in LBP-11-22, we had not ruled on the petition, but we subsequently denied the request to suspend proceedings. *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 73 NRC 141 (2011).

pointed to the language of the Notice of Hearing, which delegated to the Board the authority to provide the hearing mandated by the Atomic Energy Act.[32] Next, the Board pointed to NRC regulations governing the termination of the Board's jurisdiction. According to 10 C.F.R. § 2.318(a), a Board's jurisdiction terminates "when the period within which the Commission may direct that the record be certified to it for final decision expires, when the Commission renders a final decision, or when the presiding officer withdraws from the case."[33] The Board found the plain text of this provision delineates the occasions that trigger termination of the presiding officer's jurisdiction, and none applied.[34] Citing the rule of construction that the specific inclusion of some conditions implies the exclusion of those not mentioned, the Board rejected the argument that its jurisdiction must end in other circumstances not mentioned in the regulation.[35] Further, the Board concluded that nothing in NRC rules explicitly states that an intervenor loses its status as a party whenever its sole remaining admitted contention is dismissed prior to the issuance of the SER and Staff NEPA documents.

The Board noted the Staff's acknowledgment that it is not unusual to keep a proceeding open when a contention of omission is mooted by new information, in order to allow the intervenors to formulate new contentions based on the new information.[36] The Board pointed out that it had already kept the proceeding open twice for that purpose. But it found nothing in the regulations to suggest that this is the only situation where a board may hold a proceeding open without a viable contention before it.[37] Nowhere do the regulations state, the Board pointed out, that the intervenor must lose its status as a party if, during the "dynamic" licensing process, it no longer has a live contention.[38]

The Board also relied on the model milestones in 10 C.F.R. Part 2, Appendix B, which anticipate that the intervenor will have the opportunity to pose contentions on the SER and EIS.[39] The Board said it was appropriate to keep the proceeding open "particularly in a case as this where the Applicant has made substantial

---

[32] LBP-11-22, 74 NRC at 274-75 (citing Nuclear Regulatory Commission, Dominion Virginia Power; Notice of Hearing and Opportunity to Petition for Leave to Intervene on a Combined License for North Anna Unit 3, 73 Fed. Reg. 12,760 (Mar. 10, 2008)).

[33] 10 C.F.R. § 2.318 ("Commencement and termination of jurisdiction of presiding officer").

[34] LBP-11-22, 74 NRC at 276-77.

[35] *Id.* at 277 (citing the Supreme Court's recent discussion in *Bruesewitz v. Wyeth LLC,* 131 S. Ct. 1068, 1076 (2011)).

[36] *Id.* (citing the NRC Staff Answer to Dominion's Motion for Clarification and Response to Licensing Board Order Dated April 22, 2011, at 6 (May 2, 2011) (Staff Answer to Motion for Clarification)).

[37] *Id.* at 278.

[38] *Id.*

[39] *Id.* at 279.

changes to the COLA that are still being evaluated by the NRC Staff."[40] In addition, the Board pointed to the scheduling order it issued at the outset of the proceeding, which indicated that the intervenors would have the opportunity to file contentions within 30 days of the issuance of the Staff's final review documents.[41] The scheduling order was based on the Part 2 model milestones. The Board noted that the model milestones contemplate proceedings extending beyond issuance of the Staff review documents. "Nothing in Appendix B conditions an intervenor's right to file new contentions based on [these] documents on whether previously admitted contentions are still pending," the Board reasoned.[42]

The Board was particularly concerned that closing the record of the proceeding at this stage of the license review would potentially violate BREDL's right to a hearing under the AEA. Citing the ruling of the U.S. Court of Appeals for the District of Columbia Circuit in *Union of Concerned Scientists v. NRC,*[43] the Board found that the Commission cannot restrict the opportunity for a hearing so much that it effectively removes from the hearing issues that are material to the licensing decision.[44]

C. BREDL's Contention Concerning the Virginia Earthquake

On August 23, 2011, an earthquake registering 5.8 on the Richter scale struck Mineral, Virginia, approximately 13 miles from the North Anna site, causing an extended shutdown of the existing reactors at the site. BREDL timely filed a request to admit a new contention on the earthquake's implications for the COL application.[45] The parties jointly consented to hold the contention in abeyance while Dominion assessed whether the earthquake would require any changes to its application.[46] According to the parties' consent motion, Dominion expects to finish its assessment by the third quarter of 2012.[47]

The Board granted the request to hold the contention in abeyance.[48] It also set deadlines for amending or supplementing the contention, as well as for the Staff

---

[40] *Id.* at 272.

[41] *Id.* at 279.

[42] *Id.*

[43] 735 F.2d 1437, 1447 (D.C. Cir. 1984) (*UCS I*).

[44] LBP-11-22, 74 NRC at 281-82.

[45] Request to Admit Intervenor's New Contention (Sept. 22, 2011).

[46] Consent Motion to Hold BREDL's New Contention in Abeyance (Oct. 12, 2011).

[47] *Id.* at 1.

[48] Order (Granting Consent Motion to Hold BREDL's New Contention in Abeyance) (Oct. 20, 2011) (unpublished).

and applicant to amend or supplement their answers, after Dominion's assessment is complete.[49] Accordingly, this contention remains pending before the Board.

II. DISCUSSION

A. Review Under 10 C.F.R. § 2.341

Dominion argues that the Board's decision to reject all contentions but not to terminate the adjudication is tantamount to a partial or final initial decision, and thus immediately reviewable by the Commission under 10 C.F.R. § 2.341. The NRC Staff supports Dominion's interpretation of our regulations in this regard.[50] We agree: the Board's ruling resolving the last pending contention (that is, LBP-11-10) amounted to a final board decision. That ruling would have triggered the time for filing petitions for review but for the Board's additional ruling in LBP-11-22 — which we now find to be in error — that the proceeding would be held open to entertain new contentions. The Board's decision raises a potentially recurring procedural issue of some importance. Hence, we exercise our discretion under section 2.341 to review it.

As a consequence of our ruling today that the Board should have terminated the proceeding once it resolved all contentions, all of the Board's earlier interlocutory orders now become ripe for our appellate review. Therefore, any party who wishes to file a petition for review should comply with the timing and procedural provisions of 10 C.F.R. § 2.341, which, as we explain below, we adapt to fit the unusual procedural posture of this case.

B. Analysis

1. The Record Properly Closed with the Disposition of the Last Contention

We find that the Board erred in denying Dominion's motion. The Board's approach cannot be squared with the longstanding practice in our proceedings that, once all contentions have been decided, the contested proceeding is terminated.[51] Our review of agency case law reveals no situation where a Board has

---

[49] *Id.*

[50] NRC Staff Answer to "Dominion's Petition for Review of LBP-11-22" (Sept. 26, 2011). *See also* NRC Staff Answer to Motion for Clarification.

[51] *See, e.g., Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-3, 75 NRC 132, 140-41 (2012); *Luminant Generation Co., LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-11-9, 74 NRC 233, 236 (2011); *Southern Nuclear Operating Co.* (Vogtle Electric

(Continued)

held a proceeding open after the resolution of the last contention because new information triggering fresh contentions might appear later in the Staff's final review documents. The courts of appeals have repeatedly approved our practice of closing the hearing record after resolution of the last "live" contention, and of holding new contentions to the higher "reopening" standard.[52] Agencies need not keep adjudications open indefinitely to await potential new developments. An "unfettered ability to file a late contention may significantly undermine the efficiency of a proceeding even if the contention is based on newly discovered information."[53]

We reject the Board's reasoning that applying the reopening standards to a new contention is tantamount to denying BREDL its right to a hearing under the AEA. BREDL will have the opportunity to move to reopen the record to raise new contentions on the Staff's review documents. While our rule governing motions to reopen sets a high standard — focusing on the timeliness, seriousness, and materiality of the new claim — it by no means prohibits hearings on significant new safety or environmental issues.[54] The very purpose of having the reopening rule is to make sure that petitioners have an opportunity to raise serious issues after the close of the record.[55] In unusual circumstances, where fairness dictates, we have been willing to soften or waive our reopening requirements.[56] The D.C. Circuit has considered and rejected the argument that applying heightened

---

Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 217 n.1 (2011). *See also Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), LBP-05-19, 62 NRC 134, 183 (2005) ("There being no admitted contention remaining to be litigated, the contested portion of this proceeding is terminated.").

[52] *See, e.g., New Jersey Environmental Federation v. NRC,* 645 F.3d 220, 232-33 (3d Cir. 2011); *State of Ohio v. NRC,* 814 F.2d 258, 262-64 (6th Cir. 1987); *Oystershell Alliance v. NRC,* 800 F.2d 1201, 1207-08 (D.C. Cir. 1986).

[53] *Massachusetts v. NRC,* 924 F.2d 311, 334 (D.C. Cir. 1990).

[54] To admit a new contention after the contested proceeding has terminated, a petitioner must meet three criteria: (1) the motion must be "timely" (this criterion may be waived if the issue presented is "exceptionally grave"), (2) the contention must address a "significant" safety or environmental issue, and (3) the contention must demonstrate that a "materially different result" would be likely if the proffered evidence had been considered initially. In addition, a motion to reopen must be accompanied by a supporting affidavit. 10 C.F.R. § 2.326(a), (b).

[55] *See Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC 479 (2012). *See also Dominion Nuclear Connecticut, Inc.* (Millstone Power Station, Unit 3), LBP-01-17, 53 NRC 398, 406-07 (2001) (the Board, on reconsideration and after remand from Commission, reopened the record with respect to a previously disposed contention, to consider the effect of the licensee's losing track of a fuel rod).

[56] *Shaw AREVA MOX Services, LLC* (Mixed Oxide Fuel Fabrication Facility), CLI-09-2, 69 NRC 55, 65 (2009) (in the interest of fairness, based on specific facts of the case, Commission waived late-filing and reopening standards with respect to claims that facility had not been constructed in accordance with its permit).

late-filing standards to contentions triggered by the Staff's review documents violates a petitioner's AEA hearing rights.[57] In so ruling, the D.C. Circuit held that the AEA does not "guarantee[ ] all private parties the right to have the staff studies as a sort of pre-complaint discovery tool."[58] Recently, the Third Circuit expressly found NRC's approach to reopening consistent with the AEA's hearing requirement.[59]

We find the Board's other stated reasons for keeping the hearing record open unconvincing. First, the provision regarding termination of the Board's jurisdiction, 10 C.F.R. § 2.318(a), which covers some procedural situations but by no means all, does not purport to provide an exhaustive list of every situation where Board jurisdiction lapses. The three situations specifically listed in section 2.318, for example, do not address the situation where a board's jurisdiction ends after it has rendered a final decision and jurisdiction passes to the Commission to consider any appeals (or *sua sponte* review). This is the most common instance where the Board's jurisdiction ends, and indeed, is in essence the situation before us today.

2. Remand to the Board for Consideration of the Motion to Reopen

Under our decision today, the Board lost jurisdiction once it completed action on BREDL's last remaining contention. Any new contentions must satisfy our reopening standards. Thus, given that the Board ought to have terminated its jurisdiction, consideration of any motion to reopen, including any motion associated with BREDL's proposed new earthquake-related contention, which has been now held in abeyance, would normally pass to the Commission in the first instance.[60] Several factors, however, persuade us that in the particular circumstances of the present case, the Board should consider the motion to reopen the record to admit BREDL's contention relating to the August 23, 2011, earthquake (or any future revision to that contention). This is consistent with our ordinary practice of referring reopening motions to the Board, particularly where

---

[57] *Union of Concerned Scientists v. NRC,* 920 F.2d 50, 55 (D.C. Cir. 1990) ("Petitioner also is mistaken in reading *UCS I* to require that a licensing hearing embrace *anything* new revealed in the SER or the NEPA documents . . ." (emphasis in original)).

[58] *Id.* at 55-56.

[59] *See N.J. Envtl. Fed'n v. NRC,* 645 F.3d at 232-33.

[60] *See, e.g., Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 120 (2009) ("Generally, once there has been an appeal or petition to review a Board order . . . jurisdiction passes to the Commission"); *Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 3), CLI-00-25, 52 NRC 355, 357 n.3 (2000) (observing that after a petition to review a final order has been filed with the Commission, the Board no longer has jurisdiction to consider a motion to reopen and the motion is properly filed with the Commission).

complex safety issues are in question, as we have done on several occasions in recent years.[61]

Several reasons support referral of the earthquake contention to the Board. As an initial matter, the earthquake contention has already been raised before the Board, although BREDL must now move to reopen the record and include appropriate support to gain admission.[62] In addition, the Board is the agency's expert body on matters of contention admissibility, and we generally defer to its judgment on contention admissibility.[63] Similarly, the Board is in a better position than the Commission to consider any expert affidavit or affidavits BREDL submits to support its motion to reopen.[64] We also think the Board is better positioned than we are to consider, in the first instance, whether BREDL has shown that a "materially different result" is likely should it prove the claims in the contention.[65] Here, the Board must consider whether the change in outcome BREDL advocates is both likely and material.[66]

We therefore direct the Board to exercise jurisdiction for the limited purpose of considering whether to reopen the record and admit BREDL's seismic contention. We leave to the Board's discretion whether to move forward on the reopening issues now, or, in the alternative, to hold those issues in abeyance pending Dominion's ongoing review of the earthquake.

---

[61] Recently, for example, the Secretary of the Commission has referred such motions to reopen to the Atomic Safety and Licensing Board Panel pursuant to her authority under 10 C.F.R. § 2.346(i). *See e.g., Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), Order (Aug. 30, 2011) (Order of the Secretary referring motions to reopen the *Vogtle, Comanche Peak,* and *Bell Bend* combined license application proceedings to the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel); *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), Order (Aug. 25, 2010) (Order of the Secretary referring motion to reopen to Board); *AmerGen Energy Co., LLC* (License Renewal for Oyster Creek Nuclear Generating Station), Order (May 9, 2008) (Order of the Secretary referring motion to reopen to Board).

[62] We recognize that BREDL's proposed new earthquake-related contention was not accompanied by a motion to reopen because, at the time the contention was filed, the Board had just ruled that it would not close the record.

[63] *See, e.g., Nuclear Management Co., LLC* (Palisades Nuclear Plant), CLI-06-17, 63 NRC 727, 728 (2006); *USEC Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 439-40 (2006).

[64] *See Vogtle,* CLI-11-8, 74 NRC at 220 (deferring to Board's ruling on "threshold issue" of whether pleading met reopening standards); *Millstone,* CLI-00-25, 52 NRC at 357 (remanding to the board consideration of a motion to reopen, given board's "greater familiarity with the record" in that case).

[65] *See* 10 C.F.R. § 2.326(a)(3).

[66] The denial or conditioning of a license would obviously be a "materially different result." *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 673 (2008). But BREDL might, alternatively, seek the addition of an ITAAC, a design modification, or the performance of additional analyses prior to license issuance.

C. Deadline for Petitioning for Review of Intermediate Board Rulings

As a result of our ruling today, the record of the adjudicatory proceeding is closed, and the time for petitioning for review of any of the Board's prior interlocutory rulings (e.g., the Board's various contention-admissibility rulings) will run from today.[67] Any party seeking review of such Board decisions should file a petition within 15 days of the service of this order, in accordance with the requirements for such petitions set forth in 10 C.F.R. § 2.341.

III. CONCLUSION

For the foregoing reasons, the Board decision in LBP-11-22 to keep the adjudicatory record open and to retain jurisdiction is *reversed* and the case is *remanded* to the Board for further proceedings consistent with our opinion.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

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

[67] *See* 10 C.F.R. § 2.341.

Cite as 75 NRC 704 (2012) **CLI-12-15**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, 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) **June 7, 2012**

The Commission denies a petition for review of an Atomic Safety and Licensing Board decision that rejected a new contention.

SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS

The Severe Accident Mitigation Alternatives (SAMA) analysis is a probability-weighted analysis carried out for the limited purpose of identifying mitigation alternatives that meet a defined benefit-cost criterion. Mitigation measures assessed in the SAMA analysis under the National Environmental Policy Act (NEPA) are supplemental to those we already require under our safety regulations for reasonable assurance of safe operation, and likewise supplemental to those we may order or require under our ongoing regulatory oversight over reactor safety, pursuant to the Atomic Energy Act (AEA).

RULES OF PRACTICE: REOPENING A RECORD

To satisfy the standard for reopening the evidentiary record, a motion to reopen the record must (1) be timely (or, if untimely, raise an exceptionally grave matter);

(2) address a significant safety or environmental issue; and (3) demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially. The motion must be supported by an affidavit written by an individual with knowledge of the facts alleged, and the affidavit must explain why each of the criteria has been met.

SEVERE ACCIDENT MITIGATION ALTERNATIVES

Contentions challenging a SAMA analysis must identify a deficiency that plausibly could alter the overall result of the analysis in a material way.

RULES OF PRACTICE: REOPENING A RECORD

Our standard for reopening the record requires an affidavit-based showing that a materially different result would have been likely had the newly proffered evidence been considered initially. To meet the reopening standard, it is insufficient merely to point to disputed facts.

NATIONAL ENVIRONMENTAL POLICY ACT

NEPA is not intended to encompass every possible impact, and does not encompass potential losses due merely to individuals' perception of a risk.

NATIONAL ENVIRONMENTAL POLICY ACT

NEPA does not require that we wait until incomplete information matures into something that might possibly affect the NRC's review.

MEMORANDUM AND ORDER

Before us is intervenor Pilgrim Watch's petition for review of Atomic Safety and Licensing Board decision LBP-12-1.[1] The Board's decision denied Pilgrim Watch's request for a hearing on a new contention based on the Fukushima Daiichi accident. Both the NRC Staff and the applicants, Entergy Nuclear Generation

[1] Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Requests for Hearing on New Contentions Relating to Fukushima Accident) LBP-12-01 January 11, 2012 (Jan. 26, 2012) (Petition); LBP-12-1, 75 NRC 1 (2012).

Company and Entergy Nuclear Operations, Inc. (together, Entergy), oppose the petition for review.[2] We deny review for the reasons provided below.

I. BACKGROUND

This proceeding stems from Entergy's application to renew its operating license for the Pilgrim Nuclear Power Station for an additional 20-year period beyond the current license expiration date of June 8, 2012. Entergy submitted its license renewal application to the NRC in January 2006, and the Board admitted Pilgrim Watch as an intervenor in October 2006.[3] Extensive motions, petitions, and memoranda have been filed before both the Board and the Commission, and a number of new contentions have been submitted after the established deadline for contentions. The Board in LBP-12-1 outlines the main points in the proceeding's procedural history, and we need not repeat that history here.[4] Our decision today focuses on the matters directly relevant to Pilgrim Watch's petition for review of LBP-12-1.

In LBP-12-1, the Board rejected a Pilgrim Watch contention challenging the Pilgrim Severe Accident Mitigation Alternatives (SAMA) analysis. While we have previously explained the nature of the SAMA analysis and its role in the NRC Staff's review, a brief overview is warranted here, given the complexity of this subject area.

The SAMA analysis is not part of the agency's safety review for license renewal under the Atomic Energy Act (AEA), but is instead a mitigation alternatives analysis conducted pursuant to the National Environmental Policy Act (NEPA).[5] The analysis examines a variety of potential severe accident progression sequences or scenarios. In particular, the analysis evaluates the degree to which specific additional mitigation measures (e.g., new plant procedures or new hardware) may reduce the risk — by reducing the probability or the consequences — of the accident scenarios evaluated. A specific mitigation alternative might reduce risk by, for example, reducing the estimated frequency of core damage or estimated frequency of containment failure in a particular accident sequence. By NRC practice to date, the SAMA analysis has been a quantitative cost-benefit analysis,

---

[2] *See* Entergy's Answer Opposing Pilgrim Watch's Petition for Review of LBP-12-1 (Feb. 6, 2012) (Entergy Answer); NRC Staff's Answer to Pilgrim Watch's Petition for Review of Memorandum and Order (Denying Pilgrim Watch's Request for Hearing on a New Contention Relating to Fukushima Accident) (Feb. 6, 2012) (Staff Answer).

[3] *See* Notice of Acceptance for Docketing of the Application and Notice of Opportunity for Hearing, 71 Fed. Reg. 15,222 (Mar. 27, 2006); LBP-06-23, 64 NRC 257 (2006).

[4] *See* LBP-12-1, 75 NRC at 3-5; *see also* CLI-12-3, 75 NRC 132, 135-36 (2012).

[5] *See* 10 C.F.R. § 51.53(c)(3)(ii)(L); CLI-10-14, 71 NRC 449, 453-56 (2010) (describing scope of license renewal safety review); *see also generally* 10 C.F.R. Part 54.

assessing whether the cost of implementing a specific enhancement outweighs its benefit. Because the SAMA analysis is a site-specific analysis, site-specific inputs (e.g., weather data, estimated reactor core radionuclide inventory, population data) are used in the accident modeling.

The SAMA analysis also is a probabilistic risk assessment (PRA), which means that the probability of particular accident scenarios occurring is taken into account. The analysis "assesses whether and to what extent the probability-weighted consequences of the analyzed severe accident sequences would decrease" if a specific mitigation alternative were implemented.[6] Probabilities and consequences are calculated with the use of various computer codes, including codes that perform a PRA of accident sequences leading to core damage (Level 1 PRA), and of accident progression leading to containment failure and release of radionuclides to the environment (Level 2 PRA).

The last stage of the computer modeling for the SAMA analysis is the offsite consequence calculation (Level 3 PRA). Output of the Level 1 PRA is used in the Level 2 PRA, which in turn is a basis for the Level 3 PRA offsite consequence cost calculation. The NRC has endorsed use of the MACCS2 Accident Consequence Analysis (MACCS2) code to calculate estimated offsite consequences — which include both radiological doses and economic losses (e.g., decontamination costs, evacuation and relocation costs, banned contaminated food, interdicted and/or condemned farm and nonfarm land and property).[7] Accident consequences at a particular site will vary depending upon weather patterns, and the MACCS2 code calculates potential offsite consequences over an extensive array of potential weather scenarios in a 50-mile radius around the nuclear power plant. In a recent decision in this proceeding, we provided additional detail on the nature of the NEPA SAMA analysis.[8]

While the limited focus of our license renewal safety review does not encompass a SAMA analysis, safety matters pertaining to severe accident mitigation are assessed on an ongoing basis through the NRC's regulatory oversight functions, which include both generic and plant-specific issues. If at any time new information suggests that additional severe accident mitigation measures are warranted or otherwise require evaluation, the NRC can take action through various means, including plant inspections, enforcement orders, or rulemaking. The NRC's ongoing oversight over the safety of reactor operation occurs regardless of a nuclear power station's license renewal status. Our ongoing reactor oversight, pursuant

---

[6] *See* CLI-10-11, 71 NRC 287, 291 (2010), *reconsideration denied,* CLI-10-15, 71 NRC 479 (2010).

[7] *See* NEI 05-01, Rev. A, "Severe Accident Mitigation Alternatives (SAMA) Analysis, Guidance Document" (Nov. 2005) (endorsed by "Final License Renewal Interim Staff Guidance LR-ISG-2006-03: Staff Guidance for Preparing Severe Accident Mitigation Alternatives Analyses," 72 Fed. Reg. 45,466 (Aug. 14, 2007)).

[8] *See* CLI-12-1, 75 NRC 39, 41-43, 55, 56-57 (2012).

to the AEA, helps to assure that any additional mitigation measures that may be warranted to protect public health and safety will be assessed and, where called for, implemented.

Pursuant to our AEA authority, we can — and recently did — order licensees and construction permit holders to "increase the capability of nuclear power plants to mitigate beyond-design-basis external events."[9] This order stemmed from findings of the NRC's Task Force that reviewed the Fukushima accident. We issued this order without conducting plant-specific probabilistic risk assessments or quantitative cost-benefit analyses, but instead "consistent with the overall defense-in-depth philosophy," to provide even "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," particularly at sites where there may be multiple reactor units.[10] Based on events at Fukushima, we similarly issued other orders requiring safety enhancements to further strengthen the severe accident "prevention, mitigation, and emergency preparedness defense-in-depth layers."[11]

In contrast to these recent orders, the Pilgrim SAMA analysis is a probability-weighted analysis carried out for the limited purpose of identifying mitigation alternatives that meet a defined benefit-cost criterion. As such, it examines the probability of various hypothesized accident scenarios, spanning a spectrum of potential initiating events, accident sequences, and severity of consequences. As a NEPA mitigation analysis, the SAMA analysis is not based on either the best-case or the worst-case accident scenarios, but on mean accident consequence values, averaged over the many hypothetical severe accident scenarios (with an additional uncertainty analysis also performed).[12]

---

[9] *See* EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Effective Immediately)," at 4 (Order), attached to Leeds, Eric J., Director, Office of Nuclear Reactor Regulation; Johnson, Michael R., Director, Office of New Reactors, Letter to All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status (Mar. 12, 2012).

[10] *See id.* at 6.

[11] *See, e.g.,* EA-12-50, "Order to Modify Licenses with Regard to Reliable Hardened Containment Vents (Effective Immediately)," at 6, attached to Leeds, Eric. J., Director, Office of Nuclear Reactor Regulation, Letter to All Boiling-Water Reactor Licensees with Mark I and Mark II Containments (Mar. 12, 2012).

[12] *See, e.g.,* CLI-12-1, 75 NRC at 55 & n.73. The SAMA analysis uses the "mean values of the consequence distributions for each postulated release scenario or category — the mean estimated value for predicted total population dose and predicted offsite economic cost." *See* CLI-10-11, 71 NRC at 316. Although mean accident consequence values are used as a baseline in the cost-benefit analysis, an uncertainty analysis also is performed, and baseline results ultimately are "multiplied by an uncertainty factor." *See* CLI-12-1, 75 NRC at 58. Final cost-benefit comparisons in the Pilgrim analysis were made on "revised results that take into account [the] uncertainty factor." *Id.*

The Pilgrim SAMA analysis must also be understood against the backdrop of our Generic Environmental Impact Statement (GEIS), which contains a bounding, generic severe accident impacts analysis, applicable to all plants.[13] Thus, although our rules require that potential severe accident mitigation alternatives be considered for license renewal, no site-specific severe accident impacts analysis need be done.[14] Mitigation measures assessed in the NEPA SAMA analysis are "*supplemental* to those we already require under our safety regulations for reasonable assurance of safe operation," and likewise supplemental to those that we may otherwise order or require under our ongoing regulatory oversight over reactor safety, pursuant to the AEA.[15]

Below we summarize relevant agency standards for adjudications, including our contention admissibility standard, and we also describe Pilgrim Watch's SAMA contention.

II. DISCUSSION

A. Applicable Standards

To be accepted for hearing, contentions must meet our strict contention standards under 10 C.F.R. § 2.309(f). The standards help assure that adjudicatory proceedings will be meaningful. Among other requirements, contentions must raise a genuine dispute with the license application, and further must have underlying factual or legal support.[16] The contention must "demonstrate that the issue raised . . . is material to the findings" that the NRC must make for the licensing action at issue.[17] Contentions filed after the deadline for initial intervention petitions also must satisfy the standards for late-filed contentions.[18] And where the Board already has closed the evidentiary record, intervenors seeking a new hearing on a new contention additionally must move to reopen the evidentiary record, a deliberately "higher" threshold standard than that "for an ordinary late-filed contention."[19]

---

[13] *See* "Generic Environmental Impact Statement for License Renewal of Nuclear Plants — Main Report" (Final Report), NUREG-1437, Vol. 1 (May 1996), at 5-12 to 5-116 (GEIS).

[14] *See id.* at 5-114 to 5-116; 10 C.F.R. Part 51, Subpart A, Appendix B, Table B-1 (regarding "severe accidents").

[15] *See* CLI-12-1, 75 NRC at 57 (emphasis added).

[16] *See* 10 C.F.R. § 2.309(f)(1)(v)-(vi).

[17] *See* 10 C.F.R. § 2.309(f)(1)(iv).

[18] *See* 10 C.F.R. § 2.309(f)(2).

[19] *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 668 (2008) (citation omitted).

We may grant a petition for review of a Board decision at our discretion, giving due weight to whether there is a "substantial question" regarding the following considerations:

> (1) A finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding;
> (2) A necessary legal conclusion is without governing precedent or is a departure from or contrary to established law;
> (3) The conduct of the proceeding involved prejudicial procedural error; or
> (4) Any other consideration which the Commission may deem to be in the public interest.[20]

We generally defer to Board threshold rulings on contention admissibility, unless we find an "error of law or abuse of discretion."[21]

B. Pilgrim Watch's Contention

In a new contention filed November 18, 2011, Pilgrim Watch claimed that the Pilgrim SAMA analysis was deficient because it did not "model and analyze aqueous transport and dispersion of radioactive materials[.]"[22] The contention read as follows:

> Based on new and significant information from Fukushima, the Environmental Report is inadequate post Fukushima Daiichi. Entergy's SAMA [Severe Accident Mitigation Alternatives] analysis ignores new and significant issues raised by Fukushima regarding the probability of both containment failure, and subsequent larger off-site consequences due, in part, to the need for flooding the reactor (vessel, containment, pool) with huge amounts of water in a severe accident, as in Fukushima. An important limitation of the MACCS2 code is that it does not currently model and analyze aqueous transport and dispersion of radioactive materials through the subsurface water, sediment, soils, and groundwater. As demonstrated by the recent events in Japan, certain accident scenarios can result in large volumes of contaminated water being generated by emergency measures to cool the reactor cores and SFPs [spent fuel pools], with yet to be determined offsite radiological consequences.[23]

---

[20] *See* 10 C.F.R. § 2.341(b)(4)(i)-(v).

[21] *See, e.g., South Carolina Electric and Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-21, 72 NRC 197, 200 (2010) (citing *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 336 (2009)).

[22] *See* Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post Fukushima (Nov. 18, 2011) at 1 (Hearing Request).

[23] *See id.* (quotation omitted).

The contention went on to argue the following:

> To determine the relative risk significance of these types of scenarios, (Pilgrim's) Level 3 PRA [the offsite consequence portion of the SAMA analysis] must [ ]model and analyze[ ] the aqueous transport and dispersion of radioactive materials. Further, there is no provision within the Severe Accident Mitigation Guidelines (SAMGs) for processing the water post accident. This important technical gap in Entergy's SAMA needs to be addressed before closing this proceeding. As in Japan, enormous quantities of contaminated water are likely to enter Cape Cod Bay (adding to radioactive atmospheric fallout on the waters and contamination resulting from aqueous transport and contamination resulting from aqueous transport and dispersion of radioactive materials through subsurface water, sediments, soils and groundwater) and then flow to other water bodies and shores posing significant offsite consequences and costs, threatening the health of citizens and the ecosystem and damaging the economy.[24]

Pilgrim Watch argues that Entergy in the Pilgrim SAMA analysis failed to model "offsite marine economic costs," and that Entergy "must be required to do so."[25] Pilgrim Watch claims that the analysis must model "contaminated aqueous releases 'bled' into Cape Cod Bay from the large volumes of water needed to flood the reactor (vessel, containment, pool) in a severe accident extending over an extended period of time in the type of disaster we now know is credible."[26] Pilgrim Watch argues that this additional analysis "could change the outcome of Pilgrim's SAMA [analysis]," leading "previously rejected or ignored SAMAs" to become cost-effective.[27]

In support of its contention, Pilgrim Watch provided a declaration by Mr. Arnold Gundersen. Mr. Gundersen states that "we know that the area impacted by the disaster at Fukushima is enormous," and "[t]herefore there is every reason to expect that a similarly large area would be affected by a similar accident at Pilgrim Station."[28] He provides his "opinion that the economic impacts would be significant in a similar accident scenario at Pilgrim."[29] Mr. Gundersen further states that in his "professional opinion," the contention "clearly addresses a significant safety and environmental issue by showing the effect of copious amounts of radioactive releases upon the marine environment, the area likely

---

[24] *Id.* at 1-2 (quotation omitted).

[25] *Id.* at 22.

[26] *See id.* at 8-9.

[27] *See id.* at 6.

[28] *See* "Declaration of Arnold Gundersen Supporting Request by Pilgrim Watch for a New Contention Hearing Regarding the Inadequacy of Pilgrim Station's Environmental Report, Post Fukushima" (Nov. 17, 2011) at 10, attached to Hearing Request.

[29] *Id.* at 12.

to be contaminated (or, as important, that will be believed by the public to be contaminated) and its resulting economic impact."[30] Mr. Gundersen claims that "[s]ince we know that millions of gallons of contaminated water bled into the ocean at Fukushima, it is reasonable to assume that the same would hold true at Pilgrim."[31]

C. Board Decision

In LBP-12-1, the Board rejected the contention on several grounds. In addressing threshold standards, the Board found that the contention did not meet our contention admissibility rules because it did not point with support to a "genuine dispute" with the SAMA analysis.[32] The Board concluded that Pilgrim Watch and its expert presented merely "speculative assertions" that did not demonstrate a material issue for hearing.[33]

More specifically, the Board stated that Pilgrim Watch had not addressed "a single portion" of the SAMA analysis, but rested on generalized claims regarding the Fukushima accident.[34] The Board noted that neither Pilgrim Watch nor its expert challenged any "initiating event or equipment failure probability assumptions" in the SAMA analysis," or "otherwise [made] any attempt to relate the Fukushima accident (and its initiating events and equipment/system failures) to the Pilgrim plant."[35] Instead, the Board found, the only "linkage" made between the Fukushima accident and the Pilgrim plant was Pilgrim Watch's claim that the Pilgrim reactor has a similar Boiling Water Reactor (BWR) design, a BWR Mark I design.[36]

The Board went on to stress that Entergy's experts provided "uncontroverted testimony" describing why a consideration of potential aqueous releases would not materially "increase the [severe accident] costs" already estimated, given the nature of severe accident scenarios evaluated in the Pilgrim SAMA analysis.[37] The Board referenced the declaration of Entergy experts Dr. Kevin R. O'Kula and Mr. Joseph R. Lynch, who outlined various grounds for why the potential consequences from the atmospheric releases considered in the Pilgrim SAMA analysis "are far greater than potential consequences resulting from the aqueous

---

[30] *Id.* at 6.
[31] *Id.* at 10.
[32] *See* LBP-12-1, 75 NRC at 18.
[33] *Id.* at 19.
[34] *Id.* at 20.
[35] *Id.* at 19.
[36] *Id.*
[37] *Id.*

releases at issue in Pilgrim Watch's contention."[38] The Board found that, in contrast to Entergy and its experts' explanation, neither Pilgrim Watch nor Mr. Gundersen had provided any "facts" or "technical bases" indicating "how it could be expected" that the estimated severe accident consequences analyzed in the analysis — which span a "spectrum of accident scenarios" — "could be so altered as to make additional SAMAs cost-effective to implement."[39] In other words, the Board found no supported basis for the contention's premise that modeling aqueous releases to Cape Cod Bay might materially change the overall Pilgrim SAMA analysis results. The Board therefore found no material issue for hearing.[40]

In addition to finding that the contention lacked support, and failed to raise a material or genuine dispute for hearing — basic requirements under our contention admissibility rule — the Board also found that the contention was untimely, and did not meet the criteria for reopening the evidentiary record (under 10 C.F.R. § 2.326).[41]

To satisfy the standard for reopening the evidentiary record, a motion to reopen the record must (1) be timely (or, if untimely, raise an "exceptionally grave" matter); (2) address a significant safety or environmental issue; and (3) "demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially."[42] The motion must be supported by an affidavit written by an individual with knowledge of the facts alleged, and the affidavit must explain why each of the criteria "has been met."[43]

In LBP-12-1, the Board found that the contention failed to meet all of the reopening criteria.[44] The Board concluded that Mr. Gundersen's declaration presented "no facts or data to support its bald assertions," and had not set forth the required factual or technical bases indicating how each of the criteria

---

[38] *See* "Declaration of Mr. Joseph R. Lynch and Dr. Kevin R. O'Kula in Support of Entergy's Answer Opposing Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post-Fukushima" (Dec. 13, 2011) at 7-8, 11-12, 22-30, 36 (O'Kula/Lynch Declaration), *attached to* Entergy's Answer Opposing Pilgrim Watch Request for Hearing on a New Contention Regarding Inadequacy of Environmental Report, Post-Fukushima (Dec. 13, 2011).

[39] *See* LBP-12-1, 75 NRC at 17, 18-19.

[40] *See id.* at 19.

[41] *See id.* at 12-18.

[42] *See* 10 C.F.R. § 2.326(a)(1)-(3).

[43] *See* 10 C.F.R. § 2.326(b). As we explained in CLI-12-3, where we ruled that the Board had properly applied the reopening standards to Fukushima-related contentions, our existing procedural rules for seeking admission of new or amended contentions and filing motions to reopen are sufficient, and "[n]either new procedures nor a separate timetable for raising new issues related to the Fukushima events are . . . warranted." *See* CLI-12-3, 75 NRC at 141 (quoting *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 171 (2011)). We continue to believe that our procedural rules can be applied effectively, and are aware of no new information that causes us to change our view.

[44] *See* LBP-12-1, 75 NRC at 12-18.

in 10 C.F.R. § 2.326(a) were met.[45] The Board stressed that Mr. Gundersen's declaration nowhere provided a "factual or technical basis" to suggest how "other mitigative measures [might] become cost-effective" in light of the assumptions and considerations contained in the Pilgrim analysis.[46] Neither Pilgrim Watch nor its expert had "demonstrated that a materially different result would be, or would have been, likely had the newly proffered evidence been considered initially."[47]

The Board further found the contention untimely, whether evaluated under the criteria for reopening an evidentiary record (10 C.F.R. § 2.326(a)(1)) or for admission of late-filed contentions generally (10 C.F.R. § 2.309(c)).[48]

We carefully considered Pilgrim Watch's petition for review, but the petition points to no error or abuse warranting review of the Board's decision. Before turning to the petition, a few points bear mention.

As we stressed recently, the SAMA analysis involves a host of inputs and methodologies, and when determining whether a petitioner has raised a litigable challenge, the question is not whether more or different analysis can be done.[49] It will always be possible to envision and propose some alternate approach, some additional detail to include, some refinement. And one can always make different assumptions about the progression of severe accidents. But particularly in regard to the SAMA analysis, we have reiterated that our adjudicatory proceedings are not "EIS editing sessions."[50] Unless a contention, with support, raises a credible potential *material* deficiency in the analysis, there is no genuine dispute with the application, and therefore no demonstration of a material issue for hearing. Contentions challenging a SAMA analysis therefore must identify a deficiency that plausibly could alter the overall result of the analysis in a material way.

At the threshold contention admission stage, the burden for providing support for a contention is on the petitioner. And the *added* "burden of satisfying the reopening requirements" is, deliberately, "a heavy one."[51] "Bare assertions and speculation," even by an expert, are insufficient to trigger a full adjudicatory proceeding.[52] While we do not expect petitioners to prove their case at the contention admissibility stage, it is not enough for a contention merely to speculate that some input, some pathway, or some scenario left unconsidered may significantly alter the number and kinds of mitigation alternatives found cost-beneficial.

---

[45] *See id.* at 17.

[46] *See id.*

[47] *See id.* at 16.

[48] *See id.* at 12-16, 18.

[49] CLI-12-1, 75 NRC at 57.

[50] *Id.* (citation omitted).

[51] *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 287 (2009).

[52] *See, e.g., Oyster Creek,* CLI-08-28, 68 NRC at 674.

Finally, and just as fatal to Pilgrim Watch's claims here, a challenge to a NEPA SAMA analysis cannot ignore the probabilistic nature and other characteristics of the analysis. As we recently stated, "[w]hile we do not require petitioners to run their own computer models at the contention admissibility stage, a contention challenging a SAMA analysis nonetheless must be tethered to the computer modeling and mathematical aspects of the analysis."[53]

Here, contrary to Pilgrim Watch's claims, the Board did not insist upon a "detailed showing" of exactly "how much" the Pilgrim SAMA analysis would change if radionuclide releases to liquid pathways were modeled.[54] Instead, the Board insisted on some factual basis in the contention to suggest that the existing Pilgrim analysis results were not already sufficiently conservative for SAMA purposes, given the factors and scenarios considered in the analysis. It found no such supported basis. The Board also insisted that Pilgrim Watch satisfy the reopening rule criteria, which include "demonstrat[ing]" the *likelihood* of a "materially different" result in the SAMA analysis if the newly proffered evidence were considered.[55] Again, the Board found no such demonstration. Nor do we, as outlined further below.

D. Pilgrim Watch's Petition for Review

1. Linkage of Fukushima Accident to SAMA Analysis

Before us, Pilgrim Watch first claims that the Board erred when it concluded that Pilgrim had not sufficiently "linked" its descriptions of the Fukushima accident to the Pilgrim SAMA analysis.[56] Pilgrim Watch argues that "the Pilgrim Mark I BWR [Boiling Water Reactor] is essentially identical to the failed Mark I BWRs at Fukushima," and that "[t]his admitted essential identity of the BWRs shows that what happened at Fukushima could happen here and must be considered[.]"[57]

But Pilgrim Watch's generalized claim that the Pilgrim reactor is a Mark I BWR does not raise a genuine dispute with the application. The Pilgrim SAMA analysis does not ignore the nature of the Mark I BWR containment design. In reviewing the underlying accident progression analyses, the Staff found that they addressed "the most important severe accident phenomena normally associated

---

[53] *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 415 (2012).

[54] Petition at 4.

[55] *See* 10 C.F.R. § 2.326(a)(3) (emphasis added); LBP-12-1, 74 NRC at 16-17. We have already addressed and rejected Pilgrim Watch's argument that it need not meet the reopening rule criteria. *See* Petition at 4; CLI-12-3, 75 NRC at 139-41; CLI-12-10, 75 NRC 479, 495-96 (2012).

[56] Petition at 4-5.

[57] *Id.* at 5.

with the Mark I containment type," and, further, that the analyses had been independently peer reviewed.[58] Pilgrim Watch does not identify any aspect of the SAMA analysis that may suggest inappropriate consideration of the reactor's design, such as any error in the portions of the analysis bearing on containment performance. The Pilgrim SAMA analysis encompasses events involving both early and late containment failure.[59]

Pilgrim Watch also essentially ignores that the SAMA analysis is a site-specific analysis. As such, the accident sequences evaluated and their assessed probabilities are specific to the features and location of the plant, including numerous factors extending far beyond the particular design of the reactor (e.g., reactor core radionuclide inventory, physical and climate features of the site, existing equipment or hardware, relevant plant procedures). If one could simply assume that all nuclear power stations would have the same estimated radionuclide releases, caused by the same sequence of events, with the same frequency of occurrence, there would be little reason to do a site-specific probabilistic risk analysis. We agree with the Board that Pilgrim Watch's broad-brushed references to the Pilgrim reactor design do not identify any deficiency in, or dispute with, the Pilgrim SAMA analysis.

The Board similarly found in several other respects that Pilgrim Watch and its expert raised generalized, speculative claims regarding the Fukushima accident — claims that did not, in fact, place into question any of the specific considerations in the Pilgrim SAMA analysis. Pilgrim Watch does not identify any error in the Board's decision.

Pilgrim Watch claims, for example, that "lessons learned" from the Fukushima accident, particularly the "need for flooding the reactor[,]" showed that the probability of containment failure is "much higher than previously considered by Entergy."[60] But no support is provided for this probability-related argument. Entergy expert Dr. O'Kula described that the Pilgrim SAMA analysis considers severe accident events including those involving a breach of the reactor vessel or the containment structure, and included scenarios involving "failure to vent and early failure of containment."[61] Neither Pilgrim Watch nor its expert cite to or otherwise challenge any aspect of the Pilgrim SAMA analysis that goes to

---

[58] *See* "Generic Environmental Impact Statement for License Renewal of Nuclear Plants Regarding Pilgrim Nuclear Power Station, Supplement 29, Vol. 2 — Appendices (Final Report), NUREG-1437 (July 2007) (ADAMS Accession Nos. ML071990020, ML071990027), Appendix G at G-11 (Pilgrim EIS).

[59] *See, e.g.,* Ex. NRC000001, Entergy License Renewal Application, Environmental Report, Attachment E at E.1-29 to E.1-30 (Jan. 2006) (Environmental Report).

[60] *See* Hearing Request at 37.

[61] *See* O'Kula/Lynch Declaration at 23-24.

containment failure scenarios and their probabilities. There is no support for the containment failure claim, as the Board noted.[62]

Further, Pilgrim Watch also appears to discount the role that the earthquake and tsunami played in initiating and exacerbating the severity of the Fukushima accident. Pilgrim Watch argues that "the proximate cause of what happened at Fukushima was the loss of AC [alternating current] and DC [direct current] power," stressing that "it does not take an earthquake or tsunami to cause a power loss."[63] But the extended duration of the loss of offsite power at Fukushima cannot be divorced from the vast and devastating effects of the major earthquake and tsunami, which occurred in a region susceptible to severe seismic activity. Significantly, the Fukushima accident involved a multireactor unit, with core damage to three of the reactors, and the challenges involved in addressing concurrent emergencies involving multiple reactors. In terms of the probabilities and probable consequences of severe accidents, Pilgrim Watch's generalized assertions about the Fukushima accident do not raise a genuine material dispute with the site-specific Pilgrim SAMA analysis.[64]

In any event, loss of offsite power, station blackout (SBO), loss of DC power buses, loss of AC power buses, and containment failure are key considerations in the Pilgrim SAMA analysis. Loss of offsite power events account for 20% of the core damage frequency assessment in the Pilgrim analysis.[65] Loss of DC power buses accounts for almost 48% of core damage frequency, and loss of AC power buses for approximately 14% of core damage frequency.[66] Station blackout is also considered to contribute to core damage frequency in the Pilgrim analysis.[67]

---

[62] *See* LBP-12-1, 75 NRC at 8 n.26. Regarding the "probability of containment failure," Pilgrim Watch refers generally to one of its earlier-filed contentions, the Direct Torus Vent Contention, which claimed that the Pilgrim SAMA analysis was deficient for failure to account for an increased probability of vent failure and consequent containment failure. *See, e.g.,* Petition at 2 n.2. In CLI-12-3, we affirmed the Board's rejection of the Direct Torus Vent contention, noting that the SAMA analysis already encompasses events involving vent failure, as well as "pressure buildup," "operator error," "hydrogen explosions," "containment breach," and "large radioactive releases," and that Pilgrim Watch's general arguments about the Fukushima accident simply had not pointed to a deficiency in the Pilgrim analysis. *See* CLI-12-3, 75 NRC at 146-49. Pilgrim Watch additionally refers generally to another of its contentions filed after the Fukushima accident, the Recriticality Contention. *See, e.g.,* Petition at 2 n.2. In CLI-12-3, we also affirmed the Board's rejection of the Recriticality Contention, finding no error in the Board's conclusion that the contention lacked adequate support. *See* CLI-12-3, 75 NRC at 144-46. To the extent that Pilgrim Watch relies on the Direct Torus Vent and Recriticalilty contentions as support for its aqueous modeling contention, we can discern no sufficient ground on which to admit the aqueous modeling contention.

[63] Petition at 6 (citation omitted).

[64] *See* LBP-12-1, 74 NRC at 14, 19.

[65] *See, e.g.,* Pilgrim EIS, Appendix G at G-3.

[66] *See id.*

[67] *Id.*

In short, the Pilgrim analysis includes extensive consideration of loss-of-power events, which were analyzed to assess their contribution to core damage, containment failure, and releases of radionuclides into the environment. Many of the particular events analyzed in the Pilgrim analysis bear similarity to events that may have contributed to the Fukushima accident (e.g., long-term steam and noncondensable gas generation, nonavailability of containment decay heat removal systems, and ultimate overpressurizing of the containment).[68] Pilgrim Watch nowhere addresses, let alone controverts, any of the accident events considered in the analysis, or their timing, probabilities, or source terms. Apart from general statements about the Fukushima accident, Pilgrim Watch does not support its claims of a material deficiency in the Pilgrim analysis, or raise a genuine dispute with the application.

2. Materiality of Asserted Aqueous Modeling Claims

Pilgrim Watch additionally argues that the Board erred in concluding that the aqueous modeling claims made in the contention failed to present a genuine and material dispute for hearing. Pilgrim Watch argues that "it is abundantly clear that any proper SAMA analysis" should "model aqueous discharges."[69] But Pilgrim Watch again fails to identify error in the Board's reasoning, as discussed below.

As we earlier noted, the offsite consequence analysis (Level 3 PRA) that Pilgrim Watch seeks to have redone is inextricably linked to the underlying analyses of accident events, accident progression, and radioactive source terms. Here, however, Pilgrim Watch's contention does not challenge any details of the wide spectrum of severe accidents analyzed. It does not, for example, challenge the core inventory release fractions — the portion of the radionuclide core inventory that is actually released from the core and transported to the outside environment during the course of the accident.[70]

Without challenging any of the radionuclide releases assumed in the analysis, Pilgrim Watch instead merely insists that the offsite consequence calculation portion of the SAMA analysis is deficient because it does not "model contaminated aqueous releases 'bled' into Cape Cod Bay and adjacent waters[.]"[71] But here the Board found "uncontroverted" expert evidence that, even assuming some or all of the estimated radionuclide releases were to go into Cape Cod Bay and

---

[68] *See, e.g.,* Environmental Report at E.1-28 to E.1-29.

[69] *See* Petition at 6.

[70] To the extent that Pilgrim Watch's contention is intended to challenge underlying Level 1 and Level 2 PRA analyses going to radionuclide core inventory, release fractions, accident events, accident progression, and accident probabilities, we do not discern any specific argument, genuine dispute with the application, or support for any such challenges.

[71] Petition at 2.

related aqueous pathways, such a scenario would not increase the current overall estimated severe accident costs, and therefore would not change the conclusions on the mitigation alternatives found cost-beneficial to implement.[72] Based on the severe accident scenarios and factors considered in the Pilgrim SAMA analysis, the Board found uncontested expert evidence that the estimated severe accident costs for the Pilgrim site effectively subsumed or bounded — for SAMA analysis purposes — the aqueous release scenario that Pilgrim Watch asserted could be material.

Pilgrim Watch does not identify any error in this conclusion. Pilgrim Watch calls the Entergy experts' declaration "mere speculation," but the declaration is rooted in specific aspects of the SAMA analysis, characteristics of radionuclides, principles of radioactivity decay and of dilution, and other information, none of which Pilgrim Watch or its expert specifically contested.[73] Again, at the contention admissibility stage, it is *Pilgrim Watch's burden* to provide support for why the further "analyses" or new computer modeling it seeks credibly could make a *material* difference to the SAMA analysis conclusions, not simply that the analysis might change in some fashion.[74] Further, to meet the reopening standards, Pilgrim Watch also needed to demonstrate a likelihood of *prevailing* — a likelihood that the aqueous modeling would lead to a "materially different" cost-benefit analysis conclusion.[75] We cannot say that the Board, having reviewed

---

[72] *See* LBP-12-1, 75 NRC at 16, 19.

[73] Petition at 7; *see also* O'Kula/Lynch Declaration at 23-37 (addressing conservatism of the release pathways modeled in the Pilgrim SAMA analysis).

We note that Entergy expert Dr. O'Kula also described that, given the information to date from the Fukushima accident, the Pilgrim SAMA analysis "already considers postulated containment failure with atmospheric radiological releases much larger than the releases that have occurred at Fukushima — which involved core damage in three reactor units." *See* O'Kula/Lynch Declaration at 8; *see also id.* at 30-37. Although not necessary to the Board's conclusions on the materiality of the proffered contention, this comparison by Dr. O'Kula provides additional support for the Board's decision. While Pilgrim Watch in its reply before us claims that Dr. O'Kula's cited data on releases at Fukushima is "months old," and that "nobody . . . knows exactly how much radioactive contamination was, *and continues* to be released," Pilgrim Watch provided no data or other facts indicating error in Dr. O'Kula's overall comparison of radiological releases. *See* Pilgrim Watch Reply to Entergy's and NRC Staff's Answers to Pilgrim Watch's Petition for Review of LBP-12-01 (Feb. 13, 2012) at 8 (emphasis in original) (Pilgrim Watch Reply). Pilgrim Watch also appears not to have directly challenged before the Board Dr. O'Kula's comparison of the Fukushima accident and the Pilgrim SAMA analysis releases, rendering its new claim on appeal improper. *See* Entergy Motion to Strike Pilgrim Watch's Reply (Feb. 23, 2012) at 2; *see also* CLI-12-1, 75 NRC at 59.

[74] *See* CLI-12-1, 75 NRC at 57-58.

[75] *See* 10 C.F.R. § 2.326(a)(3).

the expert declarations before it, erred in its conclusion to reject the contention as immaterial and insufficiently supported.[76]

On appeal, Pilgrim Watch argues that it supported its claims regarding the need for — the materiality of — the aqueous modeling Pilgrim Watch seeks for the SAMA analysis. Specifically, Pilgrim Watch argues that it "*did* show that" severe accident costs associated with its claims of water-related contamination "far exceeded the cost of [the mitigation alternatives] that Entergy identified in its application."[77] Citing Judge Ann Marshall Young's separate dissenting opinion in LBP-12-1, Pilgrim Watch states that "Judge Young's Dissent did the math."[78] Judge Young concluded that Pilgrim Watch had identified a "genuine dispute" over whether its asserted economic costs of "aqueous contamination . . . being dispersed into Cape Cod Bay and the surrounding Atlantic Ocean . . . could lead to an additional cost-beneficial SAMA."[79]

But both Judge Young and Pilgrim Watch are comparing Pilgrim Watch's submitted "analysis of the economic value of the coastal and marine economies" for Massachusetts[80] with the cost of implementing one of the listed mitigation alternatives in the Pilgrim SAMA analysis. This is a flawed apples to oranges comparison that disregards a fundamental concept: the SAMA analysis is a probabilistic risk assessment that compares the cost of implementing a mitigation alternative with its reduction in *risk*. As Entergy describes, the dissent "does not multiply the asserted consequences by their frequency of occurrence."[81] In other words, the comparison effectively assumes a 100% chance of the presumed severe accident scenario occurring.[82] Because the economic consequences figure posited by the Dissent (and relied on by Pilgrim Watch) is not risk-informed,

---

[76] With no further substantiation and without addressing any of the relevant factors considered in the Pilgrim analysis, Pilgrim Watch merely proposes that significant amounts of additional radionuclide releases (greater than releases currently estimated in the Pilgrim analysis) must be assumed and simply *added* mathematically to the radionuclide releases outlined in the analysis. *See* Petition at 25. Pilgrim Watch provides insufficient support for its claim, given the pathways, accident events, and source terms considered in the site-specific analysis.

[77] *See* Petition at 16-17 (emphasis in original).

[78] *See id.* at 17 (citing LBP-12-1, 75 NRC at 32-33 & n.31 (Young, J., Dissenting Opinion)).

[79] *See* LBP-12-1, 75 NRC at 32-33 & n.31 (Young, J., dissenting).

[80] *See* Contention at 23-30.

[81] *See* Entergy Answer at 15.

[82] We have explained that in a SAMA analysis, the "mean consequence values are multiplied by the estimated frequency of occurrence of specific accident scenarios to determine population dose risk and offsite economic cost risk for each type of accident sequence studied." *See* CLI-11-10, 71 NRC at 316.

An additional point regarding Judge Young's comparison merits comment. Judge Young inappropriately equates the reopening standards to a summary disposition standard, an error we recently highlighted. *See, e.g.,* CLI-12-10, 75 NRC at 498. Our standard for reopening the evidentiary record

(Continued)

the Dissent's comparison with the cost of implementing particular mitigation measures is rendered meaningless.

In deferring to the Board's conclusion in LBP-12-1, we do not mean to suggest that modeling of radionuclide transport and dispersion through aqueous pathways could never prove useful or significant for any regulatory purpose, only that Pilgrim Watch nowhere indicates the necessary minimal support to show that it is material for the Pilgrim SAMA analysis. The NRC conducts severe accident modeling and related probability risk assessments in a wide variety of risk-informed contexts, not merely for a SAMA analysis. The issue before us, however, is not whether accident modeling can become more precise, or aqueous pathways modeling could prove of use in some regulatory decisionmaking, but whether for SAMA purposes the Pilgrim SAMA analysis is adequately conservative.

Here, for example, in support of its contention Pilgrim Watch highlights an NRC Staff SECY paper to the Commission, which discusses various potential ways to improve methods, models, and tools for conducting probabilistic risk assessments, including a recommendation for adding a capability to model aqueous transport and dispersion.[83] But as we explain below, the paper neither addresses SAMA analyses nor otherwise suggests any error in the Board's decision, which is specific to the Pilgrim SAMA analysis.

SECY-11-0089 addresses options for proceeding with future offsite consequence probabilistic risk assessments, including potential future agency uses for offsite consequence PRAs.[84] In addition to numerous other matters, the paper outlines what are described as current "gaps" in "existing PRA technology."[85] Among the PRA technology limitations outlined in the paper is the ability to "model[ ] and analyz[e] aqueous transport and dispersion of radioactive materials through surface water, sediments, soils, and groundwater."[86] The paper notes that "[e]xisting PRA analytical tools do not have this capability," and therefore "[r]esearch is . . . needed to identify or develop methods, models, and tools that can be used to simulate geochemical speciation and transport of dissolved radionuclides in surface water, sediments, soils, and groundwater."[87]

---

requires an affidavit-based showing that a "materially different result . . . would have been *likely*" had the newly proffered evidence been considered initially. *See* 10 C.F.R. § 2.326(a)(3), (b) (emphasis added). "To meet the reopening standard . . . it is insufficient merely to point to disputed facts." *See id.* at 499. The Board must make a record-based judgment on the evidence presented by the parties, concluding that there is evidence "sufficiently compelling to suggest a likelihood of materially affecting the ultimate results." *Id.*

[83] *See* Petition at 9-11.

[84] *See* "Options for Proceeding with Future Level 3 Probabilistic Risk Assessment Activities," Commission Paper SECY-11-0089 (July 7, 2011) (including Enclosures 1 and 2) (SECY-11-0089).

[85] *See, e.g., id.* at 6.

[86] *See* Enclosure 1 to SECY-11-0089, at 21.

[87] *Id.*

SECY-11-0089 gives the example of the Fukushima accident, with its "large volumes of contaminated water" that resulted from emergency measures to cool the multiple reactor cores and spent fuel pools, as a "type" of scenario that could be assessed for radiological consequences and risk, if the capability existed to model aqueous transport and dispersion of radioactive materials.[88] The paper therefore recommends further research to develop models and tools capable of simulating the transport of dissolved radionuclides through surface water, soils, and groundwater.[89]

Pilgrim Watch claims that SECY-11-0089 demonstrates a modeling limitation that might affect the Pilgrim SAMA analysis. But as we have described, the Board found that given the accident scenarios, source terms, and atmospheric pathways considered in the Pilgrim analysis, the analysis already is more conservative — in effect, therefore, bounding — for SAMA purposes, than if some (or even much) of the estimated radionuclide releases were assumed instead to have entered Cape Cod Bay and related waters. In other words, while aqueous pathways modeling could add to the sophistication and precision of the consequence analysis, the Board found that Pilgrim Watch failed to support its claim that the aqueous modeling discussed in the SECY paper credibly could change the overall cost-benefit conclusions in the analysis. In short, the Board did not find the asserted modeling limitation to be material for the Pilgrim analysis. Applying both the contention admissibility and the reopening rule standards, the Board reached a technical judgment based on and supported by the record, and nothing in Pilgrim Watch's petition identifies error in the Board's reasoning or conclusion.[90]

3. Timeliness

The Board additionally found that Pilgrim Watch's arguments regarding a need for aqueous modeling were late under both the contention admissibility and reopening rules.[91] The Board concluded, in particular, that SECY-11-0089 did not present any genuinely new information on modeling limitations of the MACCS2 code, which have been "present for decades," and therefore the paper did not render timely Pilgrim Watch's contention.[92] We agree.

---

[88] *See id.* at 29; *see also* SECY-11-0089, at 6.

[89] *See* SECY-11-0089, at 6.

[90] SECY-11-0089 in fact suggests that PRA-based severe accident modeling encompassing aqueous transport and dispersion of radionuclides *cannot be done* without further research and development. *See* SECY-11-0089, at 21. As we earlier stated, NEPA obligations are "tempered by a practical rule of reason," and an "environmental impact statement is not intended to be a 'research document.'" See CLI-10-22, 72 NRC 202, 208 (2010) (citations omitted).

[91] *See* LBP-12-1, 75 NRC at 12-16, 18.

[92] *See id.* at 13-14.

SECY-11-0089, written by members of the NRC's Office of Research, examined various potential improvements that could be made to severe accident modeling. While the paper highlighted the current inability to perform a full probabilistic risk analysis of the water contamination accident scenario involved in the Fukushima accident, the paper did not reveal any newly discovered limitation in the capabilities of the MACCS2 code. The nature of the MACCS2 code as an atmospheric modeling code certainly has been well known since its inception. Pilgrim Watch itself has litigated in this proceeding the adequacy of the atmospheric transport and dispersion module in the MACCS2 code, appropriately called "ATMOS."[93] That Pilgrim Watch earlier did not know that the MACCS2 code does not fully model aqueous transport and dispersion through groundwater and soils does not make its contention timely.[94] Further, SECY-11-0089 was issued over 4 months before Pilgrim Watch filed its contention. Finally, the reactor flooding measures and related water contamination at Fukushima were publicly known well before issuance of the SECY paper.[95] Pilgrim Watch identifies no error in the Board's determination that the contention was untimely under both the contention admissibility and reopening rules.[96]

---

[93] *See generally* CLI-12-1, 75 NRC at 41-43, 46-54.

[94] *See* Petition at 10. Moreover, Pilgrim Watch's various arguments calling for calculations of maritime economic losses, including to "coastal tourism," "marine transportation," "marine related construction and infrastructure," "marine technology," "aquaculture," "commercial and recreational seafood," etc., could have been raised at the outset of the proceeding, and therefore are several years late. *See generally* Hearing Request at 23-37. The Environmental Report identified the Pilgrim plant's location on the western shore of Cape Cod Bay. *See* Environmental Report at 2-1.

[95] *See, e.g.,* LBP-12-1, 75 NRC at 13 (noting that Pilgrim Watch itself cited "news articles from April 2011 that reference water being injected into and exiting from the Fukushima reactors").

[96] The standard for new or amended contentions involves a balancing of eight factors set forth in 10 C.F.R. § 2.309. The factor given the most weight is whether there is "good cause" for the failure to file on time. *See Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2), CLI-10-12, 71 NRC 319, 322-23 (2010); 10 C.F.R. § 2.309(c)(1)(i). The Board found insufficient "good cause," and for the reasons outlined above, we see no error in that conclusion. A failure to demonstrate "good cause" for a late-filed contention requires a "compelling" showing on the remaining factors. *See, e.g., Watts Bar,* CLI-10-12, 71 NRC at 323; *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-4, 37 NRC 156, 165 (1993). Pilgrim Watch's petition does not present a "compelling" showing weighing in favor of admitting the contention. *See* Petition at 23; Pilgrim Watch Reply at 9-10.

The Board additionally noted that to admit the contention would "cause a material delay in the proceeding" and therefore also weighed against admission of the contention, pursuant to 10 C.F.R. § 2.309(c)(1)(vii). *See* LBP-12-1, 75 NRC at 18. Pilgrim Watch erroneously argues that delay is "legally irrelevant" under the standards for new contentions. *See* Petition at 23. The "introduction of a new contention," long after the evidentiary record is otherwise closed, would broaden and delay the proceeding and therefore tends to weigh against admission of a new contention. *See, e.g., Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 228

(Continued)

4. Post-Accident Water Processing

Pilgrim Watch's contention also challenges the SAMA analysis with respect to water processing measures. Specifically, Pilgrim Watch claims that there is no "provision within the Severe Accident Mitigation Guidelines (SAMGs) for processing [contaminated] water post accident."[97] Pilgrim Watch argues that the failure to address post-accident water processing in the SAMGs is an "important technical gap in Entergy's SAMA" analysis.[98]

It is not clear, however, what Pilgrim Watch means by its reference to SAMGs. SAMGs are Severe Accident *Management* Guidelines, which do not fall within the scope of license renewal. At issue in the SAMA analysis are specific candidate Severe Accident *Mitigation Alternatives,* or SAMAs, which are assessed in the cost-benefit analysis.

Pilgrim Watch does not appear to be claiming that there are specific additional mitigation measures to prevent or mitigate water contamination that should have been considered in the Pilgrim SAMA analysis but were not.[99] Pilgrim Watch's general references to a lack of water processing methods appear merely to be part of its overall claim regarding the need for SAMA analysis aqueous pathways modeling. Even assuming, however, that Pilgrim Watch meant to propose that the SAMA analysis should have reviewed some particular technology for processing contaminated water, the contention is ill-supported. We have said that "[u]nder the rule of reason governing NEPA . . . the concept of alternatives must be bounded by some notion of feasibility."[100] To "trigger full adjudicatory proceedings" based upon a suggested SAMA, petitioners must provide some minimal support to suggest that the SAMA credibly could be cost-beneficial.[101] Here, however, Pilgrim Watch's hearing request appears to suggest that efforts to process and decontaminate water would *fail,* not that there is an effective, cost-beneficial

---

(2011). And given the lack of support provided for the aqueous modeling contention and overall lack of familiarity demonstrated with the details of the Pilgrim SAMA analysis, we see no indication that Pilgrim Watch would "reasonably be expected to assist in developing a sound record" on the issue of aqueous modeling. *See* 10 C.F.R. § 2.309(c)(1)(viii).

[97] *See* Hearing Request at 2.

[98] *Id.*

[99] *See, e.g., id.* at 3, 10.

[100] *See Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 12 (2002) (internal citations omitted) (citing *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.,* 435 U.S. 519, 551 (1978); *Citizens Against Burlington v. Busey,* 938 F.2d 190, 195 (D.C. Cir. 1991)).

[101] *Id.*

mitigation alternative for processing contaminated water that should have been considered.[102]

On appeal, Pilgrim Watch claims that the Pilgrim station's "site-specific Severe Accident Mitigation Guidelines" are not available to the public.[103] But again, this apparent broad reference to SAMGs, which are voluntary *management* guidelines, does not suggest in any way a deficiency in the *mitigation* alternatives analyzed, which were made public in Entergy's ER and the Staff's SEIS. In short, Pilgrim Watch's references to post-accident water processing and SAMGs do not identify a genuine material dispute with the Pilgrim SAMA analysis.

5. Additional Challenges to SAMA Analysis Methodology

Pilgrim Watch also raises an array of challenges to the methodology of the SAMA analysis.[104] These arguments are both without foundation and late, such as the bare claim that the "95 percentile" level of potential accident consequences — nearly the worst accidents in the spectrum of accident scenarios assessed — must be used as the baseline in the NEPA SAMA analysis.[105] In a recent decision addressing another Pilgrim Watch contention, we explained at some length why this SAMA analysis challenge is both late and, in any event, unsupported.[106] Our earlier discussion is equally applicable here, and likewise supports the Board's ruling in LBP-12-1.

Pilgrim Watch also argues that the economic cost calculations in the SAMA analysis must consider not only costs stemming from actual contamination, but also any losses stemming from the public's potential "perception" that waters or fish may be contaminated, even if they in reality are not.[107] But NEPA is not intended to encompass every possible impact, and does not encompass potential losses due to individuals' "perception" of a risk.[108]

6. Claims of New and Significant Information Under NEPA

We turn last to Pilgrim Watch's claim that its contention presented "new, significant, and material information" regarding potential environmental effects

---

[102] *See* Hearing Request at 12-13; *see also* Pilgrim Watch Reply at 6 ("there are no currently available methods to successfully decontaminate the water").

[103] *See* Petition at 10.

[104] *See, e.g.,* Petition at 15; Pilgrim Watch Reply at 7.

[105] *See id.* at 15; Pilgrim Watch Reply at 7.

[106] *See* CLI-12-1, 75 NRC at 54-57.

[107] *See* Pilgrim Watch Reply at 7; Hearing Request at 18-19.

[108] *See Metropolitan Edison Co. v. People Against Nuclear Energy,* 460 U.S. 766, 775-79 (1983); *New Jersey Department of Environmental Protection v. NRC,* 561 F.3d 132, 138-39 (3d Cir. 2009).

at the Pilgrim facility.[109] Namely, Pilgrim Watch claims that the Board erred when it found that the contention did not "paint a *seriously* different picture of the environmental landscape" than that already depicted in the environmental analyses.[110] Pilgrim Watch argues that the Board's "picture" of the "environmental landscape" is one where there is no radiological contamination "flow[ing] into Cape Cod Bay and adjacent waters beyond in a severe accident."[111]

But contrary to Pilgrim Watch's suggestion, it is not the case that the NRC's environmental impacts analysis for the Pilgrim plant ignores potential releases of radionuclides or contaminated water to liquid pathways. As we earlier noted, the NRC's GEIS provides a generic, bounding severe environmental impacts analysis of severe accidents that is applicable to all plants, including the Pilgrim facility. The GEIS analysis encompasses releases to aquatic pathways in a severe core-melt accident. The analysis examines radioactive fallout onto open bodies of water, including drinking water and aquatic food pathways, and it also considers surface water contamination and potential releases to groundwater pathways.[112]

Pilgrim Watch does not identify how the Fukushima accident paints a "seriously different picture" of the environment at the Pilgrim plant, given the bounding severe accident scenarios assumed in the GEIS analysis and its consideration of liquid pathways.[113] Specifically, it is not apparent how the mitigation actions of flooding the reactor in Fukushima, the so-called "feed and bleed" scenario referenced by Pilgrim Watch and Judge Young, significantly changes for the Pilgrim site the GEIS's overall conclusions on either potential severe accident impacts (which include extreme scenarios) or their overall low probability. That the Fukushima accident was a severe accident with serious consequences is self-evident. But our GEIS analysis encompasses severe accidents with serious consequences, as does the Pilgrim SAMA analysis.

We reemphasize, though, that our review of the Fukushima accident continues, and that if "'new and significant information comes to light' that is relevant to ongoing 'application-specific NEPA documents' the NRC will evaluate the

---

[109] *See* Petition at 17.

[110] *See id.* at 12 (quoting LBP-12-1, 75 NRC at 14) (emphasis in original).

[111] *See id.*

[112] *See* GEIS at 5-49 to 5-95. For the groundwater pathway, for example, the GEIS analysis assumes core meltdown and penetration of the basemat (a "worst-case accident"). *See id.* at 5-92; *see also id.* at 5-65 to 5-66 (referencing scenario of breached basemat, with molten core debris and radioactive water penetrating the strata beneath the plant, and where "soluble radionuclides" are "leached and transported with groundwater and contaminated water" to drinking water wells and surface water bodies used for fishing and shoreline activities). The GEIS concludes that the "risk from groundwater releases at ocean sites would be a small fraction of that from atmospheric releases." *See id.* at 5-95. *See also* 10 C.F.R. Part 51, Subpart A, Appendix B, Table B-1 (regarding "severe accidents").

[113] *See generally Callaway,* CLI-11-5, 74 NRC 141.

information as appropriate."[114] We note, further, that we are in the process of updating the GEIS analysis.[115] To the extent that any new information learned from the Fukushima accident presents a significant new environmental impact that should be addressed in the upcoming GEIS, or in site-specific environmental analyses, we will supplement or otherwise incorporate the information into the environmental analyses as warranted.

Judge Young, in her dissenting opinion, writes that the NRC should "refrain from terminating this proceeding," and refrain from "making an ultimate decision on the renewal application" pending more information from the Fukushima accident.[116] Judge Young reasons that although there is "insufficient information available at this time" to conclude that the ongoing Fukushima accident reviews "*would* definitely lead to significantly different analyses of environmental consequences," it is also impossible to conclude that "Fukushima-related issues" could never "lead to significantly different analyses."[117] But Judge Young's proposal is akin to our staying a decision on the license indefinitely, perhaps for years, to await a final confirmation of whether multiple Fukushima studies and reviews produce any information that may significantly alter the current applicable GEIS impacts analysis, or the Pilgrim SAMA analysis.

NEPA, however, does not "require that we wait until inchoate information matures into something that [possibly] might affect our review."[118] It requires us to conduct our review with the "best information available now."[119] Based on what we know to date, the Fukushima accident does not significantly alter the overall environmental picture for severe reactor accidents at the Pilgrim site.[120] As we have stated, our review of the accident has not revealed "sufficient information . . . to make a significant difference in the *Pilgrim* environmental review."[121] Our decision today is consistent with other recent decisions we have issued addressing NEPA claims based on the accident at Fukushima.[122]

---

[114] *See* CLI-12-10, 75 NRC at 501.

[115] *See* "Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Main Report, Draft Report for Comment," NUREG-1437, Rev. 1 (Vol. 1 July 2009) (ADAMS Accession No. ML091770049).

[116] *See* LBP-12-1, 75 NRC at 34 (Young, J., Dissenting Opinion).

[117] *See id.* (emphasis in original).

[118] *See* CLI-12-6, 75 NRC 352, 376 (referencing *Marsh v. Oregon Natural Resources Council,* 490 U.S. 360, 373-74 (1989)).

[119] *Id.* at 376.

[120] *See Marsh v. Or. Natural Res. Council,* 490 U.S. at 373-74; *National Committee for the New River, Inc. v. Federal Energy Regulatory Commission,* 373 F.3d 1323, 1330 (D.C. Cir. 2004).

[121] *See* CLI-12-6, 75 NRC at 376; *see also* CLI-12-10, 75 NRC at 501.

[122] *See, e.g., Luminant Generation Co., LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 388-91 (2012) (upholding Board determination that petitioners had failed to articulate factual basis for Fukushima-based NEPA dispute with specific application).

We continue to conclude that the current "operation and continued licensing" of nuclear power reactors "do not pose an imminent threat to public health and safety," or to the environment.[123] Further, we "have in place well-established regulatory processes by which to impose any new requirements or other enhancements."[124] And we are taking measures, consistent with "our overall defense-in-depth philosophy," to provide "greater assurance" that severe accidents will not pose an undue risk to public health and safety.[125] But our ongoing efforts to evaluate and enhance our safety requirements — to bolster the layers of protection to prevent and mitigate accidents — do not imply that we now consider severe accidents significantly more likely or potentially more damaging than suggested in the GEIS, our bounding impacts analysis for license renewal.

To conclude, the issue before us is a limited one: whether Pilgrim Watch presented an admissible contention. Our rules are "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" in a hearing.[126] Here, the Board found that Pilgrim Watch had not met the applicable requirements under 10 C.F.R. §§ 2.309 and 2.326. Pilgrim Watch's petition reveals no error, abuse of discretion, or other reason warranting review of LBP-12-1. We therefore decline to revisit the Board's decision.[127]

III. CONCLUSION

For reasons given in LBP-12-1 and in this decision, we *deny* Pilgrim Watch's petition for review.

---

[123] *See, e.g.,* Order at 3.

[124] *See* CLI-12-6, 75 NRC at 375-76.

[125] *See, e.g.,* Order at 6.

[126] *See Davis-Besse,* CLI-12-8, 75 NRC at 416.

[127] Since filing its petition for review, Pilgrim Watch has submitted five supplemental filings, which it claims provide new and significant information relevant to its petition. *See* Supplement to Pilgrim Watch's Petitions for Review of LBP-12-1, LBP-11-23 (Feb. 15, 2012); Pilgrim Watch's Supplement to Pilgrim Watch's Petition for Review of LBP-12-1 (Feb. 28, 2012); Pilgrim Watch's Supplement to Pilgrim Watch Petition for Review of LBP-12-1 (Mar. 2, 2012); Pilgrim Watch's Supplement to Pilgrim Watch Petition for Review of LBP-12-1 (Apr. 6, 2012); Pilgrim Watch's Supplement to Pilgrim Watch Petition for Review of LBP-12-01 (May 15, 2012). Pilgrim Watch's filings merely consist of attached news articles. Pilgrim Watch does not identify either what information in the articles is significant or why. We nonetheless reviewed the articles, but none of the material suggests error in the Board's conclusions in LBP-12-1.

IT IS SO ORDERED.[128]

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

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

[128] Commissioner Apostolakis did not participate in this matter. The Chairman dissents from this order.

Chairman Gregory B. Jaczko, Dissenting

I dissent from the decision because I do not believe we should apply the standard reserved for reopening a closed hearing record to Fukushima contentions. In my view, this higher contention admissibility standard is not appropriate for contentions arising from the unprecedented and catastrophic accident at Fukushima. We are in the process of conducting a comprehensive review of those events from which we have learned, and will continue to learn, new information and insights on the safety of our nuclear fleet. Given the significance of that accident and the potential implications for the safety of our nuclear reactors, I believe we should allow members of the public to obtain hearings on new contentions on emerging information if they satisfy our ordinary contention standards.

Cite as 75 NRC 731 (2012) **LBP-12-11**

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. 12-920-07-LR-BD01)

ENTERGY NUCLEAR GENERATION COMPANY and ENTERGY NUCLEAR OPERATIONS, INC.
(Pilgrim Nuclear Power Station) **June 18, 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 concerning the Licensee's impacts on the roseate tern, a federally listed endangered species.

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.

ENDANGERED SPECIES ACT

Under the ESA, a federal agency must consult with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service to ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any species listed as threatened or endangered, or to destroy or adversely modify critical habitat. The agency must request information whether any listed or proposed species may be present in the area of the action, and if the Services advise that any such species may be present, the agency must prepare a biological assessment to identify any species that is likely to be affected by the action.

CONTENTIONS, TIMELINESS: NATIONAL ENVIRONMENTAL POLICY ACT

The contention at issue was filed several years after issuance of both the draft and final EIS in this case, and petitioners' claimed new information was either not materially different from information that was previously available, or otherwise not really new, with the contention filed a year or more after the availability of the most recent information cited by petitioners. Under these circumstances the contention is found to be untimely.

MOTIONS TO REOPEN: TIMELINESS, "EXCEPTIONALLY GRAVE ISSUE"

Section 2.326(a)(1) of 10 C.F.R. 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." Although noncompliance with the ESA is a serious matter, which may warrant further attention by the NRC Staff, the board concludes that any possibility of adverse effects on the roseate tern was not shown to involve any "grave threat to public safety" 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)

On May 2, 2012, for the second time since the January 11, 2012, termination of this proceeding,[1] Pilgrim Watch, an intervenor in the earlier proceeding, has jointly with Jones River Watershed Association (JRWA, collectively Petitioners) moved to reopen the proceeding and petitioned for intervention on behalf of JRWA.[2] The motion is accompanied by a new contention raising challenges, under the Endangered Species Act (ESA) and the National Environmental Policy Act (NEPA), to the Nuclear Regulatory Commission (NRC) Staff's review of the application of Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc. (collectively, Entergy), for renewal of the Pilgrim plant's operating license for an additional 20-year period.[3] Petitioners assert in their new contention that the NRC failed to comply with the ESA and NEPA in considering the impacts of relicensing Pilgrim on the roseate tern, a federally listed endangered species.

This licensing board, comprised of the same members who have been involved in this proceeding for some years, was again constituted for the purpose of evaluating the Petitioners' current motion. For the reasons discussed below, we must deny the motion, finding that Petitioners' motion and new contention are untimely and fail to satisfy the requirements of 10 C.F.R. §§ 2.326 and 2.309, subsections (c) and (f)(2).

I. BACKGROUND

The background of this proceeding has been discussed in earlier orders and need not be fully recounted here. In brief, Pilgrim Watch first petitioned to intervene in opposition to Entergy's license renewal application in 2006.[4] The licensing board granted the petition,[5] adjudicated two of Pilgrim Watch's

[1] *See* LBP-12-1, 75 NRC 1, 24 (2012).

[2] [JRWA] 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 (Mar. 8, 2012) [hereinafter Motion]. The two organizations filed additional joint motions to reopen and admit a new contention on March 8, 2012, and May 14, 2012.

[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).

contentions following evidentiary hearings[6] (one held after a Commission remand of a portion of a contention previously dismissed through summary disposition[7]), 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 before the board, a ruling that was recently upheld by the Commission.[9]

Petitioners filed the instant motion on May 2, 2012. On May 10, the Commission referred Petitioners' motion to the Atomic Safety and Licensing Board Panel,[10] and, on May 15, this licensing board was established.[11] Entergy[12] and the NRC Staff[13] filed their answers to the motion on May 16. Petitioners replied to Entergy's and the Staff's answers on May 23.[14] On June 4, the NRC Staff filed an answer opposing Petitioners' reply.[15]

II. APPLICABLE LEGAL STANDARDS

In order for Petitioners' motion to be granted and the 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, the motion must meet the requirements of 10 C.F.R. § 2.326 for reopening a closed record; (2) under 10 C.F.R. § 2.309(f)(2), the contention, being filed after

---

[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).

[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; the board found none of its contentions admissible.

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

[10] Memorandum from Annette L. Vietti-Cook, Secretary, to E. Roy Hawkens, 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] 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].

[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] [JRWA] and Pilgrim Watch Reply to Answers of NRC Staff and Entergy Opposing Petitions/Motions to Reopen, Intervene, and for Hearing on Roseate Tern Contention (May 23, 2012) [hereinafter Petitioners' Reply].

[15] NRC Staff's Answer to Motion for Leave to Reply to NRC Staff and Entergy's Opposition to the Roseate Tern Contention (June 4, 2012). The Staff asks us to deny Petitioners' request for leave to file their reply. Because the conclusion we reach disposing of Petitioners' motion is independent of the arguments made in their reply, the Staff's motion is effectively moot and does not require a ruling.

the deadline for initial intervention petitions, must have been submitted in a timely fashion, based on new information that is materially different from information previously available; (3) consideration of the contention under a balancing of the factors set forth at 10 C.F.R. § 2.309(c) must weigh in favor of admitting the contention; and finally, (4) the contention must satisfy the general contention admissibility requirements of 10 C.F.R. § 2.309(f)(1)(i)-(vi).[16]

III. PETITIONERS' NEW CONTENTION

Petitioners summarize their new contention as follows:

> Petitioners proffer evidence of procedural and substantive violations of the ESA with regard to the roseate tern by showing: (1) that the NRC staff was required to conduct a biological assessment pursuant to ESA § 7, 16 U.S.C. § 1536(c)(1), and it did not, (2) that Entergy's license application is inaccurate and incomplete in material aspects regarding the roseate tern, (3) that the U.S. Fish and Wildlife Service (USFWS) unlawfully ignored the requirement for a biological assessment and without a scientific basis declared the roseate tern to be "probably transient," contrary to widely known and available data, (4) that there is significant potential for adverse effects on roseate terns during the relicensing period, (5) that the NRC staff environmental impact statement [EIS] contradicts the USFWS finding that the roseate tern is present at PNPS but is "probably transitory," rendering the statement inadequate, and (6) that therefore, the NRC staff should be ordered to conduct a biological assessment on the Roseate tern and to supplement the environmental impact statement with this data.[17]

Under the ESA, a federal agency must consult with the USFWS and the National Marine Fisheries Service (NMFS) in order to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence" of any species that has been listed as threatened or endangered, or to destroy or adversely modify critical habitat.[18] The ESA further provides that the acting agency shall request of USFWS and NMFS "information whether any species which is listed or proposed to be listed may be present in the area" of the action; if the Services advise that such species are present, the acting agency is to prepare a biological assessment (BA) to identify any species "which

---

[16] *See also* 10 C.F.R. 2.326(d).

[17] Motion at 5-6. This Licensing Board does not, of course, have jurisdiction to rule on any challenge by Petitioners to any act of the USFWS.

[18] 16 U.S.C. § 1536(a)(2). For a more detailed overview of the ESA requirements, *see* LBP-12-10, 75 NRC 633 (2012), in which the licensing board denied Pilgrim Watch and JWRA's motion to reopen the proceeding and admit a contention based in part on the ESA.

is likely to be affected by such action."[19] The joint regulations of the USFWS and NMFS implementing the procedural requirements of the ESA provide further clarification on the requirements with respect to biological assessments.[20]

Petitioners' essential complaint is that the NRC never prepared a BA for the roseate tern. Petitioners allege that the NRC Staff incorrectly relied on a letter from USFWS, sent prior to the NRC's own assessment, in which USFWS concluded that the renewed license was "not likely to adversely affect" the roseate tern.[21] Petitioners assert that this conclusion is erroneous, in part because it was based on flawed information in the environmental report (ER) that Entergy submitted as part of its license renewal application.[22]

In support of their motion and contention, Petitioners offer the affidavit of Ian Christopher Thomas Nisbet, Ph.D., an environmental scientist and expert on the roseate tern.[23] Dr. Nisbet in his affidavit reviews information about the roseate tern's habits and habitat, and suggests that Entergy, USFWS, and the NRC Staff should have known that their conclusions about the roseate tern's presence in the vicinity of Pilgrim and the effects of the plant on the tern were flawed.[24]

In response, Entergy and the NRC Staff point to provisions in the Services' ESA regulations stating that the contents of the BA "are at the discretion of the Federal agency"[25] and that preparation of the BA "may be consolidated with interagency cooperation procedures required by other statutes, such as" NEPA.[26] Accordingly, Entergy and the Staff argue that the analysis of endangered species in the Staff's EIS operated as the equivalent of the BA.[27] Additionally, the Staff argues that USFWS concluded the consultation process required by the ESA when it forwarded to the NRC Staff (in response to the Staff's request for a species list) its letter to Entergy concluding that relicensing was "not likely to adversely affect" the roseate tern.[28] Entergy and the NRC Staff also argue that the motion and contention are untimely, a matter we turn to below.

---

[19] 16 U.S.C. § 1536(c).
[20] *See, e.g.,* 50 C.F.R. § 402.12.
[21] Motion at 15-16.
[22] *Id.* at 16-17.
[23] Affidavit of Ian Christopher Thomas Nisbet, Ph.D. (Apr. 30, 2012) [hereinafter Nisbet Affidavit].
[24] *Id.* at 3-5, 7-8.
[25] 50 C.F.R. § 402.12(f).
[26] *Id.* § 402.06.
[27] *See* NRC Staff Answer at 19-21; Entergy Answer at 11-12.
[28] *See* NRC Staff Answer at 22-23.

IV. RULING ON MOTION TO REOPEN AND NEW CONTENTION

Petitioners' new contention is inadmissible primarily because it has not been timely presented, nor has it been shown that it should nonetheless be admitted under any other relevant criteria. With certain exceptions discussed further herein, the reopening standards of 10 C.F.R. § 2.326 and the admissibility criteria of section 2.309(f)(2) require that any contention be timely. Although NRC regulations do not provide a precise definition of "timely," licensing boards have often found a new contention to be timely if it has been filed within 30 days of the availability of information on which the contention is based.[29]

To the extent Petitioners criticize the accuracy of statements in Entergy's ER, the time for challenging the ER passed when the NRC Staff released its draft supplemental EIS. Although NRC regulations allow for filing contentions challenging the ER with the initial petition[30] and prior to the time the Staff's environmental review documents are completed, in this instance the Staff completed the draft EIS in December 2006 and the final EIS in July 2007,[31] rendering any challenge to the ER both untimely and moot.

As to the 2007 Final Supplemental EIS (FSEIS), this document includes an analysis of the impact of the licensing action on the roseate tern,[32] as well as the letter from USFWS that the Staff maintains concluded the ESA consultation.[33] Petitioners' claim that the NRC Staff has failed to comply with certain procedural requirements of the ESA is also based on events and information from 2007 and earlier. Petitioners assert that 10 C.F.R. § 2.309(f)(2) allows them to bring their contention now because it is based on data or conclusions in the FSEIS that differ significantly from those in the ER.[34] But as the Staff correctly points out,[35] that provision does not allow petitioners an indefinite period of time within which to file a contention. Petitioners' ESA claim may properly be viewed as arising with publication of the FSEIS in July 2007, and should have been filed, if not within 30 days of that time, then certainly at a time significantly earlier than nearly 5 years later.

---

[29] *See, e.g., Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 218 & n.8 (2011).

[30] *See* 10 C.F.R. 2.309(f)(2).

[31] Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Pilgrim Nuclear Power Station — Final Report, NUREG-1437, Supplement 29 (2007) (ADAMS Accession No. ML071990020) [hereinafter FSEIS].

[32] *See id.* at 4-64.

[33] *Id.* at E-8 to -9.

[34] Motion at 28.

[35] *See* NRC Staff Answer at 7-8.

Petitioners point to several more recent developments that they claim provide "new information" that renders the contention timely. Each of these pieces of information, however, is either not new or not materially different from information that was previously available. For example, the most recent information in the Nisbet Affidavit concerning sighting of roseate terns is from August 2011, 7 months before the motion was filed.[36]

Petitioners also rely on a report completed in 2000 by ENSR, a consultant to Entergy, which was cited in both the ER and the FSEIS as support for the conclusion that relicensing would have no adverse impact on fish populations, i.e., the food supply for the roseate tern.[37] Petitioners argue that, because the report was made available to them only recently, "following repeated requests," the report should be considered new information.[38] They do not, however, explain why they did not request the 12-year-old report earlier, or why they were unable to locate the report in the NRC's electronic public document system.[39] Nor do they show how the information in the report is materially different from what was already available in the ER or the FSEIS.[40] Entergy and the Staff both argue that the relevant conclusions of the ENSR report were previously available, and Petitioners offer nothing to demonstrate the opposite.

Petitioners also offer evidence of recent violations of the Clean Water Act as new information.[41] But as Petitioners' motion shows, the asserted pollution limit exceedances at issue began in 2010.[42] That noncompliance with the effluent limitations may have continued does not excuse Petitioners from waiting until now to bring their contention. Further, the violations of which Petitioners complain involve one pollutant, chlorine,[43] and neither the motion nor the Nisbet Affidavit draws any connection between chlorine emitted from Pilgrim and any adverse impacts on the roseate tern.

Petitioners say they should be excused from application of a 30-day timeliness requirement because they acted reasonably in expecting USFWS and the NRC Staff to comply with proper procedures.[44] We cannot agree that a years-long delay

---

[36] *See* Motion at 29.

[37] *Id.* at 23, 44.

[38] *Id.* at 23.

[39] *See* ENSR Corp., Redacted Version, 316 Demonstration Report — Pilgrim Nuclear Power Station (March 2000) (ADAMS Accession No. ML061390357).

[40] The report also fails to provide support for Petitioners' contention. Rather than cast doubt on the conclusions of the FSEIS, the report supports the conclusion in the ER and FSEIS of no adverse impact on the roseate tern. *See id.* at 1-1; Motion at 23, 44.

[41] *See* Motion at 22.

[42] *See id.* at 22 n.20.

[43] *Id.*

[44] *See id.* at 30-31.

in raising these issues is reasonable. Because the motion and contention are based on information that is neither new nor materially different from information that was previously available, the motion to reopen and accompanying contention are untimely under both 10 C.F.R. § 2.326 and § 2.309(f)(2).

This conclusion is not changed by Petitioners' supporting affidavit of Dr. Nisbet. Although quite detailed and thorough in other respects, Dr. Nisbet in his affidavit does not substantively address the reopening criteria as required by 10 C.F.R. § 2.326(b), providing only the cursory and conclusory statement that, "[in his] professional opinion, this is a significant environmental issue and a materially different result would have been likely if the evidence proffered in this affidavit had been considered in a timely fashion."[45] The affidavit provides a great deal of information about the roseate tern, but does not, with any specificity, explain how this information would alter the actual conclusions of the USFWS or NRC regarding the effects of the additional operation of Pilgrim on the tern. Dr. Nisbet provides support for that part of the contention asserting that USFWS and NRC incorrectly gauged the presence of roseate terns at the Pilgrim site, stating, for example, that, "[p]rior to 1999 LBP [Long Beach, Plymouth] was known to be used by staging roseate terns but was thought to be a relatively minor site, with a maximum of 240 birds in August 1988."[46] But, again, it is not explained how this or related information would alter the USFWS or NRC conclusions.

Nor does Dr. Nisbet suggest that the information he presents demonstrates an "exceptionally grave issue," within the terms of 10 C.F.R. § 2.326(a)(1), which allows a motion to reopen to be granted, "even if untimely presented," when the motion presents an "exceptionally grave issue." And in any event, the Commission has defined an exceptionally grave issue as one which raises "a sufficiently grave threat to public safety."[47] Although we have no doubt that noncompliance with the Endangered Species Act is a serious matter, the possibility of adverse effects on the roseate tern has not been shown to involve any "threat to public safety." We must therefore conclude that Petitioners' motion to reopen fails to meet the requirement of section 2.326(a)(1). We further find that the contention fails to meet either the timeliness requirements of 10 C.F.R. § 2.309(f)(2) or the requirements of 10 C.F.R. § 2.309(c), which permits untimely filings in certain circumstances. No good cause has been shown for the contention's untimeliness,

---

[45] Nisbet Affidavit at 8.

[46] *Id.* at 4-5.

[47] 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").

and under the circumstances discussed herein, we find no other considerations weigh sufficiently in Petitioners' favor to admit the contention.[48]

Because we find that the motion and contention are untimely and fail to meet the reopening criteria, we need not rule on other contention admissibility requirements under 10 C.F.R. § 2.309(f)(1), or delve any further into the substantive allegations of the contention. But we remind the NRC Staff that it is ultimately their obligation to comply with NEPA and the ESA. Petitioners have raised genuine concerns that appropriate procedures were not followed in this case. For example, although the NRC Staff may be correct that the FSEIS is the functional equivalent of a BA, there is no evidence that the FSEIS was ever submitted to USFWS as required by the ESA regulations. In addition, although the roseate tern population nesting at the LBP site has increased in recent years,[49] Dr. Nisbet (who clearly has significant expertise on the roseate tern and how it may be affected by environmental considerations) presents extensive additional information and considerations that may warrant further attention by the NRC Staff.

V. CONCLUSION AND ORDER

For the foregoing reasons, we conclude that the May 2, 2012, contention filed by Pilgrim Watch and JRWA:

a. Fails to satisfy the criteria for reopening a closed record under 10 C.F.R. § 2.326; and

b. Fails to satisfy the admissibility criteria of 10 C.F.R. § 2.309(f)(2) and § 2.309(c).

Each of these failures separately requires denial of this request for hearing by Pilgrim Watch and JRWA. The petition to intervene and motion to reopen 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 July 30, 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 to have exhausted 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.

---

[48] *See, e.g.,* in this regard NRC Staff Answer at 15-17.

[49] *See* Nisbet Affidavit at 5; NRC Staff Answer at 21, 25-26; Entergy Answer at 35-36.

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

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
June 18, 2012[50]

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

Cite as 75 NRC 742 (2012) **LBP-12-12**

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) **June 21, 2012**

This 10 C.F.R. Part 52 proceeding concerns the application of Detroit Edison Company (DTE) to construct and to operate a new boiling water reactor on its existing Fermi nuclear facility site near Newport City in Monroe County, Michigan. The proposed reactor is designated Unit 3 and would employ the GE-Hitachi Economic Simplified Boiling Water Reactor (ESBWR) design. The Licensing Board granted the Intervenors' motion for leave to file ten new or amended contentions but denied the contentions as inadmissible.

RULES OF PRACTICE: NEW OR AMENDED CONTENTIONS, GOOD CAUSE

A delay caused by the schedule of counsel in other matters can support a finding of good cause. *See Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-00-19, 52 NRC 85, 92 (2000).

RULES OF PRACTICE: NEW OR AMENDED CONTENTIONS, BROADENING SCOPE OF PROCEEDING

Because three contentions are already set for hearing in this proceeding, the admission of further contentions would not substantially delay the proceeding. And, because two of the previously admitted contentions allege NEPA violations, the new NEPA contentions put forward by the Intervenors would not unreasonably broaden the issues.

RULES OF PRACTICE: NEW OR AMENDED CONTENTIONS, TIMELINESS

As a general rule, Intervenors must file their NEPA contentions based on the ER. Thus, a contention submitted for the first time after the DEIS is issued will be deemed untimely. But there are exceptions to this rule. A petitioner "may amend [NEPA] contentions or file new [NEPA] contentions if there are data or conclusions in the NRC draft or final environmental impact statement, environmental assessment, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's documents." 10 C.F.R. § 2.309(f)(2). Alternatively, the Intervenors may file new or amended contentions in response to the DEIS if they can satisfy the test of section 2.309(f)(2)(i)-(iii). Thus, a new or amended contention may be filed based upon the DEIS if it is based upon new and materially different information, whether contained in the DEIS itself or some other source, and if it is filed in a timely manner once the new information becomes available (or any delay is excused pursuant to section 2.309(c)(1)).

RULES OF PRACTICE: NEW OR AMENDED CONTENTIONS, TIMELINESS

Although NRC regulations provide that petitioners may file amended contentions "if there are data or conclusions in the [DEIS] . . . that differ significantly from the data or conclusions in the applicant's documents," 10 C.F.R. § 2.309(f)(2), this does not mean that the publication of the DEIS simply provides an opportunity to renew previously filed (and rejected) contentions. Rather, the petitioner must demonstrate that the DEIS actually contains new data or conclusions.

RULES OF PRACTICE: ENVIRONMENTAL IMPACT STATEMENT, OPPORTUNITY TO COMMENT

Intervenors claim that, because the permitting processes of the Army Corps of Engineers and the state Department of Environmental Quality were not completed

before the DEIS was issued for public comment, Intervenors have been deprived of their right to comment publicly on mitigation plans at the DEIS stage. Intervenors fail to cite any legal authority, however, supporting their theory that the permitting processes of other agencies must be completed before the DEIS may be issued for public comment. Although the NRC must respond to the significant views of other agencies, particularly if they are critical of the NRC's analysis, that duty applies at the FEIS stage, after the DEIS has been circulated to interested federal and state agencies for their review and comment in accordance with the NRC's regulations.

RULES OF PRACTICE: NEW OR AMENDED CONTENTIONS, TIMELINESS

Contentions that concern duties of the NRC Staff and not an applicant, such as consultation with other federal agencies, could not be raised at the ER stage, and therefore we will not reject such a contention as untimely when filed after the release of the DEIS.

STATUTES: ENDANGERED SPECIES ACT

There is no requirement in the Endangered Species Act (ESA), or in the NRC regulations enumerating the required contents of a DEIS, that the NRC complete the required ESA consultation before publication of the DEIS.

RULES OF PRACTICE: CONTENTIONS, STATE REGULATORY REQUIREMENTS

Intervenors' challenge concerning the DEIS's alleged failure to discuss the Great Lakes Compact's process for regional review of its application for a consumptive water use permit is inadmissible because it does not raise a genuine dispute with the DEIS. The Compact Agreement binds and imposes certain obligations on its member states, not on other governmental agencies or on utility companies. Where Fermi 3 is concerned, if the Michigan Department of Environmental Quality decides to grant Applicant a water withdrawal permit, it is Michigan that must seek approval from the Compact, not Applicant or the NRC.

RULES OF PRACTICE: CONTENTIONS, SCOPE OF PROCEEDING

A licensing board is precluded from admitting a contention alleging that the

project may not be consistent with the requirements of another federal, state, or local agency. That issue must be resolved by the other agency, not the NRC.

RULES OF PRACTICE: CONTENTIONS

The Board may construe an admitted contention contesting the ER as a challenge to the subsequently issued DEIS or FEIS without the necessity for Intervenors to file a new or amended contention. This concept has been referred to as the "migration tenet." The migration tenet 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. This tenet, however, applies only so long as the DEIS analysis or discussion at issue is essentially *in para materia* with the ER analysis or discussion that is the focus of the contention. If it is not, an intervenor may need to amend the admitted contention, or file a new contention altogether.

NATIONAL ENVIRONMENTAL POLICY ACT: MITIGATION ALTERNATIVES

Although NEPA requires that the environmental impact statement discuss the impacts of the proposed action and any alternatives to that action (including options for mitigating impacts), the statute does not require that any specific mitigation strategies must be adopted.

CONTENTIONS, ADMISSIBILITY: BOILING-WATER REACTORS

The General Design Criteria require that "[t]he reactor core and associated coolant systems shall be designed so that in the power operating range the net effect of the prompt inherent nuclear feedback characteristics tends to compensate for a rapid increase in reactivity." In other words, the General Design Criteria require that the reactor exhibit a negative void coefficient in the power operating range. The Design Control Document for the ESBWR shows that throughout core life the ESBWR exhibits a negative void coefficient. Thus, there was no need for the DEIS to discuss accidents encompassing the potential of "Positive Void Coefficient" because the design does not exhibit such a characteristic.

NATIONAL ENVIRONMENTAL POLICY ACT: SEGMENTATION, SCOPE

In order to avoid an unlawful segmentation of the project, the FEIS must evaluate the environmental impact not only of the construction and operation of

the project itself but of all connected actions. The NRC Staff argues that the construction of a transmission line is defined as a "preconstruction activity," and that the NRC lacks regulatory authority over construction of the transmission corridor, which will be built by an entity other than the Applicant. But even if the transmission corridor is a preconstruction activity and outside the NRC's regulatory jurisdiction, the construction and maintenance of the transmission corridor likely qualifies as a connected action under governing NRC and Council on Environmental Quality (CEQ) regulations, and therefore must be analyzed in the FEIS.

RULES OF PRACTICE: NEW OR AMENDED CONTENTIONS, CHALLENGE TO REGULATIONS

By raising the public health consequences of all radiological releases from Fermi 3, Intervenors seem to suggest that any release, even those within limits set by NRC regulations, must be prohibited. To the extent that Intervenors challenge all radiological releases from nuclear power plants, the contention presents an impermissible challenge to the NRC's regulations. *See* 10 C.F.R. § 2.335(a).

MEMORANDUM AND ORDER

(Ruling on Motion for Leave to Late-File Amended and New Contentions and Motion to Admit New Contentions)

Before this Licensing Board are (1) a motion for leave to file amended and new contentions 15 days after the deadline provided in our scheduling order ("Motion for Leave"); and (2) a motion to admit those contentions ("Motion to Admit"), both submitted by Intervenors[1] on January 11, 2012.[2] We grant Intervenors' Motion for Leave. We deny the Motion to Admit, except that we reserve ruling on two specific aspects of proposed Contentions 20 and 21 that are related to the pending motions for summary disposition of previously admitted Contentions 6 and 8.[3]

---

[1] The Intervenors include: Beyond Nuclear, Citizens for Alternatives to Chemical Contamination, Citizens Environmental Alliance of Southwestern Ontario, Don't Waste Michigan, Sierra Club (Michigan Chapter), Sandra Bihn, Derek Coronado, Richard Coronado, Keith Gunter, Michael J. Keegan, Leonard Mandeville, Frank Mantei, Edward McArdle, Marcee Meyers, Henry Newnan, George Steinman, Shirley Steinman, Harold L. Stokes, and Marilyn R. Timmer.

[2] Motion for Leave to Late-File Amended and New Contentions (Jan. 11, 2012); Motion for Resubmission of Contention 10, to Amend/Resubmit Contention 13, and for Submission of New Contentions 17 through 24 (Jan. 11, 2012).

[3] *See* pp. 767-68 and 771, *infra.*

I. BACKGROUND

This combined license (COL) contested proceeding involves the application of Detroit Edison Company (Applicant) under 10 C.F.R. Part 52, Subpart C, to construct and to 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.

On March 9, 2009, Intervenors submitted a petition to intervene that included fourteen proposed contentions.[4] We ruled that Intervenors have standing and admitted four of their contentions.[5] We subsequently admitted one additional contention[6] and granted motions for summary disposition with respect to two of the original contentions.[7] Thus, three contentions remain pending in this proceeding.

On January 11, 2012, Intervenors filed the motions now before the Board, seeking to admit two refiled contentions and eight new contentions. On February 6, the NRC Staff and Applicant filed answers opposing admission of all ten contentions.[8] Intervenors filed their reply on February 13.[9] On February 17, Applicant filed its Motion for Leave to File Surreply and Surreply.[10]

II. BOARD RULING ON INTERVENORS' MOTION FOR LEAVE

Intervenor's Motion for Leave asks that we consider the Motion to Admit even though it was filed 15 days after the deadline specified in our scheduling order for motions to admit proposed new or amended contentions based on the Draft Environmental Impact Statement (DEIS). We grant the Motion for Leave.

---

[4] Petition of Beyond Nuclear [et al.] for Leave to Intervene in Combined Operating License Proceedings and Request for Adjudication Hearing (Mar. 9, 2009) [hereinafter "Petition"].

[5] *See* LBP-09-16, 70 NRC 227, 306, *aff'd,* CLI-09-22, 70 NRC 932 (2009).

[6] *See* LBP-10-09, 71 NRC 493, 522 (2010).

[7] *See* Board Order (Granting Motion for Summary Disposition of Contention 3) (July 9, 2010) (unpublished); Board Order (Granting Motion for Summary Disposition of Contention 5) (Mar. 1, 2011) (unpublished).

[8] NRC Staff Answer to Intervenors' Motion for Resubmission of Contention 10, to Amend/Resubmit Contention 13, and for Submission of New Contentions 17 through 24 (Feb. 6, 2012) [hereinafter "NRC Staff Answer"]; Applicant's Answer to Proposed New Contentions (Feb. 6, 2012) [hereinafter "Applicant Answer"].

[9] Reply in Support of "Motion for Resubmission of Contention 10, to Amend/Resubmit Contention 13, and for Submission of New Contentions 17 through 24" (Feb. 13, 2012) [hereinafter "Reply"].

[10] Applicant's Motion for Leave to File Surreply and Surreply (February 17, 2012). We find it unnecessary to consider the Surreply, and we therefore deny the Applicant's Motion for Leave to File Surreply as moot.

Under 10 C.F.R. § 2.309(f)(2), new or amended 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;
>
> (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.

If a new or amended contention is deemed untimely under section 2.309(f)(2)(iii), it will be evaluated under 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.[11]

The Motion for Leave concerns the third requirement for filing a new or amended contention: that the contention be "submitted in a timely fashion based on the availability of the subsequent information."[12] The regulations do not define "timely fashion." In order to provide guidance to the parties, the Board stated in its Initial Scheduling Order that, with respect to new or amended contentions based on new and material information in the DEIS, "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 sixty (60) days of the date when the document containing the new and material information first becomes available."[13] Thus, a motion to admit new

---

[11] The eight factors are:

> (i) Good cause, if any, for 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.

[12] 10 C.F.R. § 2.309(f)(2)(iii).

[13] Board Order (Establishing Schedule and Procedures to Govern Further Proceedings) (Sept. 11, 2009) at 2 (unpublished) [hereinafter "ISO"].

contentions based on the DEIS would be considered timely if filed within 60 days of the publication of the DEIS.

A notice of the availability of the DEIS was published in the *Federal Register* on October 28, 2011.[14] Therefore, any contentions based on the DEIS should have been filed by December 27, 2011, in order to be deemed timely under section 2.309(f)(2)(iii). The Motion to Admit was filed on January 11, 2012, 15 days after the deadline. Intervenors concede that their Motion to Admit is not timely.[15] We therefore proceed to the section 2.309(c)(1) balancing test.

The Commission has held that good cause is the most important factor under section 2.309(c)(1), and that absent good cause, a "compelling" showing must be made with regard to the other seven factors.[16] Intervenors attempt to demonstrate good cause for their late filing by arguing that their counsel "was preoccupied throughout the month of December with major filings in three other unrelated legal matters, two of which were due the week of December 27, 2011."[17] A delay caused by the schedule of counsel in other matters can support a finding of good cause.[18] On the other hand, our scheduling order allowed the Intervenors 60 days to prepare new contentions based on the DEIS, and counsel's other obligations during December only partially explain why it was not possible to meet our deadline by working on the new contentions before other deadlines became imminent. Counsel for Intervenors admits that he "did not consult the scheduling

---

[14] *See* Notice of Availability of Draft Environmental Impact Statement for a Combined License for Unit 3 at the Enrico Fermi Atomic Power Plant Site, 76 Fed. Reg. 66,998 (Oct. 28, 2011); *see also* 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) [hereinafter "DEIS"].

[15] *See* Motion for Leave at 1-2.

[16] *See, e.g., Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC 479, 492 n.69 (2012).

[17] Motion for Leave at 1.

[18] *See Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-00-19, 52 NRC 85, 92 (2000). It is true that the Commission has held in another context that parties' other professional obligations do not relieve them of their obligations to meet mandatory deadlines. *See Tennessee Valley Authority* (Bellefonte Nuclear Plant, Units 1 and 2), CLI-10-26, 72 NRC 474, 476 (2010) (". . . Petitioners' argument that their counsel was busy on other legal matters disregards our longstanding policy that 'the fact that a party may have . . . other obligations . . . does not relieve that party of its hearing obligations.'" (quoting *Statement of Policy on Conduct of Licensing Proceedings,* CLI-81-8, 13 NRC 452, 454 (1981))). In that case, however, the Commission was not addressing the "good cause" requirement of section 2.309(c)(1), but rather the 10-day deadline for filing appeals, which the Commission enforces "strictly" and excuses only in "'unavoidable and extreme circumstances.'" *Id.* (quoting *Statement of Policy on Conduct of Adjudicatory Proceedings,* CLI-98-12, 48 NRC 18, 21 (1998). In this case, we are not required to find "unavoidable and extreme circumstances," but only "good cause" for the 15-day delay in filing the Motion to Amend. The obligations of counsel in other cases may be part of the good cause showing, although it is preferable to request an extension of time rather than rely on an after-the-fact showing of good cause.

order, and (incorrectly) remembered the term for raising new contentions."[19] It thus appears that Intervenors' failure to meet the deadline was at least partly due to their counsel's misunderstanding of the deadline for filing amended or new contentions based on the availability of the DEIS. Not surprisingly, the failure to review the scheduling order does not constitute good cause for failure to meet a filing deadline.[20] We therefore conclude that Intervenors have made only a partial showing of good cause for their late filing. However, section 2.309(c)(1) provides for a balancing test, so we must also consider the seven remaining factors.[21]

Factors (ii), (iii), and (iv) restate the Commission's requirements for standing that are found in 10 C.F.R. § 2.309(d)(1).[22] We have already ruled that Intervenors have standing based upon their proximity to the proposed Fermi Unit 3, admitted four of their contentions, and granted their request for a hearing.[23] They have therefore established their right to be parties to the proceeding.[24] The nature of their interest in the proceeding is based upon the fact that members of the Intervenor organizations reside, work, or recreate within 50 miles of the proposed nuclear power plant.[25] Intervenors' proposed new contentions are based upon the National Environmental Policy Act (NEPA),[26] which is intended to require federal agencies to consider the environmental consequences of their actions and to foster informed public participation in the decision making process.[27] By seeking to enforce the NRC's NEPA obligations, Intervenors seek to require the agency to more fully consider the environmental consequences of its proposed action and to provide the public, including Intervenors' members, with accurate and complete information concerning the environmental consequences of the proposed action and alternatives to that action. Thus, any order that may be entered in this proceeding on NEPA issues may affect the Intervenors' ability to protect the interests of their members.[28] We therefore conclude that factors (ii), (iii), and (iv) weigh in Intervenors' favor.

Factor (v) is "the availability of other means whereby the requestor's/peti-

---

[19] Motion for Leave at 2.

[20] *See Florida Power & Light Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-06-21, 64 NRC 30, 33 (2006).

[21] *Long Island Lighting Co.* (Jamesport Nuclear Power Station, Units 1 & 2), ALAB-292, 2 NRC 631 (1975) (Even if a petitioner fails to establish good cause for the untimely petition, the other factors must be examined).

[22] *Compare* 10 C.F.R. § 2.309(c)(1)(ii)-(iv) *with* 10 C.F.R. § 2.309(d)(1)(ii)-(iv).

[23] LBP-09-16, 70 NRC at 227.

[24] 10 C.F.R. § 2.309(c)(1)(ii).

[25] LBP-09-16, 70 NRC at 242.

[26] 42 U.S.C. §§ 4321 et seq.

[27] *See Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 349-50 (1989).

[28] 10 C.F.R. § 2.309(c)(1)(iv).

tioner's interest will be protected."[29] As with any other member of the public, Intervenors were free to provide comments on the DEIS.[30] While we fully recognize that the commenting process is vital to NRC proceedings and the administrative process more broadly, a public adjudicatory hearing provides more complete protection of an intervenor's interests. This factor weighs in favor of the Intervenors because they have no other means of obtaining the same level of protection of their interests that a public hearing provides.

Factor (vi) is "the extent to which the requestor's/petitioner's interests will be represented by existing parties."[31] As Intervenors are the only parties who have intervened in this proceeding, no other party will represent their interests. Thus, this factor weighs in favor of the Intervenors.

Factor (vii) is "the extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding."[32] Because three contentions are already set for hearing in this proceeding, the admission of further contentions would not substantially delay the proceeding. And, because two of the previously admitted contentions allege NEPA violations, the new NEPA contentions put forward by the Intervenors would not unreasonably broaden the issues. Therefore, this factor weighs in favor of the Intervenors.

Factor (viii) is "the extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record."[33] Intervenors have submitted affidavits and other information in support of their proposed new contentions, which suggests that, if the new contentions were admitted, Intervenors would be capable of assisting in the development of a sound record concerning those issues. Therefore, this final factor weighs in favor of the Intervenors as well.

While the Intervenors have made only a partial showing of good cause for their late filing, the remaining seven factors strongly weigh in their favor. Because section 2.309(c)(1) provides for a balancing test, and because Intervenors' delay was only 15 days and will not cause any significant delay in concluding this adjudication, we will consider Intervenors' Motion to Amend, despite its lateness.

We note, however, that this ruling resolves only one aspect of the timeliness dispute. In addition to opposing the Motion for Leave, Applicant and the NRC Staff also argue that, although the proposed new contentions are purportedly based on new information in the DEIS, the same or substantially similar information was presented in other previously available documents, including the Applicant's Environmental Report (ER).

---

[29] 10 C.F.R. § 2.309(c)(1)(v).

[30] *See* 76 Fed. Reg. at 66,999.

[31] 10 C.F.R. § 2.309(c)(1)(vi).

[32] *Id.* § 2.309(c)(1)(vii).

[33] *Id.* § 2.309(c)(1)(viii).

As a general rule, Intervenors must file their NEPA contentions based on the ER.[34] Thus, a contention submitted for the first time after the DEIS is issued will be deemed untimely. But there are exceptions to this rule. A petitioner "may amend [NEPA] contentions or file new [NEPA] contentions if there are data or conclusions in the NRC draft or final environmental impact statement, environmental assessment, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's documents."[35] Alternatively, the Intervenors may file new or amended contentions in response to the DEIS if they can satisfy the test of section 2.309(f)(2)(i)-(iii).[36] Thus, a new or amended contention may be filed based upon the DEIS if it is based upon new and materially different information, whether contained in the DEIS itself or some other source, and if it is filed in a timely manner once the new information becomes available (or any delay is excused pursuant to section 2.309(c)(1)).

By granting the Motion for Leave, we have resolved only the question whether the 15-day delay in filing the proposed new and amended contentions should be excused. Given the other timeliness objections of the Applicant and the NRC Staff, we must also determine whether the new contentions are based upon either (1) data or conclusions in the DEIS that differ significantly from data or conclusions in the ER; or (2) information that is new and materially different from that previously available. We consider these separate timeliness issues below in our rulings on the specific contentions.

III. BOARD RULING ON THE MOTION TO ADMIT

A. Contention 10

Proposed Contention 10 reads as follows:

> The Walpole Island First Nation [WIFN] has learned of these proceedings and has petitioned the government of Canada for consultation and accommodation prefatory to joining these proceedings on the ground that tribal hunting and fishing rights, property rights and other concerns on the Great Lakes may be impaired by the construction and operation of Fermi 3.[37]

On first examination, Contention 10 fails to present an issue for litigation. It merely predicts that at some future date the WIFN might petition to intervene in this adjudication. Such a contention fails to identify any dispute with the license

[34] 10 C.F.R. § 2.309(f)(2).
[35] *Id.*
[36] *Id.*; *see* p. 748, *supra.*
[37] Motion to Admit at 5.

application or the DEIS, and thus fails to satisfy the requirement of 10 C.F.R. § 2.309(f)(1)(vi). Licensing boards do not conduct evidentiary hearings to decide whether a future petition to intervene will be filed as predicted.

In their argument in support of the contention, however, Intervenors allege that "[t]here has been no formal notification given the [WIFN] by the NRC Staff of the pendency of these proceedings, nor the right to comment or otherwise participate as an intervenor."[38] The Intervenors further allege that the "NRC has legal obligations under the National Environmental Policy Act (NEPA) to notify affected Native American tribes of pending significant proposals and actions, such as the Fermi 3 new reactor environmental and licensing proceedings. NRC is required under NEPA to interact with Native American tribes in a sovereign-government-to-sovereign-government manner." Intervenors claim that this lack of notification violates 10 C.F.R. § 51.28(a)(5).[39] This argument alleges, in substance, that the DEIS was issued in violation of NEPA requirements intended to ensure tribal participation in the NEPA process.[40]

We will evaluate the timeliness and admissibility of the contention on that basis.

1. Timeliness

Intervenors submitted an earlier version of this contention in their initial petition to intervene.[41] This Board did not rule on the admissibility of that contention because the Intervenors withdrew it during the oral argument held on May 5, 2009.[42] Intervenors note that they "withdrew that contention voluntarily because of an inability to secure the Walpoles' commitment to join these proceedings."[43] In order for Contention 10 to be timely now, Intervenors must show that new and materially different information justifies resubmitting the contention. But, as the NRC Staff argues, Intervenors have not shown that the DEIS contains or omits any information "that would justify amending and/or resubmitting a contention

---

[38] *Id.*

[39] *Id.* at 7-8.

[40] Although it might be fatal for standing purposes if the WIFN were seeking to have Intervenors represent their interests in this proceeding, *see Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989), Intervenors' lack of authority to represent the WIFN is not a bar to Intervenors raising this contention. By reason of their own standing in this proceeding, Intervenors may assert any violation of law that would lead to a redress of their injuries, including their interests in seeing that the NEPA process is properly carried out or in preventing or delaying issuance of the requested COL. *See* LBP-09-16, 70 NRC at 242 (citing *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 339 (2009)).

[41] *See* Petition at 96.

[42] Tr. at 142.

[43] Motion to Admit at 6.

challenging notifications related to a scoping process that occurred several years previously and that the Intervenors have already challenged in this proceeding."[44]

The NRC Staff's alleged failure to notify the WIFN of this proceeding occurred in 2009. And, as noted, Intervenors raised a challenge to this alleged failure in 2009. In their current Motion, Intervenors attempt to demonstrate that there is new information on which to base the resubmission of this contention by pointing out that Joseph B. Gilbert, Chief of the WIFN, has written a letter to the Canadian Minister of the Environment requesting that the government of Canada consult with and accommodate WIFN during their administrative processes relevant to Fermi 3.[45] Intervenors suggest that the Canadian government will consult with the tribe, and that "the end result will be that the [WIFN] will petition this Board to intervene."[46]

The claim that the WIFN has petitioned the Canadian government is of no help to Intervenors in establishing the timeliness of Contention 10. The alleged failure by the NRC to notify the tribe occurred in 2009, and Chief Gilbert's letter, does not somehow renew or add to the alleged injury. Thus, Intervenors have not demonstrated that Contention 10 is based on information that "was not previously available"[47] and that "is materially different than information previously available."[48] Contention 10 is therefore untimely under section 2.309(f)(2).

Although Intervenors argued in their Motion for Leave that their 15-day delay in filing the Motion to Admit should be excused under section 2.309(c)(1), they have made no equivalent argument under that provision with respect to the more lengthy delay in refiling Contention 10. We therefore have no basis upon which to excuse the untimely refiling of Contention 10.

2. Admissibility

Even if timely, Contention 10 would not be admissible because Intervenors have alleged no factual or legal basis for applying the requirements of 10 C.F.R. § 51.28(a)(5) to the WIFN, a Canadian Tribe. The Intervenors rely on section 51.28(a)(5) for the proposition that First Nations in Canada must receive invitations to participate in the EIS scoping process when there are transboundary environmental impacts from a project.[49] As the NRC Staff points out, however, section 51.28(a)(5) is subject to the general limitation that the NRC's NEPA regulations "do not apply to . . . any environmental effects which NRC's domestic

[44] NRC Staff Answer at 12.
[45] Motion for Leave at 6-7.
[46] *Id.* at 7.
[47] 10 C.F.R. § 2.309(f)(2)(i).
[48] *Id.* § 2.309(f)(2)(ii).
[49] Motion to Admit at 7.

licensing and related regulatory functions may have upon the environment of foreign nations."[50] Thus, any impact that the licensing of Fermi Unit 3 would have upon the Canadian environment fails to provide a basis for alleging that the DEIS violates the NRC's NEPA regulations.

Intervenors suggest that the NRC's regulatory limitation on the scope of its NEPA obligations is inconsistent with the statute as construed by several federal courts.[51] Whether or not this argument has merit, we may not entertain it because 10 C.F.R. § 2.335(a) precludes us from hearing challenges to NRC regulations absent a request for a waiver under section 2.335(b), which Intervenors have not made.

B. Contention 13

Proposed Contention 13 reads as follows:

> The [DEIS] is inadequate to meet the requirements of NEPA or the Atomic Energy Act because it does not provide a reasonable cost/[b]enefit basis for the NRC to decide to issue a combined operating license for the proposed Fermi 3 nuclear reactor. The DEIS analyses of Need for Power, Energy Alternatives and Cost/Benefit analysis are flawed and based on inaccurate, irrelevant and/or outdated information.[52]

Like Contention 10, Contention 13 was also submitted as part of the Intervenors' Petition to Intervene.[53] This Board found that the original Contention 13 was inadmissible because it did not provide factual or expert support sufficient to demonstrate a genuine material dispute with the application.[54]

1. Timeliness

The NRC Staff argues that Contention 13 is untimely because Intervenors "have not pointed to any portion of the DEIS that they allege to contain data or conclusions that differ from those in the ER."[55] We agree that the contention is untimely.

Although NRC regulations provide that petitioners may file amended contentions "if there are data or conclusions in the [DEIS] . . . that differ significantly

[50] 10 C.F.R. § 51.1.
[51] Reply at 4-5.
[52] Motion for Leave at 10.
[53] *See* Petition at 109.
[54] LBP-09-16, 70 NRC at 299-304.
[55] NRC Staff Answer at 18.

from the data or conclusions in the applicant's documents,"[56] this does not mean that the publication of the DEIS simply provides an opportunity to renew previously filed (and rejected) contentions. Rather, the petitioner must demonstrate that the DEIS actually contains new data or conclusions. Intervenors have made no such demonstration in their Motion to Admit. Similarly, they have not shown that the information contained in the DEIS was "not previously available," as required by 10 C.F.R. § 2.309(f)(2)(i). For this reason, Intervenors could have submitted (and indeed did submit) this contention upon publication of Applicant's ER. Therefore, Contention 13 is untimely.

In their Reply, Intervenors make a brief effort to justify the untimely filing of Contention 13 under section 2.309(c)(1).[57] Given that Intervenors submitted an earlier version of Contention 13 several years ago in their petition to intervene, it is difficult to see how Intervenors can now make the required showing of good cause for their failure to file in a timely manner.[58] In any event, Intervenors do little more than assert, without explanation, that "good cause — or certainly, not very bad cause — exists for their failure to file on time."[59] An unsupported assertion of "not very bad cause" plainly fails to justify resubmitting Contention 13 at this late date.

2. Admissibility Requirements Under 10 C.F.R. § 2.309(f)(1)

As noted above, we rejected Intervenors' original Contention 13 for failure to satisfy section 2.309(f)(1)(vi). In an effort to correct this deficiency, failure to provide sufficient information to show that there is a genuine dispute over a material issue, Intervenors have submitted the declaration of Ned Ford and have attached comments on the DEIS that were submitted by the Environmental Law and Policy Center.[60]

Intervenors contend that "[t]he Draft EIS's Need for Power analysis fails to meet [NRC regulations] because it relies entirely on the Michigan Public Service Commission ("MPSC") 21st Century Plan ("21st Century Plan"), a 2006 energy planning report that was prepared before the recession."[61] Essentially, Intervenors argue that the DEIS overestimates energy demand and thus overstates the need for Fermi Unit 3. As the NRC Staff points out, this is essentially the same argument

---

[56] 10 C.F.R. § 2.309(f)(2).

[57] Reply at 9-10.

[58] *See Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-8, 67 NRC 193, 201 (2008).

[59] Reply at 9.

[60] *See* Motion to Admit at 10.

[61] *Id.* at 11.

that Intervenors used to attack the Need for Power analysis in the ER.[62] We rejected this argument in our initial ruling on Intervenors' petition to intervene because "contrary to the Petitioners' claim, the Applicant's analysis of the need for power accounts for economic conditions in Michigan that might reduce the growth in demand, acknowledges sources of uncertainty, and recognizes that energy efficiency and conservation may also reduce the need for power."[63] Intervenors now argue that the NRC Staff may not rely on the 21st Century Plan in its DEIS as the basis of a Need for Power analysis.[64] As Applicant did in its ER, the NRC Staff has addressed the issue of uncertainty with regard to the 21st Century Plan in the DEIS.[65] Because Intervenors have not pointed out how this treatment of the 21st Century Plan is inadequate, this portion of Contention 13 is inadmissible.

Next, Intervenors state that energy efficiency programs cost much less per kilowatt-hour than construction of a new nuclear power plant.[66] Intervenors raised this same concern in their petition to intervene.[67] We rejected this portion of the original Contention 13 because Intervenors did "not take issue with any claim made in the ER," and their arguments were "too general to create a genuine dispute with the Applicant on a material issue."[68] The refiled Contention 13 suffers from the same flaws. Neither Intervenors' Motion nor the attached statement of Ned Ford provides a specific statement of the portions of the DEIS with which intervenors disagree. As before, Intervenors do "not take issue with any claim made in the" DEIS. Because of this failure, this portion of Contention 13 does not raise a genuine dispute with the DEIS and is thus inadmissible.[69]

Last, Intervenors point out a number of alternative sources of energy that they would prefer to see built rather than Fermi Unit 3.[70] As with the other portions of Contention 13, this portion was previously raised by Intervenors and rejected by this Board.[71] We found that Intervenors did not provide adequate support for their assertion that any alternative source of energy could be implemented at "utility scale."[72] Thus, we found that the Intervenors had not demonstrated that the ER omitted an analysis of a feasible alternative.[73] Intervenors have not addressed

---

[62] NRC Staff Answer at 19; Petition at 113.
[63] LBP-09-16, 70 NRC at 302.
[64] Motion to Admit at 11; *see also* DEIS at 8-14 to -15.
[65] *See* DEIS at 8-13 to -15.
[66] Motion to Admit at 16.
[67] *See* Petition at 116-17.
[68] LBP-09-16, 70 NRC at 303.
[69] 10 C.F.R. § 2.309(f)(1)(vi).
[70] *See* Motion to Admit at 15-21.
[71] LBP-09-16, 70 NRC at 304.
[72] *Id.*
[73] *Id.*

these issues in their refiled Contention 13. Intervenors still do not offer any information to demonstrate that their preferred alternatives can be implemented at a utility scale, and they do not address the portion of the DEIS that discusses alternative energy sources.[74] Thus, this portion of Contention 13 is inadmissible for failure to raise a genuine dispute with the DEIS[75] and for failure to provide factual or expert support for the notion that these alternative energy sources can be implemented at a utility scale.[76]

C. Contention 17

Proposed Contention 17 reads as follows:

> The descriptions of terrestrial and wetland mitigation plans are insufficient and inadequate, legally and practically, in violation of NEPA requirements for a Draft Environmental Impact Statement.[77]

Intervenors claim that they have the right to comment on mitigation measures at the DEIS stage, and that the NRC Staff's alleged failure to include an adequate explanation of mitigation measures in the DEIS prevents them from exercising that right. Intervenors allege that "the NRC Staff expects Intervenors and the public to forego public comment opportunity on terrestrial and/or wetland mitigation plans at the DEIS stage for want of information disclosure in a timely fashion."[78]

1. Timeliness

The NRC Staff argues that Contention 17 is untimely because Revision 2 of Applicant's ER contained lengthy discussions of potential mitigation measures and, therefore, Intervenors could have filed Contention 17 based on the ER.[79] We agree.

Revision 2 states that the Applicant will prepare a mitigation plan for Fermi 3 construction activities in consultation with the Army Corps of Engineers and the Michigan Department of Environmental Quality (MDEQ).[80] As the NRC Staff argues, the ER also describes potential impacts to the environment from

---

[74] *See* DEIS at 9-3 to -68.

[75] 10 C.F.R. § 2.309(f)(1)(vi).

[76] *Id.* § 2.309(f)(1)(v).

[77] Motion to Admit at 22.

[78] *Id.* at 23.

[79] NRC Staff Answer at 23.

[80] Fermi: Combined License Application, Part 3, Environmental Report (Rev. 0) (Sept. 2008) at 4-49, 6-45 [hereinafter "ER"].

the proposed action, identifies where the Applicant believes mitigation measures may be warranted or are not warranted, and describes proposed mitigation measures.[81] Based on the information the Applicant provided in the ER, the DEIS also discusses potential impacts of the proposed action and proposed mitigation measures.[82]

Intervenors fail to show that, with respect to terrestrial and wetland mitigation plans, "there are data or conclusions in the [DEIS] . . . that differ significantly from the data or conclusions in the applicant's documents."[83] Similarly, they have not demonstrated that the information contained in the DEIS on mitigation was "not previously available."[84] Thus, we agree with the Staff that Intervenors could have submitted Contention 17 upon publication of Applicant's Revision 2 to the ER. Accordingly, Contention 13 is untimely. And Intervenors do not attempt to justify their nontimely filing under section 2.309(c)(1).

2. Admissibility Requirements Under 10 C.F.R. § 2.309(f)(1)

Even if it were timely, Contention 17 is inadmissible because it lacks legal and factual support and fails to identify a genuine dispute with the DEIS on a material issue of law or fact.[85]

Intervenors complain about the lack of opportunity to comment on the terrestrial and wetland mitigation plans, but the DEIS in fact describes Applicant's plans for mitigating impacts to both terrestrial and aquatic resources.[86] In addition, DEIS Appendix K includes Applicant's "Proposed Fermi 3 Aquatic Resource Conceptual Mitigation Strategy," a plan to mitigate the project's impacts to wetlands and other aquatic resources submitted to the Army Corps of Engineers in connection with Applicant's application for a Clean Water Act permit. Intervenors do not identify any deficiency in the descriptions of the plans, nor do they acknowledge that the DEIS includes Applicant's "Proposed Fermi 3 Aquatic Resource Conceptual Mitigation Strategy." The only specific deficiency Intervenors allege is based on the statement in the DEIS that the U.S. Army Corps of Engineers and the Michigan Department of Environmental Quality will evaluate, as part of their respective permitting processes, the potential impacts on terrestrial or wetland resources and the compensatory mitigation proposed by the Applicant.[87] Intervenors' claim seems to be that, because the permitting process

---

[81] NRC Staff Answer at 23 (citations omitted).
[82] *Id.* (citations omitted).
[83] 10 C.F.R. § 2.309(f)(2).
[84] 10 C.F.R. § 2.309(f)(2)(i).
[85] 10 C.F.R. § 2.309(f)(1)(v) and (vi).
[86] DEIS at 4-43, 4-44.
[87] Motion to Admit at 22 (citing DEIS at 4-44).

will be completed after the DEIS was issued for public comment, they have been deprived of their right to comment publicly on mitigation plans at the DEIS stage.[88]

Intervenors fail to cite any legal authority, however, supporting their theory that the permitting processes of other agencies must be completed before the DEIS may be issued for public comment. Although the NRC must respond to the significant views of other agencies, particularly if they are critical of the NRC's analysis, that duty applies at the FEIS stage,[89] after the DEIS has been circulated to interested federal and state agencies for their review and comment in accordance with the NRC's regulations.[90] Here, the DEIS identifies and discusses potential mitigation measures and how those measures affect the conclusions in the DEIS regarding potential impacts of the proposed action. The Staff's analysis and the basis for its conclusions have been provided in the DEIS and opened to public comment. Intervenors fail to provide any factual or legal support for the theory that the Staff is prohibited from issuing the DEIS for public comment until the Corps and the Michigan Department of Environmental Quality have completed their reviews.

This contention is therefore inadmissible under section 2.309(f)(1)(v) and (vi).

D. Contention 18

Proposed Contention 18 reads as follows:

> The Endangered Species Act [ESA] consultation and biological assessment ("BA") are incomplete, and there is no adequate substitute for the BA which appears within the DEIS. This makes the DEIS dependent upon completion of the BA and as a practical matter, precludes the public a participation/comment opportunity on the [ESA] at the DEIS stage. This disclosure violates NEPA requirements for a [DEIS].[91]

1. Timeliness

Because this contention concerns duties of the NRC Staff, not an applicant (i.e., consultation and performance of a BA under the ESA), this contention could not have been raised at the ER stage. We therefore reject the argument that it is untimely.

---

[88] *Id.* at 22-23.

[89] *See Western Watersheds Project v. Kraayenbrink,* 632 F.3d 472, 491-93 (9th Cir. 2011).

[90] 10 C.F.R. §§ 51.73, 51.74; *see also* 40 C.F.R. § 1503.1.

[91] Motion to Admit at 23.

The situation here is analogous to that in *Crow Butte Resources,*[92] in which a petitioner, the Oglala Sioux Tribe, alleged that it had not been consulted concerning tribal cultural resources at the ER stage, 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.[93] Similarly, in this case the NRC Staff, not the Applicant, has the legal duty to engage in consultation under the ESA.[94] Assuming that the DEIS must include the agency's BA and the views of consulting agencies under the ESA, as Intervenors allege, it is the Staff that must provide that information. Thus, as in *Crow Butte Resources,* the NRC Staff, not the Applicant, has the legal duty alleged by Intervenors. It would therefore have been premature for Intervenors to have filed a contention alleging a violation of that duty based on the Applicant's ER.

We therefore will not reject Contention 18 as untimely.

2. Admissibility Requirements Under 10 C.F.R. § 2.309(f)(1)

The NRC Staff argues that Contention 18 is inadmissible because Intervenors have not provided any support for their claim that the DEIS may not be issued for public comment until the BA and the ESA consultation process are complete.[95] We agree.

The ESA provides:

> Each Federal agency shall, in consultation with and with the assistance of the Secretary [of the Interior], insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species.[96]

The ESA also states:

> To facilitate compliance with the requirements of subsection (a)(2) of this section [i.e., the section just quoted], each Federal agency shall . . . request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action. If the Secretary advises . . . that such species may be present, such agency shall conduct a biological assessment for the

[92] CLI-09-9, 69 NRC at 348.
[93] *Id.* at 348-51.
[94] Endangered Species Act, 16 U.S.C. § 1536.
[95] NRC Staff Answer at 30.
[96] 16 U.S.C. § 1536(a)(2).

> purpose of identifying any endangered species or threatened species which is likely to be affected by such action. Such assessment shall be completed . . . before any contract for construction is entered into and before construction is begun with respect to such action.[97]

The ESA thus explains NRC's duty to consult and to perform a BA if endangered species may be present at the site. As the NRC Staff notes, the DEIS contains information regarding impacts to endangered species.[98] In addition, the Staff has been in consultation with the Fish and Wildlife Service since December 2008,[99] and is currently finalizing a BA.[100] Intervenors contend that these actions needed to be completed before publication of the DEIS. We find no such requirement in either the ESA[101] or the NRC regulations enumerating the required contents of a DEIS.[102] Intervenors do not provide any factual or legal support for this claim, as required by section 2.309(f)(1)(v). Therefore, Contention 18 is inadmissible.

E. Contention 19

Proposed Contention 19 reads as follows:

> Consumptive water uses from the Great Lakes Basin have not been properly addressed in accordance with the Great Lakes Compact, and the required approval process and approvals, if any, are not delineated in the DEIS, in violation of NEPA.[103]

The Great Lakes Compact ("Compact") is an agreement among the states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, and Wisconsin and the Commonwealth of Pennsylvania regarding management and use of the waters within the Great Lakes and St. Lawrence River basin.[104] Under the Compact, certain proposed water uses are subject to "Regional Review," or review by members of the Compact.[105] The Compact provides that no member state shall

---

[97] *Id.* § 1536(c)(1).

[98] NRC Staff Answer at 32; *see, e.g.,* DEIS at 5-20 to -25, 5-43 to -50.

[99] NRC Staff Answer at 29.

[100] *Id.* at 30.

[101] *See generally* 16 U.S.C. § 1536.

[102] *See generally* 10 C.F.R. § 51.71.

[103] Motion to Admit at 26.

[104] *See generally* Agreement of the Great Lakes — St. Lawrence River Basin Water Resources Compact, *available at* http://www.glslregionalbody.org/Docs/Agreements/Great_Lakes-St_Lawrence_River_Basin_Water_Resources_Compact.pdf [hereinafter "Compact Agreement"].

[105] *Id.* § 4.5.

approve a proposal that is subject to Regional Review unless it has obtained regional approval.[106] In other words, a member state's issuance of a *state permit* allowing the proposal to go forward is conditioned on regional approval. Thus, the entity required to seek Regional Review is the *State,* not an applicant or any other agency.

Any proposal that would bring about new or increased consumptive use of more than 5 million gallons of water from the basin per day must undergo Regional Review.[107] Intervenors note that, "[w]ith an estimated consumptive footprint of 20-25 million gallons per day, the Fermi 3 facility will most certainly be subject to a 'regional review' from the various states and provinces within the Compact."[108] Intervenors contend that this regional review process "is not properly addressed by the DEIS," and that the parties to the Compact may not approve the proposal to construct Fermi 3.[109]

1. Timeliness

The NRC Staff argues that this contention is untimely to the extent it challenges "the way Fermi 3's consumptive water use is presented in the DEIS, and the environmental conclusions the NRC Staff has drawn from that information."[110] We agree. As NRC Staff notes, "the same information [that Intervenors challenge in the DEIS] is presented in the Applicant's ER, in more detail."[111] Because this portion of Contention 13 is not based on any new data or conclusions within the DEIS, it is untimely under section 2.309(f)(2).

Intervenors' challenge to the discussion of the Great Lakes Compact is also untimely. Both the applicant's ER and the NRC Staff's DEIS are required to list required federal permits and approvals and the current status of compliance with those requirements.[112] In addition, the applicant must discuss in an ER the status of its compliance with "environmental quality standards and requirements . . . which have been imposed by Federal, State, regional, and local agencies having responsibility for environmental protection."[113] Both Applicant, in its ER, and NRC Staff, in its DEIS, provided these required lists.[114] In each list, it is noted that the Applicant must obtain a water withdrawal permit from the Michigan

---

[106] *Id.* § 4.3.
[107] *Id.* § 4.9.
[108] Motion to Admit at 27.
[109] *Id.* at 27, 29.
[110] NRC Staff Answer at 35.
[111] *Id.*; *compare* DEIS at 2-23, 5-8 *with* ER at 2-175 to 2-185, 5-13 to 5-14.
[112] *See* 10 C.F.R. §§ 51.45(d) and 51.71(c).
[113] *Id.* § 51.45(d).
[114] *See* ER at 1-8; DEIS at H-1.

Department of Environmental Quality because Fermi 3 would withdraw more than 5 million gallons per day from Lake Erie.[115] Both the ER and the DEIS note that this permit has not yet been obtained.[116]

Intervenors make no effort to explain any difference between the ER and the DEIS regarding this required water withdrawal permit. Moreover, they make no effort to demonstrate that the NRC Staff has a duty not imposed on the applicant (as it does to consult with the FWS under the ESA) such that this contention could not have been raised at the ER stage. Given these failures, this aspect of Contention 19 is untimely under section 2.309(f)(2).

Finally, Intervenors have made no attempt to justify the late filing under section 2.309(c)(1).

2. Admissibility Requirements Under 10 C.F.R. § 2.309(f)(1)

Intervenors seem to challenge the NRC Staff's assertion that the consumptive water use impact of operating Fermi Unit 3 would be "small."[117] To the extent that Intervenors are asserting that the Staff's position is invalid, Contention 19 is inadmissible, because Intervenors have provided no factual or expert support to challenge that assertion.[118]

Intervenors' challenge concerning the DEIS's alleged failure to discuss the Compact's regional review process is inadmissible because it does not raise a genuine dispute with the DEIS.[119] As noted above, the Compact Agreement binds and imposes certain obligations on the *member states,* not on other governmental agencies or on utility companies. Where Fermi 3 is concerned, if the Michigan Department of Environmental Quality decides to grant Applicant a water withdrawal permit, it is *Michigan* that must seek approval from the Compact, *not* Applicant or the NRC.

Both Applicant and the NRC Staff, in the ER and DEIS, respectively, note that Applicant must obtain a water withdrawal permit under the Michigan Natural Resources and Environmental Protection Act.[120] This statute refers to Michigan's obligations under the Compact. Indeed, the Compact's review process is simply a part of each member state's licensing and permitting processes, each of which is governed by that member state's laws. Therefore, while the NRC Staff, in its DEIS, did not explain the Compact's review process, it satisfied its duty under 10 C.F.R. § 51.71(c) by stating that Applicant must obtain a water withdrawal

---

[115] *Compare* ER at 1-11 *with* DEIS at H-4.

[116] *Id.*

[117] Motion to Admit at 28.

[118] 10 C.F.R. § 2.309(f)(1)(v).

[119] *Id.* § 2.309(f)(1)(vi).

[120] ER at 1-11; DEIS at H-4; *see also* Mich. Comp. Laws. § 324.32723.

permit from the state of Michigan and citing to the governing Michigan statute, which in turn explains Michigan's obligations under the Compact. Because the DEIS actually does contain the information that Intervenors allege it is lacking, this portion of Contention 19 fails to raise a genuine dispute and is therefore inadmissible.[121]

F. Contention 20

Proposed Contention 20 reads as follows:

> The DEIS does not adequately evaluate thermal pollution issues associated with the discharge of cooling water into Lake Erie, in violation of NEPA.[122]

Intervenors contend that the DEIS "does not properly evaluate [thermal pollution] issues as serious and fails to provide potential mitigation options."[123] Intervenors also contend that the DEIS's analysis leading to its conclusion that "thermal pollution would have minimal environmental impact on Lake Erie" is "poorly framed," and the NRC should reevaluate "the potential problems caused by thermal pollution . . . at a more localized level."[124] As in Contention 19, Intervenors note that the Fermi 3 project will be subject to review by the Great Lakes Compact, and state that "it would be prudent" for the NRC to ensure that Fermi 3 would "result in no significant individual or cumulative adverse impacts to the quantity or quality of the Waters and Water Dependent Natural Resources and the applicable Source Watershed."[125]

1. Timeliness

Thermal pollution issues were initially raised by Intervenors in Contention 6 and Contention 14.[126] The Board admitted such issues as part of Contention 6 insofar as they relate to the adequacy of the Applicant's water quality analysis in the ER regarding the potential for increasing algal blooms and the proliferation of a newly identified species of harmful algae. In all other respects, they were dismissed for failing to demonstrate a genuine dispute with the ER or to provide alleged facts or expert opinions to support the Petitioners' assertions.[127]

---

[121] 10 C.F.R. § 2.309(f)(1)(vi).
[122] Motion to Admit at 30.
[123] *Id.*
[124] *Id.* at 31-32.
[125] *Id.* at 33.
[126] *See* Petition at 67-76, 123-39.
[127] LBP-09-16, 70 NRC at 277.

The DEIS extensively cites to the ER for analysis of potential impacts from thermal emissions.[128] In Contention 20, Intervenors cite no new data, analyses, or conclusions that differ significantly from the ER, and therefore Contention 20 is not timely except as it relates to the issue that we previously admitted as Contention 6.[129] As explained below, we will defer all issues concerning Contention 6 until our ruling on the Applicant's motion for summary disposition of that contention.

2. Admissibility Requirements Under 10 C.F.R. § 2.309(f)(1)

Intervenors' request that the thermal analysis be reevaluated on "a more localized level" is not admissible. The Applicant's hydrodynamic analysis is based on site-specific data and characteristics, and thermal impacts are evaluated on a localized as well as a basin-wide scale both in the ER and DEIS.[130] Intervenors do not identify specific issues in the ER and DEIS thermal analyses that are in dispute. Thus, with respect to this portion of Contention 20, Intervenors have not raised a genuine dispute with the DEIS, as required by section 2.309(f)(1)(vi).

We also will not admit Intervenors' assertion that the DEIS "fails to provide potential mitigation options." In Contention 20, Intervenors acknowledge that the DEIS does discuss two potential mitigation options. They contend that these are "positive mitigation procedures but not adequate to properly address the extent of harm."[131] However, Intervenors make no attempt to explain how or why these measures are inadequate. In addition, as Applicant notes,[132] Intervenors have ignored other mitigation measures concerning reduction of evaporative losses from cooling towers, minimization of turbidity at diffuser ports, and design of the diffuser to limit thermal plume impacts.[133] For these reasons, we conclude, with regard to this portion of Contention 20, that Intervenors have failed to present adequate facts or expert opinion supporting the contention and to raise a genuine dispute with the DEIS.[134]

Intervenors also claim that, because the project will be subject to review under the Great Lakes Compact, the NRC Staff "would be prudent" to ensure that Fermi Unit 3 would "result in no significant individual or cumulative adverse impacts to the quantity or quality of the Waters and Water Dependent Natural Resources and

---

[128] *See* DEIS at 5-9 to -16, 5-33 to -35.
[129] 10 C.F.R. § 2.309(f)(2).
[130] *See* ER at § 5.3.2.1.1, DEIS at § 5.2.3.1.
[131] Motion to Admit at 32-33.
[132] Applicant Answer at 41.
[133] DEIS at 5-137, 5-138.
[134] 10 C.F.R. § 2.309(f)(1)(v)-(vi).

the applicable Source Watershed."[135] This argument also fails to justify admitting the contention. By using the phrasing "it would be prudent," Intervenors appear to be giving the NRC advice, not raising a genuine dispute with the DEIS.

Alternatively, this aspect of Contention 20 could be construed as asking the Board to determine whether the project will be consistent with the requirements of the Great Lakes Compact. Such an issue, however, is outside the scope of this proceeding.[136] In *Hydro Resources* the Commission made clear that licensing boards should not admit contentions alleging that the applicant must obtain permits from other agencies:

> Whether non-NRC permits are required is the responsibility of bodies that issue such permits, such as the Federal Environmental Protection Agency, . . . or state and local authorities. To find otherwise would result in duplicate regulation as both the NRC and the permitting authority would be resolving the same question, i.e., whether a permit is required. Such a regulatory scheme runs the risk of Commission interference or oversight in areas outside of its domain. Nothing in our statute or rules contemplates such a role for the Commission.[137]

The same reasoning also precludes a licensing board from admitting a contention alleging that the project may not be consistent with the requirements of another federal, state, or local agency. That issue must be resolved by the other agency, not the NRC.

Finally, Intervenors argue that thermal emissions from Fermi Unit 3 may result in drastic growth of harmful algae, and that the DEIS fails to adequately evaluate that adverse impact.[138] As noted above, this challenge to the DEIS is substantially equivalent to the issue raised by previously admitted Contention 6 concerning the ER.[139] Thus, if we admitted this aspect of Contention 20, we would in effect be admitting a contention challenging the DEIS on a basis substantially equivalent to that alleged in Contention 6 with respect to the ER.

The Board may construe an admitted contention contesting the ER as a challenge to the subsequently issued DEIS or FEIS without the necessity for Intervenors to file a new or amended contention.[140] This concept has been referred

---

[135] Motion to Admit at 33.

[136] 10 C.F.R. § 2.309(f)(1)(iii).

[137] *Hydro Resources, Inc.* (292 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119, 120 (1998).

[138] Motion to Admit at 30-32.

[139] LBP-09-16, 70 NRC at 277.

[140] *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

(Continued)

to as the "migration tenet."[141] The migration tenet 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.[142] This tenet, however, applies "only so long as the DEIS analysis or discussion at issue is essentially *in para materia* with the ER analysis or discussion that is the focus of the contention."[143] If it is not, an intervenor may need to amend the admitted contention, or file a new contention altogether.[144]

Ordinarily, therefore, we would first determine whether the migration tenet applies, and only if it does not would we decide whether to admit the part of Contention 20 that concerns the DEIS's analysis of the algae proliferation issue. But there is a complicating factor here. While the Motion to Admit was pending, the Applicant filed a summary disposition motion alleging that, far from being *in para materia* with the ER, the DEIS completely resolves the issue raised by Contention 6.[145] If the Applicant's motion is correct, then the migration tenet would not apply. Given the overlap in the issues raised by the pending motions, we will defer ruling on this one aspect of proposed Contention 20 until we rule on the summary disposition motion. In all other respects, we will not admit proposed Contention 20.

G. Contention 21

Proposed Contention 21 reads as follows:

> Evaluation of the wetland areas that would be impacted by the construction and operation of the reactor, and the potential status of selected wildlife within those areas, is not fully and properly addressed in the DEIS, in violation of NEPA.[146]

---

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."); *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) ("[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).

[141] *Progress Energy Florida, Inc.* (Combined License Application for Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-1, 73 NRC 19, 25-26 (2011).

[142] *Id.* at 26.

[143] *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-08-2, 67 NRC 54, 63-64 (2008).

[144] *Id.* at 64 (citing 10 C.F.R. § 2.309(f)(2); *McGuire/Catawba,* CLI-02-28, 56 NRC at 383).

[145] Applicant's Motion for Summary Disposition of Contention 6 (April 17, 2012).

[146] *Id.* at 33.

Intervenors argue that the wetlands "mitigation plan is bereft of details within the pages of the DEIS" and that "[t]he EIS should also include proposed mitigation measures that take the potential effects of climate change on the wetland areas into account."[147] Additionally, Intervenors state that the DEIS fails to include protection plans for the eastern fox snake and the American lotus, two species that are listed as threatened by the state of Michigan, and which the DEIS acknowledged would be potentially impacted by construction activities.[148]

1. Timeliness

To the extent Contention 21 challenges the DEIS wetlands mitigation plan as inadequate, it is untimely. As the Staff and the Applicant correctly observe, the information presented in the DEIS on mitigation is based on the content of the ER.[149] Consequently, this portion of the contention is not based on new information that is significantly different from the data or conclusions in the application. And the Intervenors have not attempted to justify their nontimely filing under section 2.309(c)(1).

As to the American lotus, Intervenors claim that "the regulatory agencies made note that [Applicant] would work together with the Michigan Department of Natural Resources to create protections for those Threatened species."[150] They maintain, however, that "[n]o specific protection plans are in place at this time . . . , and these protections must be published and available for public comments prior to inclusion in the Final EIS."[151] This is an argument, unlike the ESA issue in Contention 18, that could have been raised in a challenge to the ER because, as Intervenors state, it is the Applicant's duty to consult with the Michigan Department of Natural Resources to create protections for species listed as threatened under state law. Intervenors maintain that the regulatory review process must be complete by the time the DEIS is published, and the approved mitigation plan must be published in the DEIS for public review and comment. It is the Applicant's responsibility to include in the ER the information that the NRC Staff needs to prepare the DEIS, including, among other things, information on

---

[147] *Id.* at 34.

[148] *Id.* at 35. Intervenors also assert that the U.S. Army Corps of Engineers has not yet evaluated the Applicant's mitigation plan for the purposes of granting a section 404 permit to fill wetlands. *Id.* at 34. The adequacy of another agency's licensing process is outside the scope of our review. *See Florida Power & Light* (Turkey Point Nuclear Generating Plant, Units 6 and 7), LBP-11-6, 73 NRC 149, 236 n.102 (2011) ("it is not the province of the NRC (and thus this Board) to enforce another agency's regulations").

[149] *See* NRC Staff Answer at 44; Applicant Answer at 45-46.

[150] Motion to Admit at 35.

[151] *Id.*

"alternatives available for reducing or avoiding adverse environmental effects."[152] If the Applicant failed to include information in the ER concerning protection plans for the American lotus that was necessary to prepare the DEIS, that deficiency could have been raised as a challenge to the ER. Indeed, the Intervenors *did* challenge the ER for failure to consider alternatives to mitigate harm to the eastern fox snake. We admitted that issue as a part of Contention 8, which remains pending.[153] Given that Intervenors included in their initial petition a contention challenging the lack of mitigation for the snake, they should have filed a similar contention concerning the American lotus based on the alleged deficiency in the ER.

Contention 21 is therefore untimely except as to the issue concerning the eastern fox snake that we previously admitted as Contention 8. As explained below, we will defer all issues concerning Contention 8 until our ruling on the Applicant's motion for summary disposition of that contention.

2. Admissibility Requirements Under 10 C.F.R. § 2.309(f)(1)

Intervenors contend that the DEIS must include specific protection plans for the eastern fox snake and the American lotus. Although NEPA requires that the environmental impact statement discuss the impacts of the proposed action and any alternatives to that action (including options for mitigating impacts), the statute does not require that any specific mitigation strategies must be adopted.[154] We therefore construe Intervenors' contention to allege that the DEIS fails to adequately discuss mitigation alternatives for the two species at issue.

Intervenors essentially allege that the NRC failed to take the requisite "hard look" at alternatives that would lessen the impact on the American lotus. They claim that the Staff instead deferred its consideration of mitigation to future discussions with the Michigan Department of Natural Resources (MDNR).[155] Intervenors insist that discussion of mitigation in the DEIS take the form of a specific "protection plan" for the lotus.

Intervenors, however, ignore the conclusion in the DEIS that "[i]mpacts from building Fermi 3 [on the American lotus] would be minimal and no mitigation measures are needed beyond those already mentioned by Detroit Edison in the ER," measures which include transplanting plants in areas to be disturbed to other

---

[152] 10 C.F.R. § 51.45(c).

[153] LBP-09-16, 70 NRC at 286-87.

[154] *See Robertson v. Methow Valley Citizens Council,* 490 U.S. at 350 ("it is now well settled that NEPA itself does not mandate particular results, but simply prescribes the necessary process.") (citations omitted).

[155] *See* Motion to Admit at 35.

areas on the Fermi site or possibly offsite.[156] Intervenors do not explain in their contention what is inadequate about this discussion of mitigation measures in the DEIS, nor do they explain how their ability to comment on the information present in the DEIS is not an adequate substitute for their claimed right to comment on "specific protection plans." Accordingly, Intervenors have not raised a genuine dispute and the contention concerning the American lotus is inadmissible.

As noted above, we have already admitted a contention (Contention 8) alleging that the ER fails to adequately evaluate impacts on the eastern fox snake and alternatives to mitigate those impacts.[157] With respect to the snake, Contention 21 challenges the DEIS on grounds much like those alleged in Contention 8 concerning the ER. The Applicant has recently filed a motion for summary disposition of Contention 8. As with the potential algae proliferation issue raised in Contention 20, because of the overlap in the issues raised by the pending motions we will defer ruling on this one aspect of proposed Contention 21 until we rule on motion for summary disposition of Contention 8.

In all other respects, we will not admit proposed Contention 21.

H. Contention 22

Proposed Contention 22 reads as follows:

> The DEIS calls for scrutiny only [of] transportation aspects of the use of unusually enriched fuel in the Fermi 3 reactor, which is not adequately disclosed, nor is there analysis of the potential reactor operations accident implications from use of higher-enriched fuel for fissioning, nor evaluation of the increased potential for higher levels of emissions of radioactivity in air and water from normal operations.[158]

Intervenors are "concerned about the transportation consequences of transporting fuel which is beyond the 4% U-235 limit established by 10 CFR 51.52(a)(2) as it is shipped to the Fermi 3 as unirradiated fuel."[159] They allege that "[t]his has not been adequately addressed in the Environmental Report or in the DEIS."[160] Additionally, "[w]hat is of particular concern to Intervenors is the use of such enriched fuel at 4.6% U-235 (by weight) running above 4500 MW thermal, both enrichment and temperature well above the 10 CFR 51.52 specifications. This is not addressed in the Environmental Report or in the DEIS."[161]

---

[156] DEIS at 4-34.
[157] *See* LBP-09-16, 70 NRC at 286-92.
[158] Motion to Admit at 36.
[159] *Id.*
[160] *Id.*
[161] *Id.* at 36-37.

They also allege that "nowhere in the Environmental Report or the DEIS is there any discussion of the potential of an accident scenario resulting from a 'Positive Void Coefficient.'"[162]

1. Timeliness

The NRC Staff argues that Contention 22 is not timely because it is based primarily on information that was previously available. The Staff notes, for example, that "[s]ome of this information has been available since October 1, 2005, when the NRC accepted the ESBWR Design Certification Application for review, and in any event since Rev. 9 of the design certification document (DCD) was submitted in December 2010."[163] According to the Staff, "[a]ll of the information the Intervenors challenge in Contention 22 has been available in the DCD at least since December 2, 2010, or in the ER since March 2011 when Revision 2 was submitted."[164] Because, in the Staff's view, Intervenors do not show "that data and conclusions in the DEIS 'differ significantly from the data or conclusions in the applicant's documents,' Contention 22 is untimely under 10 C.F.R. § 2.309(f)(2) and the Scheduling Order in this case."[165] The Staff concludes that the Intervenors have not shown why this information was not addressed sooner despite having been available, and that Contention 22 should therefore be dismissed as untimely.

We agree that this contention is not based on any information that is new, materially different, or previously unavailable, as required by 10 C.F.R. § 2.309(f)(2)(i)-(iii). As the basis for the contention, Intervenors point to technical specifications in the DCD as well as to a passage of the DEIS that specifically summarizes the content of the ER, but provide no explanation as to why they did not raise their contention earlier based on this information.[166] Intervenors also reference a January 2012 response to a question posed by one of Intervenors' representatives in December 2011 as seemingly new information to support the contention.[167] But that response simply referred Intervenors to relevant portions of the previously available DCD.[168]

Contention 22 is therefore untimely, and the late filing has not been justified under section 2.309(c)(1).

---

[162] *Id.* at 41.

[163] NRC Staff Answer at 46-47 (citing ESBWR Design Control Document, 26A6642AD Rev. 9 (Dec. 2, 2010), ADAMS Accession No. ML103440266 [hereinafter "ESBWR DCD"]).

[164] *Id.* at 47-48.

[165] *Id.* at 48.

[166] Motion to Admit at 37-40.

[167] *Id.* at 40-41.

[168] *Id.*

2. *Admissibility Requirements Under 10 C.F.R. § 2.309(f)(1)*

Even had it been timely filed, Contention 22 would be inadmissible. We agree with the Staff that while the intervenors "quote the DEIS, they do not challenge the Staff's analysis under [10 C.F.R. § 51.52] that is provided within the very part of the DEIS they quote, and therefore do not demonstrate a material dispute as required by 10 C.F.R. § 2.309(f)(1)(vi)."[169] Intervenors also fail to support their allegation that the DEIS must consider the potential of an accident scenario resulting from a positive void coefficient.

Under section 51.52, every environmental report prepared for the construction permit stage, the early site permit stage, or the combined license stage of a light-water-cooled nuclear power reactor must contain a statement concerning transportation of fuel and radioactive wastes to and from the reactor.[170] For reactors not meeting the conditions of section 51.52(a), the statement shall contain a full description and detailed analysis of the environmental effects of transportation of fuel and wastes to and from the reactor, including assessments of the environmental impact under normal conditions of transport and for the environmental risk from accidents in transport.[171] Thus, as the Staff points out, section 51.52 does not establish limits on power or on fuel enrichment. Instead, section 51.52(b) requires an applicant to perform an analysis if the conditions of section 51.52(a) are not met. As the Staff also notes, both the ER and the DEIS do in fact contain an analysis of the transportation of fuel and waste as required by section 51.52(b). Because the Intervenors do not controvert the analysis, they have failed to provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact as required by section 2.309(f)(1)(vi), and therefore this aspect of the contention is not admissible.[172]

The Intervenors' reply states, however, that "closer scrutiny of the ESBWR Design Control Document, Rev. 9, dated December 2010 reveals that the DEIS is inaccurate in its disclosure of the enrichment levels of the fuel slated for use in Fermi 3."[173] According to Intervenors, "Table 1.3-1 [of the ESBWR DCD] . . . indicates that the 'first core' at Fermi 3 (which is the only planned ESBWR) would be enriched at a level of 2.08%, not 4.6%."[174]

Although we do not decide the merits at the contention admissibility stage, materials cited as the basis for a contention are subject to scrutiny to determine

---

[169] NRC Staff Answer at 47.
[170] 10 C.F.R. § 51.52.
[171] *Id.* § 51.52(b).
[172] NRC Staff Answer at 49-51.
[173] Reply at 18-19.
[174] *Id.*

whether, on their face, they actually support the facts alleged.[175] In this instance, they fail to provide the necessary support. Table 1.3-1 actually states that the "Initial *average* U235 enrichment" is "2.08%" (emphasis added).[176] Chapter 4 of the DCD states that the "U-235 enrichments may vary axially within a fuel rod and from fuel rod to fuel rod within a bundle to reduce local peak-to-average fuel rod power ratios."[177] For the average enrichment to be 2.08%, the enrichment in some fuel would have to be greater than the average and less elsewhere. Thus, it is apparent that the references to an enrichment of 4.6% and an *average* enrichment of 2.08% refer to two separate characteristics of the fuel, and thus Intervenors fail to show any inaccuracy or inconsistency. Accordingly, Intervenors have failed to show a dispute of material fact with the DEIS, as required by section 2.309(f)(1)(vi), and therefore this portion of the contention is also inadmissible.

Intervenors cite tables in the DCD that compare the ESBWR's design characteristics, such as its power, physical dimensions, and number of bundles, to those of other reactors. They then state that the tables somehow "suggest" that the ER and DEIS are deficient.[178] Intervenors fail to provide, however, any explanation of how the tables they cite support their claims, as required by section 2.309(f)(1)(ii). "[P]roviding any material or document as the basis of a contention, without setting forth an explanation of its significance, is inadequate to support the admission of the contention."[179]

Lastly, the Intervenors complain that "an accident scenario encompassing the potential of 'Positive Void Coefficient' has been omitted from the NEPA process."[180] Intervenors fail to provide any factual support, however, for their belief that the ESBWR exhibits a positive void coefficient.[181] The General Design Criteria require the "[t]he reactor core and associated coolant systems shall be designed so that in the power operating range the net effect of the prompt inherent nuclear feedback characteristics tends to compensate for a rapid increase in

---

[175] *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded,* CLI-90-4, 31 NRC 333 (1990); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 265 (2005); *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90 n.30, *rev'd in part on other grounds,* CLI-96-7, 43 NRC 235 (1996).

[176] ESBWR DCD at 1.3-3.

[177] *Id.* at 4.2-5.

[178] Motion to Admit at 38-39.

[179] *North Anna ESP Site,* LBP-04-18, 60 NRC at 265 (citing *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 205 (2003)).

[180] *Id.* at 41.

[181] Void coefficient of reactivity is the rate of change in light water reactor power with the formation of steam bubbles or voids. A positive void coefficient of reactivity indicates a move toward a power increase with an increasing number of steam voids. A negative void coefficient of reactivity indicates a move toward a power decrease.

reactivity."[182] In other words, the General Design Criteria require that the reactor exhibit a negative void coefficient in the power operating range. Consistent with this requirement, the DCD for the ESBWR shows that throughout core life the ESBWR exhibits a negative void coefficient.[183] Thus, there was no need for the DEIS to discuss accidents "encompassing the potential of 'Positive Void Coefficient'" because the design does not exhibit such a characteristic. Here also, Intervenors fail to demonstrate a genuine dispute of material fact with the DEIS, as required by section 2.309(f)(1)(vi).

I. Contention 23

Proposed Contention 23 reads as follows:

> The high-voltage transmission line portion of the project involves a lengthy corridor which is inadequately assessed and analyzed in the Draft Environmental Impact Statement.

Intervenors allege that the discussion in the DEIS of "the environmental impacts to the approximately 1,000 acres of transmission corridor is deficient in a host of ways."[184] They characterize the DEIS's treatment of the topic as scattered, incoherent, shallow, and lacking a meaningful discussion of cumulative impacts or mitigation alternatives.[185]

1. Timeliness

Both the NRC Staff and the Applicant argue that Contention 23 is not based on new or materially different information.[186] Rather, as the Applicant states, "the Intervenors' challenges could have and should have been made in response to the ER."[187] The Staff provides an exhaustive list of citations to portions of the ER that address the impacts of the proposed transmission corridor.[188]

Intervenors do not establish that the contention is based on any data or conclusions in the DEIS that are significantly different from those in the ER. We are satisfied that each of the issues that comprise the subject matter of the contention was discussed in the ER, including the route of the transmission

---

[182] 10 C.F.R. Part 50, Appendix A, GDC 11.
[183] ESBWR DCD § 4.3.1.1, at 4B-5 to 4B-6.
[184] Motion to Admit at 41.
[185] *Id.* at 42-43.
[186] NRC Staff Answer at 56-57; Applicant Answer at 56-58.
[187] Applicant Answer at 58.
[188] NRC Staff Answer at 56 n.27.

corridor[189] and impacts from the corridor on historic and cultural resources,[190] on endangered or threatened species,[191] and on wetlands and vegetation.[192] Rather than put forward any information to show how the DEIS differs from the ER, Intervenors at several points acknowledge that the DEIS's treatment of the transmission corridor echoes the ER.[193] Because Contention 23 is not based on new or materially different information, it is not timely under section 2.309(f)(2). Nor have the Intervenors justified their nontimely filing under section 2.309(c).

2. Admissibility Requirements Under 10 C.F.R. § 2.309(f)(1)

Although Contention 23 is untimely, it raises substantial questions concerning the adequacy of the DEIS that the NRC Staff should carefully consider in preparing the FEIS.

Intervenors present a number of criticisms of the DEIS's limited evaluation of the environmental impacts of the transmission line corridor. For example, Intervenors emphasize that substantial construction will take place in undeveloped wetlands, forests, and grasslands:

> NRC reports that "the final western 10.8 miles of transmission lines would be built in an undeveloped segment of an existing transmission ROW . . . Some transmission tower footings were installed there as part of earlier plans but were never used." NRC reports that the proposed new Fermi 3 transmission line corridor would cross open water, deciduous forest, evergreen forest, mixed forest, grassland, 93.4 acres of woody wetlands, and 13 acres of emergent herbaceous wetland. (Table 2-7, Vegetative Cover Types in the Proposed 29.4-mi Transmission Corridor, page 2-46). This shows what is at stake — major impacts, or perhaps even complete destruction, to irreplaceable habitat, vital for the viability of endangered and threatened species, as well as overall ecosystem health. At 4-2, "Vegetative Cover Types Occurring in the Undeveloped 10.8-mi Segment of the Transmission Line Corridor" (page 4-28), DEIS Table 4-2 repeats the sensitive vegetative cover forms at risk from the proposed Fermi 3 transmission corridor: 170 acres of deciduous forest, 74 acres of woody wetlands, and 9 acres of herbaceous emergent wetlands.[194]

Intervenors also stress potential impacts to threatened and endangered species:

---

[189] ER at 3-57.

[190] *Id.* at 4-19 to -22.

[191] *Id.* at 4-51 to -52.

[192] *Id.* at 4-12 to -16.

[193] *See* Motion to Admit at 44 ("NRC cannot attempt to duck its responsibilities under NEPA by echoing DTE"); Reply at 23 ("The DEIS (and before it, the ER) segmented the transmission line part of Fermi from the rest of the project.").

[194] Motion to Admit at 44-45.

> NRC's DEIS section 2.4.1.4 Important Terrestrial Species and Habitats — Transmission Lines (page 2-60) also reports the high biological stakes. Important species may occur along transmission lines, "but because the exact route of the corridor has not been finally determined, no surveys have yet been conducted to confirm the presence of any species." . . . [T]able 2-9 (page 2-61) shows state-listed and federally-listed species which inhabit the counties (Monroe, Washtenaw, Wayne) that would be crossed, including over 80 plant species, 8 insect species, 2 amphibian species, 4 reptile species (including the Eastern Fox Snake), a dozen bird species, and 2 mammal species. The Michigan Dept. of Natural Resources (MDNR/now DNRE) has not provided concurrence for the project to proceed, because DTE has provided no details about the transmission line corridor route for determining the damage that would be done to threatened and endangered species and their habitats. MDNR has identified five State-listed species likely present on the Fermi site, which could also be present along the proposed Fermi 3 transmission corridor. In addition to all of the above, the U.S. Fish and Wildlife Service has identified the eastern massasauga snake as a candidate species potentially inhabiting Washtenaw and Wayne Counties, and thus, at risk along the proposed new transmission corridor.[195]

Intervenors further argue that maintenance of the transmission corridor will continue to impact wetlands and other environmental resources after construction is completed. They note that, according to the DEIS, "'[d]uring operation of Fermi 3, the power transmission line system would need to be maintained free of vegetation by ITC Transmission. Vegetation removal activities would include trimming and application of herbicides periodically and on an as-needed basis along the transmission line corridor.'"[196] Intervenors complain of the failure to analyze the environmental consequences of these actions:

> It is clear that the deforestation will be an indefinitely long, or even permanent, condition. Although herbicides designed for use in wetlands are mentioned, no specifics are given. The impact of these biocides on species inhabiting the corridor is thus impossible to analyze, given the lack of specificity. The downgrade in the ecological quality and quantity (or even permanent loss and complete destruction) of forested wetlands in an extended area along the Fermi 3 transmission line corridor is a major ecosystem impact, which currently goes unreflected.[197]

Although the DEIS acknowledges in general terms the types of environmental resources that the transmission corridor will affect, it provides little analysis of the actual environmental consequences. Intervenors criticize the DEIS for, among

---

[195] *Id.* at 45-46.
[196] *Id.* at 49 (quoting DEIS at 3-31).
[197] *Id.* at 48.

other things, an inadequately defined route for the corridor,[198] a failure to identify endangered or threatened species along the corridor,[199] an inadequate discussion of impacts on wetlands and vegetation,[200] and a failure to adequately investigate historic or cultural resources that may be affected.[201] Given the very limited analysis in the DEIS of these and other environmental impacts arising from the transmission line corridor, these claims may have been admissible had they been filed in a timely manner.

The NRC Staff responds that the construction of a transmission line is defined as a "preconstruction activity."[202] The Staff also maintains that the NRC lacks regulatory authority over construction of the transmission corridor, which will be built by an entity other than the Applicant.[203] To the extent these arguments imply that the DEIS need not evaluate in detail the environmental impacts of the transmission corridor, we are not persuaded. In order to avoid an unlawful segmentation of the project, the FEIS must evaluate the environmental impact not only of the construction and operation of Unit 3 itself but of all connected actions.[204] Even if the transmission corridor is a preconstruction activity and outside the NRC's regulatory jurisdiction, the construction and maintenance of the transmission corridor likely qualifies as a connected action under governing NRC and Council on Environmental Quality (CEQ) regulations, and therefore must be analyzed in the FEIS.

The issue concerns the scope of the FEIS. The "scope" of an EIS is defined as "the range of action, alternatives, and impacts to be considered in an environmental impact statement."[205] An NRC NEPA regulation directs the agency to use the CEQ regulations in defining the scope of its impact statements.[206] Under the

---

[198] *Id.* at 43-44.

[199] *Id.* at 45-47.

[200] *Id.* at 47-50.

[201] *Id.* at 51-52.

[202] NRC Staff Answer at 57 (citing 10 C.F.R. §§ 50.10(a)(2)(iii), (vii), 51.4).

[203] *Id.*

[204] "'Segmentation' or 'piecemealing' occurs when an action is divided into component parts, each involving action with less significant environmental effects." *Town of Huntington v. Marsh,* 859 F.2d 1134, 1142 (2d Cir. 1988) (citing *City of West Chicago v. NRC,* 701 F.2d 632, 650 (7th Cir. 1983)). "Segmentation is to be avoided in order to 'insure that interrelated projects[,] the overall effect of which is environmentally significant, not be fractionalized into smaller, less significant actions.'" *Id.* (quoting *Taxpayers Watchdog, Inc. v. Stanley,* 819 F.2d 294, 298 (D.C. Cir. 1987)).

[205] 40 C.F.R. § 1508.25.

[206] The NRC regulation governing the scope of the EIS states that the agency should use the provisions of 40 C.F.R. § 1502.4 for that purpose. 10 C.F.R. § 51.29(a)(1). Section 1502.4 in turn directs that

(Continued)

CEQ regulations, the scope of the EIS must include all "connected actions."[207] Another NRC NEPA regulation specifically adopts the CEQ regulation (40 C.F.R. § 1508.25) that defines "connected actions."[208] Thus, the NRC's regulations effectively direct the agency to use CEQ regulations in defining the scope of its impact statements. Under section 1508.25 of the CEQ regulations, separate actions are "connected" if, among other things, they "[c]annot or will not proceed unless other actions are taken previously or simultaneously," or they "[a]re interdependent parts of a larger action and depend on the larger action for their justification."[209] In general, "connected actions" are those that lack "independent utility."[210]

It appears that the sole purpose of the new transmission corridor is to transmit electrical energy generated by Fermi Unit 3, and that it would serve no useful purpose absent the new nuclear power plant. If that is true, the transmission corridor lacks independent utility (i.e., it is a connected action) and must be fully evaluated in the FEIS.[211] This remains true even though the NRC may define construction of the transmission corridor as a preconstruction activity, it is owned by a company other than the Applicant, and it is outside the NRC's regulatory jurisdiction. The NRC's obligations under NEPA include evaluating all environmental effects of the proposed action (including connected actions) that it has the authority to prevent.[212] Even though the NRC does not license construction or operation of the transmission corridor, it has the authority to

---

> Agencies shall use the criteria for scope (§ 1508.25) to determine which proposal(s) shall be the subject of a particular statement. Proposals or parts of proposals which are related to each other closely enough to be, in effect, a single course of action shall be evaluated in a single impact statement.

40 C.F.R. § 1502.4(a).

[207] 40 C.F.R. § 1508.25(a)(1).

[208] 10 C.F.R. § 51.14(b).

[209] 40 C.F.R. § 1508.25(a)(1)(ii) and (iii). NRC's NEPA regulations specifically adopt this definition. *See* 10 C.F.R. § 51.14(b).

[210] *See Society Hill Towers Owners' Association v. Rendell,* 210 F.3d 168, 181 (3d Cir. 2000) (collecting cases); *Northwest Resource Information Center v. National Marine Fisheries Service,* 56 F.3d 1060, 1067-69 (9th Cir. 1995) (same).

[211] *Society Hill,* 210 F.3d at 181; *Northwest Resource,* 56 F.3d at 1067-69. Also, in order to require detailed analysis in the FEIS, the transmission corridor must be a proposed action rather than one that is merely contemplated. *See Kleppe v. Sierra Club,* 427 U.S. 390, 410 & n.20 (1976). But the DEIS and ER suggest that the action has advanced to the stage of a proposed action. The DEIS reports that "[t]hree new 345-kV transmission lines have been *proposed* to serve Fermi 3." DEIS at 4-8 (emphasis added). The ER refers to "[t]he *proposed* route for the three new 345 kV transmission lines from Fermi to the Milan Substation . . . ." ER at 2-23 (emphasis added).

[212] *Department of Transportation v. Public Citizen,* 541 U.S. 752, 770 (2004) ("[W]here an agency has no ability to prevent a certain effect due to its limited statutory authority over the relevant actions, the agency cannot be considered a legally relevant 'cause' of the effect.").

deny the license for Fermi Unit 3 if, for example, the total environmental costs of the new reactor and connected actions exceed the benefits.[213] Denial of the license would effectively prevent harmful environmental impacts resulting from construction and operation of the transmission corridor, given that its sole purpose appears to be transmitting electrical energy generated by Fermi Unit 3.

Although NEPA does not direct any particular substantive result,[214] all the environmental consequences of the proposed action, including connected actions, must be fully evaluated in the FEIS.[215] Moreover, only by evaluating all the environmental costs of the proposed action can the NRC adequately fulfill its obligation to "[d]etermine, after weighing the environmental, economic, technical, and other benefits against environmental and other costs . . . whether the combined license should be issued, denied, or appropriately conditioned to protect environmental values."[216] Because Contention 23 was not timely filed and no sufficient showing has been made under section 2.309(c)(1) to justify the late filing, we are precluded from admitting it in this proceeding. But the "primary responsibility for compliance with NEPA lies with the Commission."[217] We recommend, therefore, that the NRC Staff consider the issues raised by Intervenors when it prepares the FEIS.

J. Contention 24

Proposed Contention 24 reads as follows:

> The public health effects and impacts from routine, licensed radiological emissions in air and water from the proposed Fermi 3 have been inadequately assessed, analyzed and disclosed in the Draft Environmental Impact Statement, in violation of NEPA.

Intervenors allege that the DEIS omits an analysis of impacts from the chemical contents of water vapor emitted from the Fermi cooling towers, and relies on a flawed assumption that all of the dissolved solids in the water vapor would be salt.[218] They charge that the DEIS "fails to consider the impact of other chemicals

---

[213] *See* 10 C.F.R. § 51.107(a)(3); *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 88 (1998); *Calvert Cliffs Coordinating Committee v. AEC,* 449 F.2d 1109, 1123 (D.C. Cir. 1971).

[214] *Robertson v. Methow Valley Citizens Council,* 490 U.S. at 350.

[215] 40 C.F.R. § 1508.25(a)(1).

[216] 10 C.F.R. § 51.107(a)(3).

[217] *New York v. NRC,* 681 F.3d 471, 482 (D.C. Cir. 2012). *Accord Pa'ina Hawaii, LLC,* CLI-10-18, 72 NRC 56, 82 (2010).

[218] Motion to Admit at 52-53.

in the drift, many of which could be far more environmentally destructive than salt and could appreciably contribute to the $PM_{2.5}$ emissions from the cooling towers."[219] Additionally, Intervenors claim, based on the declaration of their expert Joseph Mangano, that "statistically noteworthy increases" in cancer rates occurred following Fermi 2 entering operation, and therefore Fermi 3 must not be licensed without further research into epidemiological risks of the radiological releases from plant operation.[220]

1. Timeliness

Intervenors' contention is untimely because, as the Applicant observes, all of the information cited in support was available at the time of Intervenors' original intervention petition.[221] The assumption in the DEIS of which the Intervenors complain regarding the composition of cooling tower exhaust vapor was present in the ER.[222] The ER also addressed the impacts of radiological releases from plant operation.[223] Intervenors do not explain how the data and conclusions in the DEIS differ from the ER in this regard. Further, the attached declaration of Mr. Mangano relies on an assemblage of data, the vast majority of which was available when the ER was submitted. Although the declaration references certain demographic data that run through 2009 or 2010,[224] the declaration does not suggest that these years of data are crucial to the conclusions therein, and therefore the information is not materially different from information that was previously available. Nor have the Intervenors justified their nontimely filing under section 2.309(c)(1).

2. Admissibility Requirements Under 10 C.F.R. § 2.309(f)(1)

The NRC Staff argues that the contention fails to challenge any portion of the air quality impact analysis in the DEIS, which included both cooling tower drift and $PM_{2.5}$.[225] The Applicant observes that "the DEIS specifically addresses drift deposition 'from dissolved salts and chemicals found in the cooling water.'"[226] The Intervenors' concerns about the cooling tower drift are too speculative and insubstantial to form the basis of an admissible contention. Intervenors offer no

---

[219] *Id.* at 53.
[220] *Id.* at 54.
[221] *See* Applicant Answer at 64-65.
[222] ER at 5-47.
[223] *See id.* at 5-110 to -116.
[224] *See* Declaration of Joseph Mangano, Intervenors' Expert Witness at 10, 14 (Jan. 11, 2011).
[225] *See* NRC Staff Answer at 65.
[226] Applicant Answer at 66 (citing DEIS at 5-90).

facts to support their assertion that the cooling tower vapor could be harmful in ways not considered by the DEIS. As a result, this portion of the contention is inadmissible for failure to allege facts or provide expert support under section 2.309(f)(1)(v) and failure to provide sufficient information establishing a genuine dispute under section 2.309(f)(1)(vi).

By raising the public health consequences of all radiological releases from Fermi 3, Intervenors seem to suggest that any release, even those within limits set by NRC regulations, must be prohibited. As the Staff notes, "[t]he Intervenors do not assert that any portion of the [DEIS's radiological health effects] analysis is inadequate or incorrect, and do not allege that any legal dose limit is likely to be exceeded."[227] Because this portion of the contention does not challenge the contents of the DEIS, it fails to present a genuine dispute, and is inadmissible under section 2.309(f)(1)(vi). Additionally, to the extent that Intervenors challenge all radiological releases from nuclear power plants, the contention presents an impermissible challenge to the NRC's regulations.[228]

V. CONCLUSION

The Motion for Leave is GRANTED. Because Intervenors have failed to proffer an admissible contention, the Motion to Admit is DENIED, except that we defer ruling on the two specific aspects of proposed Contentions 20 and 21, identified in our rulings on those contentions, that are related to the pending motions for summary disposition of previously admitted Contentions 6 and 8. Applicant's Motion for Leave to File Surreply is DENIED.

Any party aggrieved by this Order may file a petition for interlocutory review by the Commission in accordance with the provisions of 10 C.F.R. § 2.341(f)(2). Any such petition for review must be filed within fifteen (15) days of service of this Memorandum and Order.

---

[227] NRC Staff Answer at 66.

[228] *See* 10 C.F.R. § 2.335(a).

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
June 21, 2012

Cite as 75 NRC 784 (2012) **LBP-12-13**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alex S. Karlin, Chairman
Nicholas G. Trikouros
Dr. Paul B. Abramson

In the Matter of **Docket Nos. 50-275-LR**
50-323-LR
(ASLBP No. 10-900-01-LR-BD01)

PACIFIC GAS AND ELECTRIC COMPANY
(Diablo Canyon Nuclear Power Plant, Units 1 and 2) **June 27, 2012**

The Board denies a motion filed by the San Luis Obispo Mothers for Peace seeking to admit two new environmental contentions because PG&E is under no legal duty to update its originally compliant 2009 Environmental Report (ER) based on events that occurred in 2012 and, absent any such duty, the contentions fail to allege any legal omission or deficiency in the ER and the 2012 events are not "material" under 10 C.F.R. § 2.309(f)(2).

NEPA AND PART 51: NO DUTY TO SUPPLEMENT ENVIRONMENTAL REPORT

Neither NEPA nor 10 C.F.R. Part 51 requires an applicant to update an originally compliant Environmental Report to reflect new information derived from subsequent events. LBP-11-32, 74 NRC 654, 668 (2011), *referral of issue declined,* CLI-12-13, 75 NRC 681 (2012).

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.309(f)(2)(iv))

If an Environmental Report is compliant as of its date of issuance, then subsequent events and information are not material to the compliance status of the ER.

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.309(f)(2)(vi))

Absent any duty under Part 51 requiring an applicant to supplement its Environmental Report to address subsequent events or information, subsequent events and information do not create a "genuine dispute" as to the compliance status of the ER.

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.309(f)(2))

Although the trigger point for timely submission of new or amended contentions is when new information becomes available, and our rules require the filing of contentions in a timely manner after such new information becomes available, the core element of an admissible contention is that it must allege that there is some legal omission or deficiency in the Environmental Report. If the new information does not give rise to an alleged omission or deficiency (because there is no duty for the Environmental Report to address the new information), then the new information is not material and cannot form the basis of an admissible contention.

MEMORANDUM AND ORDER
(Denying Motion to Admit New Contentions Challenging the Environmental Report)

On April 27, 2012, the San Luis Obispo Mothers for Peace (SLOMFP) moved to admit two new contentions challenging the adequacy of Pacific Gas & Electric Co.'s (PG&E's) environmental report (ER) for the proposed renewal of the operating licenses for the Diablo Canyon Nuclear Power Plant (DCNPP).[1] On May 22, 2012, PG&E and the NRC Staff filed answers opposing the admission

[1] San Luis Obispo Mothers for Peace Motion to Admit Contentions Regarding Failure of Environmental Report to Address Post-Fukushima Investigations and Modifications (April 27, 2012) [Motion].

of these two new contentions.[2] On May 29, 2012, SLOMFP filed its reply.[3] For the reason set out below, and in accordance with our prior decision herein, LBP-11-32, 74 NRC 654, 668 (2011), the motion is denied.

SLOMFP's first proposed new contention, which we denominate as EC-6,[4] asserts that the ER fails to satisfy 10 C.F.R. § 51.53(c)(2) because it does not assess the environmental consequences of PG&E's plans to modify the DCNPP to comply with EA-12-049,[5] an order issued by the NRC on March 12, 2012. Motion at 2. EA-12-049 requires PG&E to make certain modifications to the DCNPP as a result of the accidents that occurred in March 2011 at the Fukushima Dai-ichi nuclear power plants in Japan.

SLOMFP's second proposed new contention, which we denominate as EC-7,[6] asserts that the ER fails to comply with 10 C.F.R. § 51.45(d) because it does not list or describe the status of PG&E's compliance with (a) EA-12-049, and (b) an NRC request for additional information (RAI) issued on March 12, 2012. *Id.* at 6-7.[7]

In LBP-11-32 this Board declined to admit EC-5, holding that "neither NEPA nor Part 51 requires an applicant to supplement, update, or modify an originally compliant ER to incorporate 'new and significant information' arising from events occurring after the ER was filed." LBP-11-32, 74 NRC at 668.

The same principle applies to EC-6 and EC-7. When SLOMFP filed its original contentions herein, it did not assert that PG&E's November 23, 2009 ER was deficient for the reasons that it now articulates in EC-6 and EC-7 — and we have nothing before us to indicate that it was.[8] Now, however, SLOMFP asserts that the 2009 ER was rendered noncompliant by virtue of events that occurred in March 2012. Clearly, the issuance of EA-12-049 and the RAI constitute new

---

[2] Applicant's Response to Proposed Contentions (May 22, 2012) [PG&E Answer]; NRC Staff's Answer to Motion to Admit Contentions Regarding Failure of Environmental Report to Address Post-Fukushima Investigations and Modifications (May 22, 2012) [Staff Answer].

[3] San Luis Obispo Mothers for Peace's Reply to Oppositions by PG&E and NRC Staff to Motion to Admit Contentions Regarding Failure of Environmental Report to Address Post-Fukushima Investigations and Modifications (May 29, 2012) [Reply].

[4] "EC" means environmental contention. EC-6 is the sixth environmental contention proffered by SLOMFP.

[5] EA-12-049 was published at 77 Fed. Reg. 16,091 (Mar. 19, 2012).

[6] EC-7 is the seventh environmental contention proffered by SLOMFP.

[7] Both EC-6 and EC-7 raise issues that are percolating in at least one other case — *Union Electric Co.* (Callaway Plant, Unit 1), Docket No. 50-483-LR. *See* Missouri Coalition for the Environment's Hearing Request and Petition to Intervene in License Renewal Proceeding for Callaway Nuclear Power Plant at 2, 7 (May 7, 2012).

[8] When SLOMFP filed its original contentions in 2010, it did not claim that the ER failed to comply with the regulations specified in EC-6 and EC-7.

information.[9] But in LBP-11-32 we held that the law does not require an applicant to update its originally compliant ER to reflect new information derived from subsequent events. LBP-11-32, 74 NRC at 668-69. Therefore, this challenge does not raise a genuine dispute and the "new information" is simply not *material* to the compliance status of the ER (as is required by 10 C.F.R. § 2.309(f)(1)(iv) and (vi)). Thus EC-6 and EC-7 are inadmissible.[10]

Both PG&E and the NRC Staff argue that EC-6 and EC-7 are inadmissible because there is no duty for an applicant to supplement or update an originally compliant ER in light of subsequent events.[11]

This is not to say that SLOMFP is without a remedy if it believes that the issuance of EA-12-049 (and/or any other "post-Fukushima investigations and modifications") has not been adequately considered in the environmental analysis of the DCNPP license renewal process. Many steps still remain in the NEPA process, including the need for NRC to issue a draft supplemental environmental impact statement (DSEIS) and a final SEIS (FSEIS). Were the NRC to complete its DSEIS without addressing EA-12-049 to SLOMFP's satisfaction, SLOMFP would be entitled to proffer contentions at that point asserting that, pursuant to NEPA or Part 51, EA-12-049 constitutes new and significant and material information that the NRC must adequately address in the DSEIS. As outlined in note 14, SLOMFP is entitled to file any such proposed new contentions within 30 days of the issuance of the DSEIS.[12]

---

[9] We note that NRC typically issues dozens (and sometimes hundreds) of RAIs during the course of evaluating and processing a single application. If 10 C.F.R. § 51.45(d) required the Applicant to update its ER every time NRC issued an RAI, there would need to be dozens, if not hundreds, of such updates.

[10] EC-6 and EC-7 each identify a specific regulation that, allegedly, would be violated if the new information is not addressed in the ER (10 C.F.R. § 51.53(c)(2) and § 51.45(d), respectively). Likewise, proposed EC-5 was based, implicitly, on an alleged violation of 10 C.F.R. § 51.45(b) (i.e., the failure of the ER to address the impacts associated with the subsequently issued NRC Fukushima Near Term Task Force Report would cause the ER to violate the requirement that the ER must address all reasonably foreseeable environmental impacts of a proposed action). In all three situations, we assume *arguendo* that if the relevant events had occurred *prior* to the filing of the ER and the ER failed to address the subject, then the ER would violate the relevant regulation. In all three situations, however, we reject the proposition that post-ER events can render noncompliant an ER that was compliant at the time of its submission.

[11] PG&E Answer at 8 ("Part 51 does not require an applicant to automatically revise its ER, which was submitted in accordance with 10 C.F.R. § 51.53(c), to discuss an order issued after the initial submission of the ER."); Staff Answer at 14 ("[T]here is no duty to update the ER.").

[12] As we stated in LBP-11-32,

> SLOMFP is, however, not without potential remedy as to its concerns about the NEPA-derived obligations respecting implications from the Fukushima events. Even though PG&E is not

(Continued)

Nor are we ruling that new or amended contentions challenging the adequacy of an ER may not be filed or admitted. To the contrary, new contentions concerning adequacy of ERs are numerous and commonplace. Such contentions are often filed when the applicant submits new information in response to an RAI and/or voluntarily amends its application or ER (e.g., changes the reactor design from an ESBWR to an AP1000). *See* 10 C.F.R. § 51.45(a) ("An applicant . . . may submit a supplement to an [ER] at any time."). Likewise, new contentions challenging an ER are often filed when new information reveals that the ER, as originally submitted, was deficient in some way at the time of its issuance (e.g., subsequent information reveals the existence of an endangered species that should have been discussed in the original ER).[13] Further, new or amended contentions may be admissible when a judicial decision invalidates a key regulation prescribing the contents of the ERs. But in such cases, any new contentions challenging the adequacy of the ER must be filed as early as possible and the petitioner may not wait until NRC issues the DSEIS. *See* CLI-12-13, 75 NRC 681, 687 n.31 (2012).

> obligated to supplement the ER, the NRC Staff will, as it always does in license renewal proceedings, be issuing a draft supplemental EIS (DSEIS). If the DSEIS fails to capture and address any information that SLOMFP believes to be "new and significant," then SLOMFP may file a NEPA contention at that time.

LBP-11-32, 74 NRC at 669 (internal citations omitted). This is not to guarantee admission of such a contention, but simply to identify the opportunity to raise it at that time.

[13] We recognize, as the Commission has noted, that 10 C.F.R. § 2.309(f)(2) requires that a petitioner "shall file [NEPA-related] contentions based upon the applicant's environmental report." However, the filing of new or amended contentions is explicitly permitted under that regulation "if there are data or conclusions in the NRC draft or final environmental impact statement . . . that differ significantly from the data or conclusions in the applicant's documents." We see this as focusing upon the Staff's DSEIS and FSEIS and permitting the raising of challenges based upon information which arises after the filing of a compliant ER. Section 2.309(f)(2) goes on to permit the filing of amended or new contentions "only with leave of the [board]" and upon a showing that it is based on (i) information that was "not previously available" (i.e., new), (ii) the information that is "materially different;" and (iii) provided that the new contention is filed in a "timely manner." Although we agree that EC-6 and EC-7 meet two of these three criteria, i.e., that they are based on information that is indeed new and the contention was filed in a timely fashion, for the reasons stated elsewhere in this decision, these two contentions do not meet one of them (i.e., that the new information be material to the compliance, *vel non,* of the ER). We see no value to be added to the process of this proceeding by requiring, and believe it would be wasteful of the resources of all parties to require, the Applicant to address the subject matter of those contentions in some sort of amendment to its ER. SLOMFP may raise the substance of EC-6 and EC-7 when the Staff files its DSEIS or FSEIS, and we hereby hold that we will not find the raising of those matters at that time to be untimely based upon the fact that the information was available at the time SLOMFP raised the matters now. Moreover, not using our discretion to permit the filing of these new contentions at this point has the practical result that the Staff has the opportunity to gather further information (including by requiring the applicant to respond to relevant RAIs) without the distraction of dealing with contentions at this point, which may well become moot by the time the DSEIS or FSEIS is issued.

Our ruling here, and in LBP-11-32, however, is limited to situations where it is uncontested that the ER, as originally filed, was compliant and where the key events and assertedly new information arose after its issuance, making it impossible for the applicant to have incorporated the alleged information into the original ER.[14] In LBP-11-32 we observed that the parties could not point to, nor could we find, any mandatory duty under Part 51 requiring an applicant to supplement its ER to address subsequent events or information.[15] Absent any such duty, if an ER is compliant as of its date of issuance, subsequent events and information (regardless of how "significant") are simply *not material* to the compliance status of the ER (which is the substantive challenge raised in EC-6 and EC-7). Likewise, absent any such duty, subsequent events and information do not create a "genuine dispute" as to the compliance status of the ER.

We note that we referred this issue to the Commission, asking it to decide whether 10 C.F.R. Part 51 mandates that an applicant must supplement an ER if "significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts" arise after the originally compliant ER was filed. LBP-11-32, 74 NRC at 672. The Commission acknowledged that the question raised "novel" legal issues. CLI-12-13, 74 NRC at 686. The Commission ordered the Staff to conduct a "generic" review of NRC's regulations on this very point.[16] But the Commission declined to rule on the question. *Id.* at 683.

Instead, the Commission reminded us that "the 'trigger point' for timely submission of new or amended contentions is when new information becomes available" and reaffirmed that "our rules require the filing of contentions as early as possible after the information becomes available." *Id.* at 686-87. We neither assert nor hold otherwise; contentions must be filed as early as possible and environmental contentions must, at the outset, be based on the ER. *See* 10 C.F.R. § 2.309(f)(2).[17]

---

[14] In this ruling, and LBP-11-32, we also hold that if the applicant voluntarily supplements the ER to address such subsequent information or if the NRC Staff issues an RAI causing the applicant to amend its ER to cover such information, then the Intervenor must file such contentions promptly (i.e., within 30 days of making the supplemental ER publicly available) and cannot await the issuance of the DSEIS.

[15] [SLOMFP's] Response to Board Question at 1 (Oct. 18, 2011); [PG&E's] Response to Licensing Board Question at Oral Argument at 1 (Oct. 18, 2011); NRC Staff's Response to Question at Oral Argument at 1 (Oct. 18, 2011).

[16] *See* CLI-12-13, 75 NRC at 687 n.32. Concurring, Chairman Jaczko stated that the Staff should "examine the laws, regulations, policies, and guidance and practices associated with updating and correcting environmental reports." *Id.* at 691 (Jaczko, concurring in part and dissenting in part).

[17] The Commission has repeatedly held that an intervenor has an "iron-clad obligation to examine the publicly available documentary material . . . with sufficient care to enable it to uncover any

(Continued)

The Commission added:

> Regardless of whether there is an affirmative duty to supplement an environmental report, applicants still face a continuing possibility of contentions in adjudicatory proceedings based upon *omissions or deficiencies in their environmental report* (as long as the contention meets all *applicable contention admissibility criteria*) because our rules require the filing of contentions as early as possible . . . . We expect intervenors to file contentions on the basis of the applicant's environmental report and not delay their contentions until after the Staff issues its environmental analysis.

CLI-12-13, 74 NRC at 687 n.31 (internal quotes omitted) (emphasis added).

As the Commission recognized, the core element of an admissible contention is that it *must allege that there is some legal "omission or deficiency"* in the ER. *Id.* Likewise, every admissible contention *must meet "all applicable contention admissibility criteria." Id.* A contention must show that the "issue raised in the contention is *material.*" 10 C.F.R. § 2.309(f)(1)(iv). A contention must "provide sufficient information to show that a genuine dispute exists . . . on a *material* issue of law or fact." 10 C.F.R. § 2.309(f)(1)(vi).

And it is thoroughly recognized in our proceedings that the existence of new information, *per se,* is not a sufficient basis for an admissible contention. The new information must, in the present circumstance, be *material to whether or not the substantive challenge (that the ER is not compliant with the law) has a legal foundation.* Here, the "new information" is not material to compliance of the ER because the challenge is not raised to the original ER based upon the circumstances under which it was prepared, it is raised because of new requirements arising afterward. Thus, because an applicant has no duty to supplement its ER, there is no deficiency that can form the basis of a contention.

---

information that could serve as a foundation for a specific contention," *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-10-27, 72 NRC 481, 496 (2010) (quoting *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), CLI-93-3, 37 NRC 135, 147 (1993)), and to file any such new contention "as early as possible." CLI-12-13, 75 NRC at 687 n.31. Failure to meet these stringent deadlines results in the denial of any such new contention, however meritorious. Certainly, *if* applicants were under a duty to supplement their ERs when new and significant information arises, then we would expect that the Commission would be equally zealous in requiring that applicants act with expedition. Presumably, an applicant would have a similar ironclad obligation to scour all potentially relevant new and significant information so as to update its ER whenever it arose. Likewise, we would expect to see regulations and/or decisions insisting that any such ER supplements be filed "as early as possible" or "in a timely manner." *See e.g.,* 10 C.F.R. § 2.309(f)(2)(iii). We find no such NRC regulations or Commission decisions imposed on the applicants. The absence of such timeliness requirements reinforces our conclusion that nothing in Part 51 mandates that an applicant must supplement its originally compliant ER to reflect post-ER events and information.

We have previously held that *PG&E is under no legal duty* to amend, supplement, or modify its originally compliant ER to incorporate subsequent events, such as Fukushima or the NRC's Near Term Task Force Report — and that is the "law of the case" for this proceeding. The same holds true for events such as the EA-12-049 and the NRC RAI. For the foregoing reasons, the motion to admit contentions EC-6 and EC-7 is denied.

This order is subject to appeal to the Commission in accordance with the provisions of 10 C.F.R. § 2.341(f). Any petitions for such review must be filed within fifteen (15) days of service of this Memorandum and Order.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Alex S. Karlin, Chairman
ADMINISTRATIVE JUDGE

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE

Paul B. Abramson
ADMINISTRATIVE JUDGE

Rockville, Maryland
June 27, 2012

CASE NAME INDEX

CROW BUTTE RESOURCES, INC.
MATERIALS LICENSE RENEWAL; February 22, 2012; MEMORANDUM AND ORDER; CLI-12-4, 75 NRC 154 (2012)
DETROIT EDISON COMPANY
COMBINED LICENSE; MEMORANDUM AND ORDER (Ruling on Motion for Leave to Late-File Amended and New Contentions and Motion to Admit New Contentions); Docket No. 52-033-COL (ASLBP No. 09-880-05-COL-BD01); LBP-12-12, 75 NRC 742 (2012)
DOMINION VIRGINIA POWER
COMBINED LICENSE; MEMORANDUM AND ORDER; Docket No. 52-017-COL; CLI-12-14, 75 NRC 692 (2012)
DUKE ENERGY CAROLINAS, LLC
COMBINED LICENSE; MEMORANDUM AND ORDER; Docket Nos. 52-025-COL, 52-026-COL; CLI-12-7, 75 NRC 379 (2012)
ENERGY NORTHWEST
LICENSE RENEWAL; MEMORANDUM AND ORDER; Docket No. 50-397-LR; CLI-12-7, 75 NRC 379 (2012)
ENTERGY NUCLEAR GENERATION COMPANY
LICENSE RENEWAL; MEMORANDUM AND ORDER; Docket No. 50-293-LR; CLI-12-1, 75 NRC 39 (2012); CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012); CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)
LICENSE RENEWAL; MEMORANDUM AND ORDER (Denying Pilgrim Watch's Request for Hearing on a New Contention Relating to Fukushima Accident); Docket No. 50-293-LR (ASLBP No. 06-848-02-LR); LBP-12-1, 75 NRC 1 (2012)
LICENSE RENEWAL; MEMORANDUM AND ORDER (Denying Petition for Intervention and Request to Reopen the Proceeding and Admit New Contention); Docket No. 50-293-LR (ASLBP No. 12-917-05-LR-BD01); LBP-12-10, 75 NRC 633 (2012)
LICENSE RENEWAL; MEMORANDUM AND ORDER (Denying Petition for Intervention and Request to Reopen Proceeding and Admit New Contention); Docket No. 50-293-LR (ASLBP No. 12-920-07-LR-BD01); LBP-12-11, 75 NRC 731 (2012)
ENTERGY NUCLEAR OPERATIONS, INC.
LICENSE RENEWAL; MEMORANDUM AND ORDER; Docket No. 50-293-LR; CLI-12-1, 75 NRC 39 (2012); CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012); CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)
LICENSE RENEWAL; MEMORANDUM AND ORDER (Denying Pilgrim Watch's Request for Hearing on a New Contention Relating to Fukushima Accident); Docket No. 50-293-LR (ASLBP No. 06-848-02-LR); LBP-12-1, 75 NRC 1 (2012)
LICENSE RENEWAL; MEMORANDUM AND ORDER (Denying Petition for Intervention and Request to Reopen the Proceeding and Admit New Contention); Docket No. 50-293-LR (ASLBP No. 12-917-05-LR-BD01); LBP-12-10, 75 NRC 633 (2012)
LICENSE RENEWAL; MEMORANDUM AND ORDER (Denying Petition for Intervention and Request to Reopen Proceeding and Admit New Contention); Docket No. 50-293-LR (ASLBP No. 12-920-07-LR-BD01); LBP-12-11, 75 NRC 731 (2012)

CASE NAME INDEX

EXELON GENERATION COMPANY, LLC
LICENSE RENEWAL; MEMORANDUM AND ORDER (Ruling on Petition to Intervene and Request for Hearing); Docket Nos. 50-352-LR, 50-353-LR (ASLBP No. 12-916-04-LR-BD01); LBP-12-8, 75 NRC 539 (2012)
FIRSTENERGY NUCLEAR OPERATING COMPANY
LICENSE RENEWAL; MEMORANDUM AND ORDER; Docket No. 50-346-LR; CLI-12-8, 75 NRC 393 (2012)
FLORIDA POWER & LIGHT COMPANY
COMBINED LICENSE; MEMORANDUM AND ORDER (Granting FPL Motion for Summary Disposition of CASE Contention 7); Docket Nos. 52-040-COL, 52-041-COL (ASLBP No. 10-903-02-COL-BD01); LBP-12-4, 75 NRC 213 (2012)
COMBINED LICENSE; MEMORANDUM AND ORDER (Denying CASE's Motions to Admit Newly Proffered Contentions 9 and 10, and Dismissing CASE from This Proceeding); Docket Nos. 52-040-COL, 52-041-COL (ASLBP No. 10-903-02-COL-BD01); LBP-12-7, 75 NRC 503 (2012)
COMBINED LICENSE; MEMORANDUM AND ORDER (Granting, in Part, Joint Intervenors' Motion to Admit Amended Contention NEPA 2.1); Docket Nos. 52-040-COL, 52-041-COL (ASLBP No. 10-903-02-COL-BD01); LBP-12-9, 75 NRC 615 (2012)
HONEYWELL INTERNATIONAL, INC.
MATERIALS LICENSE AMENDMENT; INITIAL DECISION; Docket No. 40-3392-MLA (ASLBP No. 11-910-01-MLA-BD01); LBP-12-6, 75 NRC 256 (2012)
LUMINANT GENERATION COMPANY LLC
COMBINED LICENSE; MEMORANDUM AND ORDER; Docket Nos. 52-034-COL, 52-035-COL; CLI-12-7, 75 NRC 379 (2012)
NEXTERA ENERGY SEABROOK, LLC
LICENSE RENEWAL; MEMORANDUM AND ORDER; Docket No. 50-443-LR; CLI-12-5, 75 NRC 301 (2012)
NUCLEAR INNOVATION NORTH AMERICA LLC
COMBINED LICENSE; SECOND PARTIAL INITIAL DECISION (Contention DEIS-1-G); Docket Nos. 52-12-COL, 52-13-COL (ASLBP No. 09-885-08-COL-BD01); LBP-12-5, 75 NRC 227 (2012)
OLD DOMINION ELECTRIC COOPERATIVE
COMBINED LICENSE; MEMORANDUM AND ORDER; Docket No. 52-017-COL; CLI-12-14, 75 NRC 692 (2012)
PACIFIC GAS AND ELECTRIC COMPANY
LICENSE RENEWAL; MEMORANDUM AND ORDER; Docket Nos. 50-275-LR, 50-323-LR; CLI-12-13, 75 NRC 681 (2012)
LICENSE RENEWAL; MEMORANDUM AND ORDER (Denying Motion to Admit New Contentions Challenging the Environmental Report); Docket Nos. 50-275-LR, 50-323-LR (ASLBP No. 10-900-01-LR-BD01); LBP-12-13, 75 NRC 784 (2012)
SANTEE COOPER
COMBINED LICENSE; MEMORANDUM AND ORDER; Docket Nos. 52-027-COL, 52-028-COL; CLI-12-9, 75 NRC 421 (2012)
SHAW AREVA MOX SERVICES
MATERIALS LICENSE AMENDMENT; MEMORANDUM AND ORDER (Dismissing Contention 4); Docket No. 70-3098-MLA (ASLBP No. 07-856-02-MLA-BD01); LBP-12-2, 75 NRC 159 (2012)
SOUTH CAROLINA ELECTRIC & GAS COMPANY
COMBINED LICENSE; MEMORANDUM AND ORDER; Docket Nos. 52-027-COL, 52-028-COL; CLI-12-9, 75 NRC 421 (2012)
SOUTH CAROLINA PUBLIC SERVICE AUTHORITY
COMBINED LICENSE; MEMORANDUM AND ORDER; Docket Nos. 52-027-COL, 52-028-COL; CLI-12-9, 75 NRC 421 (2012)
SOUTHERN NUCLEAR OPERATING COMPANY
COMBINED LICENSE; MEMORANDUM AND ORDER; Docket Nos. 52-025-COL, 52-026-COL; CLI-12-2, 75 NRC 63 (2012); CLI-12-7, 75 NRC 379 (2012); CLI-12-11, 75 NRC 523 (2012)

CASE NAME INDEX

STRATA ENERGY, INC.
MATERIALS LICENSE AMENDMENT; MEMORANDUM AND ORDER; Docket No. 40-9091-MLA; CLI-12-12, 75 NRC 603 (2012)
MATERIALS LICENSE AMENDMENT; MEMORANDUM AND ORDER (Ruling on Standing and Contention Admissibility); Docket No. 40-9091-MLA (ASLBP No. 12-915-01-MLA-BD01); LBP-12-3, 75 NRC 164 (2012)
VIRGINIA ELECTRIC AND POWER COMPANY
COMBINED LICENSE; MEMORANDUM AND ORDER; Docket No. 52-017-COL; CLI-12-14, 75 NRC 692 (2012)
REQUEST FOR ACTION; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; Docket Nos. 50-338, 50-339 (License Nos. NPF-4, NPF-7); DD-12-1, 75 NRC 573 (2012)

LEGAL CITATIONS INDEX
CASES

Adikes v. S.H. Kress & Co., 398 U.S. 144, 161 (1970)
no defense to an insufficient showing by summary disposition proponent is required; LBP-12-4, 75 NRC 219 (2012)
summary judgment movant has the burden to show that he is entitled to judgment under established principles, and if he does not discharge that burden then he is not entitled to judgment; LBP-12-4, 75 NRC 219 (2012)
that a summary disposition opponent declines to oppose the motion does not mean that movant is entitled to a favorable judgment; LBP-12-4, 75 NRC 219 (2012)
AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111 (2006)
challenges to board rulings on late-filed contentions normally fall under NRC rules for interlocutory review; CLI-12-7, 75 NRC 385-86 n.17 (2012)
AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 121 (2006)
boards are appropriate arbiters of fact-specific questions of contention admissibility, and the Commission will not second-guess their evaluation of factual support, absent an error of law or abuse of discretion; CLI-12-5, 75 NRC 326-27 (2012)
AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 125 (2006)
under 10 C.F.R. 2.311, appeal of a ruling on contentions is allowed only if the order wholly denies an intervention petition or a party other than the petitioner alleges that a petition for leave to intervene or a request for hearing should have been wholly denied; CLI-12-7, 75 NRC 385 n.16 (2012)
AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 132-33 & n.38 (2007), *aff'd, New Jersey Department of Environmental Protection v. NRC,* 561 F.3d 132 (3d Cir. 2009)
new claims cannot be raised for the first time on appeal; CLI-12-1, 75 NRC 59 (2012)
AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 133-34 (2007)
concerns that apply generically to all spent fuel pools at all reactors are more appropriately addressed via rulemaking or other appropriate generic activity; CLI-12-6, 75 NRC 365 (2012)
AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-13, 67 NRC 396, 400 (2008)
without a showing of irreparable injury, petitioners seeking a stay of effectiveness must demonstrate that reversal of the licensing board is a virtual certainty; CLI-12-11, 75 NRC 529 (2012)
AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-13, 67 NRC 396, 400, 401 (2008)
if motions for stay of effectiveness demonstrate neither irreparable injury nor that reversal of the licensing board is a virtual certainty, then the remaining factors need not be considered; CLI-12-11, 75 NRC 529 n.32 (2012)
AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 466 (2008)
license renewal applicants must conduct aging management reviews of any structure, system, or component that performs one of these intended functions if the SSC is passive (performs its intended function(s) without moving parts or without a change in configuration or properties) or long-lived (not subject to replacement based on a qualified life or specified time period); CLI-12-5, 75 NRC 303-04 (2012)

LEGAL CITATIONS INDEX

CASES

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 466-67 (2008)
existing regulatory programs can be expected to directly detect the effects of aging on active functions; CLI-12-5, 75 NRC 304 n.10 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 467-68 (2008)
if NRC concludes that an aging management program is consistent with the GALL Report, then it accepts applicant's commitment to implement that AMP, finding the commitment itself to be an adequate demonstration of reasonable assurance under 10 C.F.R. 54.29(a); CLI-12-5, 75 NRC 304, 315 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 468 (2008)
license renewal applicants' use of an aging management program identified in the GALL Report constitutes reasonable assurance that it will manage the targeted aging effect during the renewal period; CLI-12-10, 75 NRC 497 n.93 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 484 (2008)
suspension of licensing proceedings is a drastic action that is not warranted absent compelling circumstances; CLI-12-6, 75 NRC 373 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 668 (2008)
Commission practice holds that the standard for admitting a new contention after the record is closed is higher than for an ordinary late-filed contention; CLI-12-10, 75 NRC 483 (2012); CLI-12-15, 75 NRC 709 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 672 (2008)
a "significant"issue is not shown merely by showing that a plant component performs safety functions; CLI-12-10, 75 NRC 499 n.104 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 673 (2008)
denial or conditioning of a license would obviously be a materially different result; CLI-12-14, 75 NRC 702 n.66 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 673-74 (2008)
although the quality of evidence presented for reopening must be at least of a level sufficient to withstand a motion for summary disposition, more is required; CLI-12-10, 75 NRC 498 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 674 (2008)
bare assertions and speculation, even by an expert, are insufficient to trigger a full adjudicatory proceeding; CLI-12-15, 75 NRC 714 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235 (2009)
challenges to board rulings on late-filed contentions normally fall under NRC rules for interlocutory review; CLI-12-7, 75 NRC 385-86 n.17 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 260 (2009)
decisions on the admissibility of contentions will be affirmed where the Commission finds no error of law or abuse of discretion; CLI-12-3, 75 NRC 138 (2012); CLI-12-6, 75 NRC 361 (2012)
standard for review of contention admissibility determinations is the same, whether an appeal lies under section 2.311 or 2.341, and the Commission will disturb a licensing board's contention admissibility ruling only if there has been an error of law or an abuse of discretion; CLI-12-7, 75 NRC 386 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 260-61 (2009)
petitions that proffer a nontimely contention without addressing the balancing factors in section 2.309(c) may be summarily rejected; LBP-12-7, 75 NRC 510, 512 n.13 (2012); LBP-12-9, 75 NRC 622 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 261 (2009)
good cause is the most important of the late-filing factors and is entitled to the most weight; LBP-12-7, 75 NRC 510 (2012); LBP-12-9, 75 NRC 621 (2012)

LEGAL CITATIONS INDEX

CASES

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 273-74 (2009) *aff'd, New Jersey Environmental Federation v. NRC,* 645 F.3d 220, 230 (3d Cir. 2011)
if applicant's enhanced monitoring program, which was the topic of a late-filed contention, was insufficient, it must have been insufficient beforehand too; CLI-12-10, 75 NRC 493 n.70 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 276-77 (2009)
severe accident mitigation alternatives analysis issues can present difficult judgment calls at the contention admissibility stage, and the Commission is reluctant as a general matter to second-guess board rulings on contention admissibility; CLI-12-5, 75 NRC 323 (2012)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 287 (2009)
at the threshold contention admission stage, the burden of providing support for a contention is on petitioner and the added burden of satisfying the reopening requirements is a deliberately a heavy one; CLI-12-15, 75 NRC 714 (2012)
litigants seeking to reopen a closed record necessarily face a heavy burden; CLI-12-3, 75 NRC 139 n.41 (2012); CLI-12-6, 75 NRC 367 (2012)
movant has the burden to present information in a manner that complies with section 2.326(b); LBP-12-10, 75 NRC 652 n.126 (2012)

AmerGen Energy Co. LLC (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 290-91 (2009)
because petitioner' claim of likelihood of success on the merits is conclusory, with no attempt to show how they would be likely to prevail, the motion to reopen falls far short of meeting the requirements of section 2.326(a)(3); LBP-12-10, 75 NRC 661 (2012)

Anchorage Associates v. Virgin Islands Board of Tax Review, 922 F.2d 168, 174-76 (3d Cir. 1990)
where a nonmoving party declines to oppose a motion for summary disposition, the board shall accept as admitted the moving party's prima facie showing of material facts, but boards cannot grant summary disposition unless movant discharges its burden of demonstrating that it is entitled to a decision as a matter of law; LBP-12-4, 75 NRC 219 (2012)

AREVA Enrichment Services, LLC (Eagle Rock Enrichment Facility), LBP-11-26, 74 NRC 499, 553-61 (2011)
fugitive dust generated onsite at a facility, particularly during construction, can be a concern in the vicinity of a facility; LBP-12-3, 75 NRC 186 n.20 (2012)

AREVA Enrichment Services, LLC (Eagle Rock Enrichment Facility), LBP-11-26, 74 NRC 499, 584-85 (2011)
light pollution is a matter of concern as a proposed nuclear materials facility undergoes agency licensing review; LBP-12-3, 75 NRC 188 (2012)

Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 143, 155 (1991)
boards may appropriately view petitioner's supporting information in a light favorable to petitioner, but failure to provide such information requires that the contention be rejected; LBP-12-3, 75 NRC 191 (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-12-3, 75 NRC 191 (2012)

Babbitt v. Sweet Home, 515 U.S. 687, 708 (1995)
when it enacted the Endangered Species Act, Congress delegated broad administrative and interpretive power to the Secretary of the Interior; LBP-12-10, 75 NRC 640 n.37 (2012)

Baltimore Gas & Electric Co v. Natural Resources Defense Council, Inc., 462 U.S. 87, 97 (1983)
it is not necessary that every alternative device and thought conceivable by the mind of man be considered, but a hard look must be taken at environmental consequences; LBP-12-1, 75 NRC 35 (2012)
NEPA exists in part to ensure that important environmental effects will not be overlooked; LBP-12-10, 75 NRC 679-80 (2012)
NEPA has a dual purpose of ensuring that federal officials fully take into account the environmental consequences of a federal action before reaching major decisions, and informing the public, Congress, and other agencies of those consequences; LBP-12-1, 75 NRC 34 (2012)

LEGAL CITATIONS INDEX

CASES

NEPA requires that a hard look must be taken at environmental consequences; LBP-12-10, 75 NRC 679 (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-12-5, 75 NRC 236 n.49 (2012)

Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc., 462 U.S. 87, 106-07 (1983)

environmental impact statements must disclose significant health, socioeconomic, and cumulative consequences of the environmental impact of a proposed action; LBP-12-9, 75 NRC 623 (2012)

Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 343 n.3 (1998)

Commission decision to decline review of a referred question does not constitute an endorsement of the board's views on the question of an applicant's duty to supplement its environmental report; CLI-12-13, 75 NRC 686-87 n.31 (2012)

unreviewed board rulings have no precedential value; CLI-12-13, 75 NRC 686-87 n.31 (2012)

Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 348-50 (1998)

NRC Staff's responsibilities, parallel to the adjudicatory process, include seeking additional information from applicant after docketing of a pending license application; LBP-12-9, 75 NRC 626 n.15 (2012)

Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1213 (9th Cir. 1998)

general statements by an agency about possible environmental effects and some risk do not constitute the hard look required by NEPA absent a justification of why more definitive information could not be provided; LBP-12-5, 75 NRC 236 (2012)

Bruesewitz v. Wyeth LLC, 131 S. Ct. 1068, 1076 (2011)

specific inclusion of some conditions in a statute or regulation implies the exclusion of those not mentioned; CLI-12-14, 75 NRC 697 (2012)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 914 (2009)

board rulings on standing are accorded substantial deference on appeal; CLI-12-12, 75 NRC 608 (2012)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Plant, Unit 3), CLI-09-20, 70 NRC 911, 915 (2009)

NRC applies contemporaneous judicial concepts of standing; LBP-12-8, 75 NRC 546 (2012)

under the proximity presumption, an individual who resides within a 50-mile radius of a nuclear power plant is not required to specifically plead injury, causation, and redressability to establish his or her standing to intervene; LBP-12-10, 75 NRC 638 (2012)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915 n.15 (2009)

geographic proximity to a facility (i.e., living or working within 50 miles) is presumptively sufficient to meet these traditional standing requirements in certain types of proceedings, including operating license renewal proceedings; LBP-12-8, 75 NRC 547 (2012)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 916-17 (2009)

for reactor operating license renewal proceedings, a proximity presumption, respecting standing for an individual who resides within a 50-mile radius of a nuclear power plant, is recognized; LBP-12-10, 75 NRC 638 (2012)

NRC could consider adopting, at least for the initial construction/operation authorization of in situ recovery facilities, a standing regime by which persons living or having substantial contacts within a 50-mile radius of the facility are afforded standing; LBP-12-3, 75 NRC 189 n.27 (2012)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 917 n.27 (2009)

NRC has latitude to define who is an "affected person" within the meaning of Atomic Energy Act § 189a, 42 U.S.C. § 2239(a); LBP-12-3, 75 NRC 189 n.27 (2012)

Calvert Cliffs Coordinating Committee v. AEC, 449 F.2d 1109, 1123 (D.C. Cir. 1971)

although NRC does not license construction or operation of a transmission corridor, it has the authority to deny the license for a proposed nuclear plant if, for example, the total environmental

costs of the new reactor and connected actions exceed the benefits; LBP-12-12, 75 NRC 779-80 (2012)
the National Pollutant Discharge Elimination System permitting process does not excuse NRC from addressing relevant water quality issues in its environmental impact statement; LBP-12-10, 75 NRC 678-79 (2012)

Carolina Environmental Study Group v. United States, 510 F.2d 796, 800 (D.C. Cir. 1975)
contentions could show a genuine dispute with respect to a technology that, 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; CLI-12-5, 75 NRC 342 n.245 (2012)
NEPA was not meant to require detailed discussion of remote and speculative alternatives; CLI-12-5, 75 NRC 342 n.244 (2012)

Carolina Environmental Study Group v. United States, 510 F.2d 796, 801 (D.C. Cir. 1975)
boards are required to consider alternatives as they exist and are likely to exist; CLI-12-5, 75 NRC 340 (2012)

Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), ALAB-837, 23 NRC 525, 542-43 n.58 (1986)
petitioner may act to vindicate its own rights, but it has no standing to assert the rights of others; CLI-12-6, 75 NRC 363 (2012)

Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), LBP-00-19, 52 NRC 85, 92 (2000)
delay in filing contentions caused by the schedule of counsel in other matters can support a finding of good cause; LBP-12-12, 75 NRC 749 (2012)

Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-79-5, 9 NRC 607, 609-10 (1979)
because a need-for-power assessment necessarily entails forecasting power demands in light of substantial uncertainty and the duty of providing adequate and reliable service to the public, need-for-power assessments are properly conservative; LBP-12-5, 75 NRC 238 (2012)

Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986)
summary disposition movant bears the initial burden of showing the absence of a genuine issue of material fact; LBP-12-4, 75 NRC 218 (2012)

Celotex Corp. v. Catrett, 477 U.S. 317, 324 (1986)
opponent of a summary disposition motion cannot rest on the allegations or denials of a pleading, but instead must go beyond the pleadings and by its own affidavits, or the depositions, answers to interrogatories, and admissions on file, designate specific facts showing that there is a genuine issue for trial; LBP-12-4, 75 NRC 218 (2012)

Center for Biological Diversity v. Department of Interior, 563 F.3d. 466, 475 (D.C. Cir. 2009)
if an agency determines that a particular action will have no effect on an endangered or threatened species, the consultation requirements are not triggered; LBP-12-10, 75 NRC 640 n.40, 656-57, 671 (2012)

Citizens Against Burlington v. Busey, 938 F.2d 190, 195 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991)
neither NRC nor applicant need consider any alternative that does not bring about the ends of the proposed action; CLI-12-5, 75 NRC 339, 343 (2012)
under the rule of reason governing NEPA, the concept of alternatives must be bounded by some notion of feasibility; CLI-12-15, 75 NRC 724 (2012)
when the purpose is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved; CLI-12-5, 75 NRC 343 (2012)

Citizens Against Burlington v. Busey, 938 F.2d 190, 197-98 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991)
NRC gives substantial weight to the preferences of the applicant and/or sponsor; CLI-12-5, 75 NRC 339 (2012)

City of Grapevine v. Department of Transportation, 17 F.3d 1502, 1506 (D.C. Cir. 1994)
NRC gives substantial weight to the preferences of the applicant and/or sponsor; CLI-12-5, 75 NRC 339 (2012)

City of West Chicago v. NRC, 701 F.2d 632, 650 (7th Cir. 1983)
segmentation is to be avoided in order to ensure that interrelated projects, the overall effect of which is environmentally significant, not be fractionalized into smaller, less significant actions; LBP-12-12, 75 NRC 778 n.204 (2012)

LEGAL CITATIONS INDEX

CASES

Cogema Mining, Inc. (Irigaray and Christensen Ranch Facilities), LBP-09-13, 70 NRC 168, 191 (2009)
general environmental and policy interests are insufficient for organizational standing; LBP-12-3, 75 NRC 178 (2012)
petitioner's claim of organizational standing is of the sort that repeatedly have been found insufficient; CLI-12-12, 75 NRC 606 n.6 (2012)
Commonwealth Edison Co. (Byron Nuclear Power Station, Units 1 and 2), ALAB-659, 14 NRC 983, 985 (1981)
it is not customary for an appeal to proceed through at least the briefing process while the trial tribunal has before it an authorized and timely filed petition for reconsideration of the decision or order in question; CLI-12-5, 75 NRC 306 n.23 (2012)
Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 and 2), ALAB-226, 8 AEC 381, 406 (1974)
boards are not responsible for providing support for contentions so as to make them admissible; LBP-12-3, 75 NRC 206 n.35 (2012)
Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 194 (1999)
neither the Commission nor the board should be expected to sift through a lengthy document in search of asserted factual support that petitioner has not specified; CLI-12-5, 75 NRC 332 (2012)
petitioner bears burden for setting forth clear arguments for its contentions; CLI-12-5, 75 NRC 332 n.189 (2012)
Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 and 2), CLI-00-5, 51 NRC 90, 98 (2000)
if petitioner's factual claims in support of its standing are contested, untenable, conjectural, or conclusory, a board need not uncritically accept such assertions, but may weigh those informational claims and exercise its judgment about whether standing has been satisfied; LBP-12-3, 75 NRC 177-78 (2012)
Consumers Energy Co. (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 409 (2007)
representational standing claims must have supporting declarations from members identifying themselves, outlining their interests, and authorizing petitioners to represent them; LBP-12-3, 75 NRC 178 n.6 (2012)
to establish representational standing, organizations must show that at least one of its members may be harmed by the licensing action and would have standing to sue in his or her own right, identify that member by name and address, show that the organization is authorized to request a hearing on behalf of that member, and show that the interests that the representative organization seeks to protect are germane to its own interests; LBP-12-10, 75 NRC 638 (2012)
Consumers Energy Co. (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 410 (2007)
if petitioner's factual claims in support of its standing are contested, untenable, conjectural, or conclusory, a board need not uncritically accept such assertions, but may weigh those informational claims and exercise its judgment about whether standing has been satisfied; LBP-12-3, 75 NRC 177-78 (2012)
Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 336 (2009)
absent error of law or abuse of discretion, the Commission generally defers to board rulings on contention admissibility; CLI-12-5, 75 NRC 307 (2012); CLI-12-8, 75 NRC 397 (2012); CLI-12-10, 75 NRC 484 (2012); CLI-12-15, 75 NRC 710 (2012)
Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 339 (2009)
by reason of their own standing in a proceeding, intervenors may assert any violation of law that would lead to a redress of their injuries, including their interests in seeing that the NEPA process is properly carried out or in preventing or delaying issuance of the requested combined license; LBP-12-12, 75 NRC 753 n.40 (2012)
Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 339-40 (2009)
there is no contention-based requirement mandating that to have standing, besides showing that a cognizable injury is associated with a proposed licensing action and that granting the relief sought

will address that injury, petitioner also must establish a link between that injury and the issues it wishes to litigate in challenging an application; LBP-12-3, 75 NRC 190 n.28 (2012)

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 346 (2009)
once it made a determination of plausible injury from the proposed project, the board was not required to weigh the evidence to determine whether the harm to petitioners was beyond doubt; CLI-12-12, 75 NRC 613 (2012)

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), LBP-08-24, 68 NRC 691, 704 (2008), *aff'd in part, rev'd in part, and remanded,* CLI-09-9, 69 NRC 331 (2009)
the in situ recovery process, which is also referred to as the in situ leach process, is described; LBP-12-3, 75 NRC 176 n.3 (2012)

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), LBP-08-24, 68 NRC 691, 708-10 (2008), *aff'd in part, rev'd in part, and remanded,* CLI-09-9, 69 NRC 331 (2009)
when an ore zone and petitioner's water source exist in separate aquifers, the injury/causation question is whether there is an interconnection between those aquifers; LBP-12-3, 75 NRC 181-82 n.11 (2012)

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), LBP-08-24, 68 NRC 691, 709 & n.77 (2008), *aff'd in part, rev'd in part, and remanded,* CLI-09-9, 69 NRC 331 (2009)
for petitioners claiming to be using water from the same aquifer as for the uranium ore source, regardless of distance from the facility in question, licensing boards have found that a plausible pathway connecting the proposed mining operation to their water source has been shown so as to establish petitioners' standing; LBP-12-3, 75 NRC 181 n.11 (2012)

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), LBP-08-24, 68 NRC 691, 756 (2008), *aff'd in part, rev'd in part, and remanded,* CLI-09-9, 69 NRC 331 (2009)
references to prior problems involving estimation of decommissioning costs are inadequate to establish a likelihood that the amount of applicant's decommissioning bond will be insufficient; LBP-12-3, 75 NRC 205 (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-12-3, 75 NRC 191 (2012)

Crow Butte Resources, Inc. (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 553 & n.81 (2009)
boards are not responsible for providing support for contentions so as to make them admissible; LBP-12-3, 75 NRC 206 n.35 (2012)

Crow Butte Resources, Inc. (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 553-54 (2009)
licensing boards must specify each basis relied upon for admitting a contention; CLI-12-5, 75 NRC 310 n.50 (2012)

Crow Butte Resources, Inc. (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 544-45 (2009)
potential harm necessary to demonstrate standing in NRC proceedings need not relate to physical or bodily injury; CLI-12-12, 75 NRC 612-13 n.49 (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-12-9, 75 NRC 629 n.22 (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-12-3, 75 NRC 192 (2012)

Crow Butte Resources, Inc. (North Trend Expansion Project), LBP-08-6, 67 NRC 241, 272-73 (2008), *aff'd as to ruling on standing,* CLI-09-12, 69 NRC 535, 544-48 (2009)
petitioners have made no attempt to establish that any promixity-plus presumption should be applicable to the licensing action they are challenging; LBP-12-3, 75 NRC 179 (2012)

Crow Butte Resources, Inc. (North Trend Expansion Project), LBP-08-6, 67 NRC 241, 278-80, 282-84, 288-89 (2008), *aff'd as to ruling on standing,* CLI-09-12, 69 NRC 535 (2009)
when an ore zone and petitioner's water source exist in separate aquifers, the injury/causation question is whether there is an interconnection between those aquifers; LBP-12-3, 75 NRC 181-82 n.11 (2012)

LEGAL CITATIONS INDEX

CASES

Crow Butte Resources, Inc. (North Trend Expansion Project), LBP-08-6, 67 NRC 241, 281 (2008), *aff'd as to ruling on standing,* CLI-09-12, 69 NRC 535 (2009)
petitioner whose property is upgradient but nonetheless located in close proximity to a proposed in situ recovery facility may be able to establish its plausible pathway with a less particularized showing; LBP-12-3, 75 NRC 182 n.13 (2012)

Crow Butte Resources, Inc. (North Trend Expansion Project), LBP-08-6, 67 NRC 241, 281-82 (2008), *aff'd as to ruling on standing,* CLI-09-12, 69 NRC 535 (2009)
for petitioners claiming to be using water from the same aquifer as for the uranium ore source, regardless of distance from the facility in question, licensing boards have found that a plausible pathway connecting the proposed mining operation to their water source has been shown so as to establish petitioners' standing; LBP-12-3, 75 NRC 181 n.11 (2012)

Crow Butte Resources, Inc. (North Trend Expansion Project), LBP-08-6, 67 NRC 241, 284-87 (2008), *aff'd as to ruling on standing,* CLI-09-12, 69 NRC 535 (2009)
surface water contamination has played a significant role in standing determinations in in situ recovery cases; LBP-12-3, 75 NRC 183 (2012)

Crow Butte Resources, Inc. (North Trend Expansion Project), LBP-08-6, 67 NRC 241, 288-89 (2008), *aff'd as to ruling on standing,* CLI-09-12, 69 NRC 535 (2009)
standing was found for petitioner fishing a river 60 miles downstream from a proposed in situ recovery facility expansion alleged to allow drainage into the river from operations; LBP-12-3, 75 NRC 182 n.13 (2012)

Curators of the University of Missouri, CLI-95-1, 41 NRC 71, 170 (1995)
contentions calling for requirements in excess of those imposed by regulations will be rejected as a collateral attack on regulations; CLI-12-5, 75 NRC 315 n.88 (2012)

David Geisen, CLI-09-23, 70 NRC 935, 936 (2009)
the Commission traditionally has entertained motions to stay agency action pending judicial review; CLI-12-11, 75 NRC 528 (2012)

David Geisen, CLI-09-23, 70 NRC 935, 936 & n.4 (2009)
irreparable injury is the most important of the stay criteria; CLI-12-11, 75 NRC 529 (2012)

David Geisen, CLI-09-23, 70 NRC 935, 937 (2009)
without a showing of irreparable injury, petitioners seeking a stay of effectiveness must demonstrate that reversal of the licensing board is a virtual certainty; CLI-12-11, 75 NRC 529 (2012)

Department of Transportation v. Public Citizen, 541 U.S. 752, 767-69 (2004)
the rule of reason is inherent in NEPA and its implementing regulations; LBP-12-5, 75 NRC 237 n.52 (2012)

Department of Transportation v. Public Citizen, 541 U.S. 752, 770 (2004)
where an agency has no ability to prevent a certain effect due to its limited statutory authority over the relevant actions, the agency cannot be considered a legally relevant cause of the effect; LBP-12-12, 75 NRC 779 n.212 (2012)

Detroit Edison Co. (Fermi Nuclear Power Plant, Unit 3), CLI-09-22, 70 NRC 932, 933 (2009)
NRC rules of practice provide for an automatic right to appeal a licensing board decision deciding standing and contention admissibility, on the question whether a petition to intervene and request for hearing should have been granted, or denied in its entirety; CLI-12-8, 75 NRC 396-97 (2012)

Detroit Edison Co. (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 242-43, *aff'd,* CLI-09-22, 70 NRC 932 (2009)
petitioners' averment that proffered environmental contentions will better position NRC to fully review the possible impacts of the proposed project and, based on petitioners' and their experts' information, may address concerns and mitigate impacts to water, land, and other resources is sufficient to fulfill the redressability element of the standing requirement; CLI-12-12, 75 NRC 613 n.51 (2012); LBP-12-3, 75 NRC 188 n.24 (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; CLI-12-5, 75 NRC 339 (2012)

LEGAL CITATIONS INDEX

CASES

Detroit Edison Co. (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 278-79 (2009)
the National Pollutant Discharge Elimination System permitting process does not excuse NRC from addressing relevant water quality issues in its environmental impact statement; LBP-12-10, 75 NRC 678-79 (2012)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 219 (2003)
NRC properly reserves its hearing process for genuine, material controversies between knowledgeable litigants; CLI-12-5, 75 NRC 307 (2012); CLI-12-8, 75 NRC 396, 416 (2012)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 119 (2009)
for threshold issues such as contention admissibility, the Commission gives substantial deference to a board's determinations; CLI-12-3, 75 NRC 138 (2012); CLI-12-6, 75 NRC 361 (2012)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 120 (2009)
generally, once there has been an appeal or petition to review a board order, jurisdiction passes to the Commission; CLI-12-14, 75 NRC 701 n.60 (2012)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 124 (2009)
motions to reopen on issues not previously litigated must satisfy the balancing test of 10 C.F.R. 2.309(c) in addition to the reopening standards; CLI-12-3, 75 NRC 140 (2012)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 124-25 (2009)
failure to address the reopening criteria is enough to reject contentions that are filed after a record has closed; CLI-12-3, 75 NRC 143 n.72 (2012)

Dominion Nuclear Connecticut, Inc. (Millstone Power Station, Unit 3), LBP-01-17, 53 NRC 398, 406-07 (2001)
the board, on reconsideration and after remand from the Commission, reopened the record with respect to a previously disposed contention, to consider the effect of licensee's losing track of a fuel rod; CLI-12-14, 75 NRC 700 n.55 (2012)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001)
standards governing contention admissibility are strict by design; LBP-12-7, 75 NRC 511 (2012)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 365 (2001)
past violations of NRC regulations would indicate a deficiency in an application only if they are directly germane to the licensing action, rather than being of simply historical interest; CLI-12-2, 75 NRC 83-84 (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 grant of a rule waiver is presented; CLI-12-6, 75 NRC 364 (2012)
petition for rule waiver or exception must allege special circumstances that were not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived and those circumstances must be unique rather than common to a large class of facilities; LBP-12-6, 75 NRC 271 (2012)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 565 (2005)
good cause is the most important of the factors in the 2.309(c) balancing test, and in the absence of good cause, a party must make an especially strong showing on the other factors to justify admission of a nontimely contention; LBP-12-10, 75 NRC 665 n.180 (2012)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), CLI-07-27, 66 NRC 215, 222 (2007)
applicant's environmental report must evaluate alternative sites to determine whether any is obviously superior to the proposed site; CLI-12-9, 75 NRC 471 n.312 (2012)

LEGAL CITATIONS INDEX

CASES

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 265 (2005)
although boards do not decide the merits at the contention admissibility stage, materials cited as the basis for a contention are subject to scrutiny to determine whether, on their face, they actually support the facts alleged; LBP-12-12, 75 NRC 774 (2012)
providing any material or document as the basis of a contention, without setting forth an explanation of its significance, is inadequate to support admission of the contention; LBP-12-12, 75 NRC 774 (2012)
Dubois v. U.S. Department of Agriculture, 102 F.3d 1273, 1291 (1st Cir. 1996)
NEPA exists in part to ensure that important environmental effects will not be overlooked; LBP-12-10, 75 NRC 679-80 (2012)
NEPA has a dual purpose of ensuring that federal officials fully take into account the environmental consequences of a federal action before reaching major decisions, and informing the public, Congress, and other agencies of those consequences; LBP-12-1, 75 NRC 34 (2012)
Duke Energy Corp. (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 67 (2004)
recognizing its lack of authority to supervise NRC Staff's review, the board referred its concerns to the Commission; CLI-12-4, 75 NRC 156 (2012)
Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 11-12 (2002)
whether a severe accident mitigation alternative is worthy of more detailed analysis in an environmental report or supplemental environmental impact statement hinges on whether it may be cost-beneficial to implement; CLI-12-3, 75 NRC 149 n.111 (2012)
Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 12 (2002)
under the rule of reason governing NEPA, the concept of alternatives must be bounded by some notion of feasibility; CLI-12-15, 75 NRC 724 (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)
the scope of a contention is limited to the issues of law and fact pleaded with particularity in the contention and any factual and legal material in support thereof; LBP-12-5, 75 NRC 239 (2012)
Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 382 (2002)
contentions challenging an environmental report may be viewed as a challenge to the NRC Staff's subsequent draft or final environmental impact statement; CLI-12-1, 75 NRC 61 n.107 (2012)
when omissions are cured by the subsequent issuance of licensing-related documents, a contention of omission must be disposed of or modified; LBP-12-5, 75 NRC 238 (2012)
Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 382-83 (2002)
where a contention alleges omission of particular information or an issue from an application, and the information is later supplied by the applicant or considered by NRC Staff in a draft environmental impact statement, the contention is moot, and intervenors must timely file a new or amended contention to raise specific challenges regarding the new information; LBP-12-5, 75 NRC 247 (2012)
Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 382-84 (2002)
petitioners' challenge to the adequacy of applicant's existing analysis of solar and wind as alternative energy sources is not a contention of omission; CLI-12-8, 75 NRC 406 n.72 (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)
a significant change in the nature of the purported NEPA imperfection, from one focusing on comprehensive information omission to one centered on a deficient analysis of subsequently supplied information, warrants issue modification by the complaining party because otherwise, absent any new pleading, the other parties would be left to speculate whether the concerns first expressed had been satisfied by the new information; LBP-12-5, 75 NRC 247 n.124 (2012)

intervenor may need to amend an admitted environmental contention based on applicant's environmental report, or file a new contention altogether challenging Staff's draft environmental impact statement; LBP-12-12, 75 NRC 768 (2012)
when omissions are cured by the subsequent issuance of licensing-related documents, intervenor must timely file a new or amended contention if it intends to challenge the sufficiency of the new information; LBP-12-5, 75 NRC 238 (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)
under the migration tenet, boards may construe an admitted contention contesting the environmental report as a challenge to the subsequently issued draft or final environmental impact statement without the necessity for Intervenors to file a new or amended contention; LBP-12-12, 75 NRC 768 n.140 (2012)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 386 (2002)
NRC proceedings would prove unmanageable and unfair to the other parties if an intervenor could freely change an admitted contention at will as litigation progresses; CLI-12-1, 75 NRC 56 (2012)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 427 (2003)
petitioners must raise and reasonably specify at the outset their objections to a license application; CLI-12-1, 75 NRC 56 (2012)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 429 (2003)
intervenors are expected to file contentions on the basis of applicant's environmental report and not delay their contentions until after NRC Staff issues its environmental analysis; CLI-12-13, 75 NRC 687 n.31 (2012)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 431 (2003)
adjudicatory hearings are not environmental impact statement editing sessions; CLI-12-1, 75 NRC 57 (2012); CLI-12-6, 75 NRC 369 (2012)
the burden is on the proponent of a contention to show that NRC Staff's analysis or methodology is unreasonable or insufficient; CLI-12-6, 75 NRC 369 (2012)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999)
contentions shall not be admitted if at the outset they are not supported by some alleged fact or facts demonstrating a genuine material dispute; LBP-12-8, 75 NRC 561 (2012)
in 1989, NRC revised its rules to prevent the admission of poorly defined or supported contentions or those based on little more than speculation; CLI-12-5, 75 NRC 307 (2012); CLI-12-8, 75 NRC 396 (2012)
NRC deliberately raised contention admissibility standards to relieve the hearing delays that poorly defined or supported contentions had caused in the past; CLI-12-5, 75 NRC 307 (2012); CLI-12-8, 75 NRC 396 (2012)
prior to NRC's 1989 rule revision, intervenors were able to trigger hearings after merely copying a contention from another proceeding, even though these admitted intervenors often had negligible knowledge of the issues and no direct case to present; CLI-12-5, 75 NRC 307 (2012); CLI-12-8, 75 NRC 396 (2012)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 335 (1999)
contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by some alleged fact or facts demonstrating a genuine material dispute with the applicant; LBP-12-8, 75 NRC 548 (2012)
intervenors may use discovery to develop a case once contentions are admitted; CLI-12-5, 75 NRC 307 (2012); CLI-12-8, 75 NRC 396 (2012)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 336-38 (1999)
mere general references to NRC Staff's requests for additional information do not provide the requisite reasonable specificity to support admission of a contention; CLI-12-5, 75 NRC 310 n.52 (2012)

LEGAL CITATIONS INDEX

CASES

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 337-38 (1999)
contention rules are intended to prevent admission of ill-defined contentions where petitioners at the outset have not set forth particularized concerns; CLI-12-5, 75 NRC 334 n.197 (2012)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 345 (1999)
Fukushima-related matters relevant to license renewal could be addressed in a rulemaking that could specifically inform a decision on the renewal application and preclude the filing of additional contentions; LBP-12-1, 75 NRC 35-36 (2012)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), LBP-98-33, 48 NRC 381, 385 n.1 (1998)
proximity-based standing is allowed because license renewal allows operation of a reactor over an additional period of time during which the reactor could be subject to the same equipment failures and personnel errors as during operations over the original period of the license; LBP-12-8, 75 NRC 547 (2012)

Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-355, 4 NRC 397, 410 (1976)
if demand for power turns out to be less than predicted, it cannot be argued that the cost of the unneeded generating capacity may turn up in customers' electric bills because the surplus can be profitably marketed to other systems or the new capacity can replace older, less efficient units; LBP-12-5, 75 NRC 238 n.60 (2012)

Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 NRC 460, 469 (1982)
good cause is the most important of the late-filing factors and is entitled to the most weight; LBP-12-9, 75 NRC 621-22 (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 order referring the proceeding to the licensing board; LBP-12-3, 75 NRC 191 (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-12-13, 75 NRC 686 n.30 (2012)
intervenors retain the responsibility to raise new or amended contentions as new information becomes available if they wish to litigate those issues; CLI-12-13, 75 NRC 689-90 (2012)

Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1048-50 (1983)
should NRC Staff provide a different analysis in its draft environmental impact statement, there will be ample opportunity to either amend or dispose of a contention challenging the environmental report; CLI-12-13, 75 NRC 687 n.31 (2012)

Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1049 (1983)
environmental contentions ultimately challenge NRC's compliance with the National Environmental Policy Act; LBP-12-5, 75 NRC 236 (2012)
for NEPA contentions, the burden of proof falls on NRC Staff because NRC, not the applicant, bears the ultimate responsibility for complying with NEPA's dictates; LBP-12-5, 75 NRC 235-36 (2012)

Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1050 (1983)
when omissions are cured by the subsequent issuance of licensing-related documents, a contention of omission must be disposed of or modified; LBP-12-5, 75 NRC 238 (2012)

Entergy Nuclear Generation Co. v. Department of Environmental Protection, 949 N.E.2d 1027, 1037 (Mass. 2011)
cooling water intake structures have harmed aquatic species and their habitats; LBP-12-10, 75 NRC 677 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-08-2, 67 NRC 31, 35 (2008)
routine contention admissibility decisions do not affect the basic structure of a proceeding in a pervasive or unusual manner; CLI-12-13, 75 NRC 688 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-08-2, 67 NRC 31, 35-36 (2008)
petitioner will have an opportunity to challenge the board's contention admissibility decision at the end of the case; CLI-12-13, 75 NRC 688-89 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-09-11, 69 NRC 529, 534 (2009)
references to affidavits and other exhibits supporting petitioner's claims should include page citations; CLI-12-8, 75 NRC 404 n.67 (2012)

the Commission should not be expected to sift unaided through documents filed before the board to piece together and discern a party's argument and the grounds for its claims; LBP-12-3, 75 NRC 206, 207 (2012); CLI-12-8, 75 NRC 404 n.67 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 290-91, 316-17 (2010)

nature and purposes of the severe accident mitigation alternatives analysis are described; CLI-12-8, 75 NRC 406 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297 (2010)

NRC applies the same standards to motions for summary disposition that federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; LBP-12-2, 75 NRC 162 n.17 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 304 n.87 (2010)

unlike plume modeling for an actual severe accident, the SAMA analysis is not focused on predicting the precise trajectory of a real-time plume but rather is a probabilistic analysis involving statistical averaging over many hundreds of randomly selected hourly weather sequences obtained from a year of hourly weather data; CLI-12-8, 75 NRC 415 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 309 & n.103 (2010)

reach of a contention necessarily hinges upon its terms coupled with its stated bases; CLI-12-5, 75 NRC 310 n.50 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 315 (2010)

environmental impact statements are not intended to be research documents, reflecting the frontiers of scientific methodology, studies, and data; CLI-12-5, 75 NRC 341 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 315-16 (2010)

although there will always be more data that could be gathered, agencies must have some discretion to draw the line and move forward with decisionmaking; LBP-12-5, 75 NRC 237 (2012)

environmental impact statements are not intended to be research documents, reflecting the frontiers of scientific methodology, studies, and data; LBP-12-5, 75 NRC 237 (2012)

NEPA allows agencies to select their own methodology as long as that methodology is reasonable; LBP-12-5, 75 NRC 237 (2012)

there is no NEPA requirement to use the best scientific methodology, and NEPA should be construed in the light of reason if it is not to demand virtually infinite study and resources; LBP-12-5, 75 NRC 237 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 317 (2010)

unless it looks genuinely plausible that inclusion of an additional factor or use of other assumptions and models may change the cost-benefit conclusions for the severe accident mitigation alternative candidates evaluated, no purpose would be served to further refine the SAMA analysis; CLI-12-5, 75 NRC 323 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 453-54 (2010)

"current licensing basis" is the set of NRC requirements (including regulations, orders, technical specifications, and license conditions) applicable to a specific plant, and includes the licensee's written, docketed commitments for ensuring compliance with applicable NRC requirements and the plant-specific design basis; CLI-12-5, 75 NRC 304 n.12 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 454 (2010)

existing regulatory programs can be expected to directly detect the effects of aging on active functions; CLI-12-5, 75 NRC 304 n.10 (2012)

license renewal applicants must conduct aging management reviews of any structure, system, or component that performs one of these intended functions if the SSC is passive (performs its intended function(s) without moving parts or without a change in configuration or properties); CLI-12-5, 75 NRC 303-04 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC 202, 207-08 (2010)

nature and purposes of the severe accident mitigation alternatives analysis are described; CLI-12-8, 75 NRC 406 (2012)

LEGAL CITATIONS INDEX

CASES

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-12-3, 75 NRC 132, 138 (2012)
level of support required for a motion to reopen is greater than that required for a contention under the general admissibility requirements; CLI-12-7, 75 NRC 391 n.47 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-12-3, 75 NRC 132, 140-41 (2012)
once all contentions have been decided, the contested proceeding is terminated; CLI-12-14, 75 NRC 699 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-12-3, 75 NRC 132, 141 (2012)
NRC rules contain ample provisions through which litigants may seek admission of new or amended contentions; CLI-12-13, 75 NRC 689 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-12-3, 75 NRC 132, 145 n.86 (2012)
litigants seeking to reopen a record must comply fully with section 2.326(b); LBP-12-10, 75 NRC 639 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC 479 (2012)
purpose of the reopening rule is to make sure that petitioners have an opportunity to raise serious issues after the close of the record; CLI-12-14, 75 NRC 700 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC 479, 492 n.69 (2012)
good cause is the most important of the late-filing factors under section 2.309(c)(1), and absent good cause, a compelling showing must be made on the other seven factors; LBP-12-12, 75 NRC 749 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC 479, 495 (2012)
the reopening standard imposes a deliberately heavy burden on parties seeking to supplement the evidentiary record at the 11th hour, after the record has closed; LBP-12-10, 75 NRC 639 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257 (2006)
severe accident mitigation alternatives analysis is a Category 2 issue and SAMAs must be considered for all plants that have not considered such alternatives; LBP-12-8, 75 NRC 551 (2012)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 280 (2006)
contentions concerning release of radiological, chemical, and herbicidal materials and storage of spent fuel are Category 1 issues and thus inadmissible; LBP-12-8, 75 NRC 551 (2012)

Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 187 (2008)
contention calling for alternative analysis, with no showing that the original analysis failed to meet applicable requirements, is inadmissible; CLI-12-8, 75 NRC 408 (2012)

Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), CLI-08-27, 68 NRC 655 (2008)
the Commission has considered whether to exercise pendent jurisdiction of otherwise unappealable issues, such as where those issues are inextricably intertwined with a related legal question properly before it, or where consideration of the issues together has the potential to resolve the entire litigation; CLI-12-12, 75 NRC 607 n.13 (2012)

Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), CLI-09-6, 69 NRC 128, 133 (2009)
interlocutory review of a board's dismissal of a new contention is granted only upon a showing of extraordinary circumstances; CLI-12-13, 75 NRC 687 (2012)

Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), CLI-09-6, 69 NRC 128, 137 (2009)
routine contention admissibility determinations generally are not appropriate for interlocutory review; CLI-12-12, 75 NRC 608 (2012)

Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), CLI-11-14, 74 NRC 801, 807-08 (2011)
motion to reply is denied because petitioner should have anticipated the arguments in the Staff's and applicant's answers, which were logical responses to petitioner's suspension motion; CLI-12-6, 75 NRC 374 n.138 (2012)

Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), CLI-11-14, 74 NRC 801, 809 (2011)
reply briefs may not contain new information that was not raised in either the petition or answers, but arguments that respond to the petition or answers, whether they are offered in rebuttal or in support, are not precluded; LBP-12-8, 75 NRC 570 (2012)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-06-8, 63 NRC 235, 237 (2006)
parties seeking a stay must show that they face imminent, irreparable harm that is both certain and great; CLI-12-11, 75 NRC 529, 530 (2012)

LEGAL CITATIONS INDEX

CASES

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13 (2007)
severe accident mitigation alternatives analysis is a Category 2 issue and SAMAs must be considered for all plants that have not considered such alternatives; LBP-12-8, 75 NRC 551 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 20 (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 generic environmental impact statement; LBP-12-8, 75 NRC 551 (2012)
generically applicable concerns are not appropriate for resolution in an adjudicatory proceeding, a rulemaking petition being the appropriate mechanism for raising those concerns; CLI-12-6, 75 NRC 357 (2012)
it makes more sense for NRC to study whether, as a technical matter, the agency should modify its requirements relating to spent fuel storage for all plants than to litigate the issue in particular adjudications; CLI-12-6, 75 NRC 365 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 20-21 (2007)
concerns that apply generically to all spent fuel pools at all reactors are more appropriately addressed via rulemaking or other appropriate generic activity; CLI-12-6, 75 NRC 365 (2012)
the board properly rejected state's contention that raised concerns similar to those in its rulemaking petition as an impermissible challenge to NRC regulations; CLI-12-6, 75 NRC 357 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 22 n.37 (2007)
rulemaking petitioner who is not a party to a licensing proceeding has no right under NRC rules to request a stay of that proceeding; CLI-12-6, 75 NRC 357 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-07-13, 65 NRC 211, 214-15 (2007)
rulemaking petitioner may request that NRC suspend all or any part of any licensing proceeding to which petitioner is a party pending disposition of the petition for rulemaking; CLI-12-6, 75 NRC 357 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 10 n.37 (2010)
a remand held the proceeding open, but only for the limited purpose of litigating the remanded contention; CLI-12-3, 75 NRC 140 (2012)
arguments from an earlier petition were incorporated by reference; CLI-12-3, 75 NRC 139 n.41 (2012)
once a proceeding has closed, the mechanism to raise a new issue no longer would be a contention accompanied by a motion to reopen, but rather a request for action under 10 C.F.R. 2.206 or a petition for rulemaking under 10 C.F.R. 2.802; CLI-12-3, 75 NRC 140 (2012)
petitioner who files a new contention after the board has already closed the evidentiary record is obliged to address the reopening standards; CLI-12-6, 75 NRC 366 (2012)
where the proceeding remained open during the pendency of a remand, but the record remained closed, any contentions raising genuinely new issues would have to be accompanied by a motion to reopen; CLI-12-3, 75 NRC 140 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 36 (2010)
if NRC concludes that an aging management program is consistent with the GALL Report, then it accepts applicant's commitment to implement that AMP, finding the commitment itself to be an adequate demonstration of reasonable assurance under section 54.29(a); CLI-12-5, 75 NRC 304, 315 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 36, 38 (2010)
assertion by applicant that its aging management plan is consistent with the GALL Report does not immunize it against a challenge to the AMP; CLI-12-5, 75 NRC 309 (2012)

LEGAL CITATIONS INDEX

CASES

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 37 (2010)
license renewal applicants' use of an aging management program identified in the GALL Report constitutes reasonable assurance that it will manage the targeted aging effect during the renewal period; CLI-12-10, 75 NRC 497 n.93 (2012)
sufficiency of an aging management program that meets the GALL Report's recommendations can be challenged if the contention admissibility requirements are otherwise met; CLI-12-10, 75 NRC 497 n.93 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 338 (2011)
the reopening standard is intended to impose a deliberately heavy burden on parties seeking to supplement the evidentiary record at the 11th hour, after the record has closed; CLI-12-10, 75 NRC 495 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 339 (2011)
new contentions must be timely and based on new information relevant to the plant and the application that is materially different from information previously available; LBP-12-1, 75 NRC 12 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 341-42 (2011)
if applicant's enhanced monitoring program, which was the topic of a late-filed contention, was insufficient, it must have been insufficient beforehand too; CLI-12-10, 75 NRC 493 n.70 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 344 (2011)
an information notice merely summarizes information that has long been publicly available and does not provide new information that would constitute good cause for the late filing; CLI-12-10, 75 NRC 490 (2012)
tardy filing of a contention may be excusable only where the facts upon which the amended or new contention is based were previously unavailable; CLI-12-10, 75 NRC 493 n.70 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 345 (2011)
there was no prejudice to intervenor where the board considered licensee's supplement to the application, which contained the updated aging management plan, because intervenor could have sought to amend its contention to respond to the supplement; CLI-12-10, 75 NRC 493 n.70 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 346 (2011)
the "materially different result" requirement of section 2.326(a)(3) is analyzed using the Commission's test of whether it has been shown that a motion for summary disposition could be defeated; LBP-12-1, 75 NRC 27 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 346-47 (2011)
the quality of evidence presented for reopening must be at least of a level sufficient to withstand a motion for summary disposition; CLI-12-10, 75 NRC 498 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131 (2006)
severe accident mitigation alternatives analysis is a Category 2 issue and SAMAs must be considered for all plants that have not considered such alternatives; LBP-12-8, 75 NRC 551 (2012)
Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 152 (2006)
contentions concerning release of radiological, chemical, and herbicidal materials and storage of spent fuel are Category 1 issues and thus inadmissible; LBP-12-8, 75 NRC 551 (2012)
Environmental Defense Fund v. Tennessee Valley Authority, 468 F.2d 1164 (6th Cir. 1972)
continued construction was barred pending the filing of an adequate environmental impact statement, notwithstanding the fact that the project was initially approved and construction commenced prior to the effective date of NEPA; LBP-12-1, 75 NRC 37 n.48 (2012)

LEGAL CITATIONS INDEX

CASES

Environmental Law and Policy Center v. NRC, 470 F.3d 676, 679 (7th Cir. 2006)
"baseload power" generates energy intended to continuously produce electricity at or near full capacity, with high availability; CLI-12-5, 75 NRC 339 n.223 (2012)
because a single wind turbine cannot provide continuous production of electricity at or near full capacity, it does not constitute a source of baseload power; CLI-12-5, 75 NRC 346 (2012)
Environmental Law and Policy Center v. NRC, 470 F.3d 676, 683-84 (7th Cir. 2006)
neither NRC nor applicant need consider any alternative that does not bring about the ends of the proposed action; CLI-12-5, 75 NRC 343 (2012)
Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-04-31, 60 NRC 461, 465-67 (2004)
intervenor normally is not allowed to challenge a board's rejection of contentions where the board has granted a hearing on any contention; CLI-12-12, 75 NRC 607 n.12 (2012)
Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 39 (2005)
the Commission does not review the combined license application de novo, but rather, considers the sufficiency of the Staff's review of that application; CLI-12-2, 75 NRC 74 (2012); CLI-12-9, 75 NRC 428 (2012)
Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 49 (2005)
the scope of intervenors' participation in combined license adjudications is limited to their admitted contentions, and they are barred from participating in the uncontested portion of the hearing; CLI-12-11, 75 NRC 527 n.17 (2012)
Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 808 (2005)
contention admissibility rules require that a proposed contention be supported by alleged fact or expert opinion; CLI-12-7, 75 NRC 390 (2012)
Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-06-20, 64 NRC 15, 21-22 (2006)
the Commission does not review the combined license application de novo, but rather, considers the sufficiency of NRC Staff's review of that application; CLI-12-2, 75 NRC 74 (2012); CLI-12-9, 75 NRC 428 (2012)
Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), LBP-05-19, 62 NRC 134, 182 (2005)
when omissions are cured by the subsequent issuance of licensing-related documents, a contention of omission must be disposed of or modified; LBP-12-5, 75 NRC 238 (2012)
Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), LBP-05-19, 62 NRC 134, 183 (2005)
once all contentions have been decided, the contested proceeding is terminated; CLI-12-14, 75 NRC 700 n.51 (2012)
Exelon Generation Co., LLC (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 581 (2005)
if proximity-based standing cannot be not demonstrated, then standing must be established according to traditional principles of redressability, injury, and causation; LBP-12-3, 75 NRC 179 (2012)
Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003)
claim that application fails to adequately present the true extent of historical exploration drilling, borehole abandonment details, R&D testing, changes to groundwater water quality, and interconnections of geologic strata contains no alleged facts to support this opinion and thus does not raise a genuine dispute; LBP-12-3, 75 NRC 203 (2012)
mere notice pleading is insufficient in NRC proceedings; LBP-12-8, 75 NRC 548 (2012)
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; LBP-12-3, 75 NRC 191 (2012)
statement of supporting facts or expert opinion to establish how the project would impair the visual resources, rather than mere speculation, is required for an admissible contention; LBP-12-3, 75 NRC 207 (2012)
Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 204-05 (2003)
petitioners fail to link any of their past criticisms to specific provisions of the environmental report, and the board declines to pore through the attachments to their intervention submission to assemble the basis for such a contention; LBP-12-3, 75 NRC 207 (2012)

simply attaching material or documents as a basis for a contention, without setting forth an explanation of that informations significance, is inadequate to support the admission of the contention; LBP-12-3, 75 NRC 191 (2012)
the Commission should not be expected to sift unaided through documents filed before the board to piece together and discern a party's argument and the grounds for its claims; LBP-12-3, 75 NRC 206 (2012)
Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 205 (2003)
providing any material or document as the basis of a contention without setting forth an explanation of its significance is inadequate to support admission of the contention; LBP-12-12, 75 NRC 774 (2012)
FirstEnergy Nuclear Operating Co. (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 396 (2012)
contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by some alleged fact or facts demonstrating a genuine material dispute with the applicant; LBP-12-8, 75 NRC 548 (2012)
FirstEnergy Nuclear Operating Co. (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 415 (2012)
although petitioners are not required to run their own computer models at the contention admissibility stage, a contention challenging a SAMA analysis nonetheless must be tethered to the computer modeling and mathematical aspects of the analysis; CLI-12-15, 75 NRC 715 (2012)
FirstEnergy Nuclear Operating Co. (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 416 (2012)
NRC rules are 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 in a hearing; CLI-12-15, 75 NRC 728 (2012)
Florida Power & Light Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-06-21, 64 NRC 30, 33 (2006)
failure of counsel to review the scheduling order does not constitute good cause for failure to meet a filing deadline; LBP-12-12, 75 NRC 750 (2012)
Florida Power & Light Co. (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989)
although it might be fatal for standing purposes if an Indian tribe were seeking to have intervenors represent their interests in the proceeding, intervenors' lack of authority to represent them is not a bar to intervenors raising the tribe's contention; LBP-12-12, 75 NRC 753 n.40 (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 order referring the proceeding to the licensing board; LBP-12-3, 75 NRC 191 (2012)
Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 5-6 (2001)
contentions concerning release of radiological, chemical, and herbicidal materials and storage of spent fuel are Category 1 issues and thus inadmissible; LBP-12-8, 75 NRC 552 (2012)
Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 11 (2001)
site-specific environmental issues are Category 2 issues; LBP-12-8, 75 NRC 553 (2012)
Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 11-13 (2001)
Part 51 process for environmental review associated with license renewal, focusing upon the potential impacts of an additional 20 years of plant operation, is described; CLI-12-5, 75 NRC 341 n.241 (2012)
Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 14 (2001)
in 1989, NRC revised its rules to prevent the admission of poorly defined or supported contentions or those based on little more than speculation; CLI-12-8, 75 NRC 396 (2012)

LEGAL CITATIONS INDEX

CASES

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 19 (2001)
prior to NRC's 1989 rule revision, intervenors were able to trigger hearings after merely copying contentions from another proceeding involving another reactor, even though many of these intervenors often had negligible knowledge of the issues and, in fact, no direct case to present; CLI-12-8, 75 NRC 396 (2012)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plants, Units 3 and 4), LBP-01-6, 53 NRC 138, 146-50 (2001)
for reactor operating license renewal proceedings, a proximity presumption, respecting standing for an individual who resides within a 50-mile radius of a nuclear power plant, is recognized; LBP-12-10, 75 NRC 638 (2012)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 150 (2001), *aff'd on other grounds,* CLI-01-17, 54 NRC 3 (2001)
geographic proximity to a facility (i.e., living or working within 50 miles) is presumptively sufficient to meet these traditional standing requirements in certain types of proceedings, including operating license renewal proceedings; LBP-12-8, 75 NRC 547 (2012)

Florida Power & Light (Turkey Point Nuclear Generating Plant, Units 6 and 7), LBP-11-6, 73 NRC 149, 236 n.102 (2011)
it is not the province of NRC and thus the board to enforce another agency's regulations; LBP-12-12, 75 NRC 769 n.148 (2012)

Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc., 528 U.S. 167, 184 (2000)
a more subjective appraisal of declining property values might be permissible in the context of a licensing action associated with an applicant or facility shown to have engaged in a continuous and pervasive course of illegal conduct; LBP-12-3, 75 NRC 184 n.16 (2012)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995)
boards are to construe intervention petitions in favor of petitioner; LBP-12-3, 75 NRC 188, 189 (2012)
boards must afford latitude to pro se petitioners in considering their pleadings; LBP-12-3, 75 NRC 177 (2012)
licensing board, construing the petition in favor of petitioners, based its standing finding on potential harm from traffic-generated dust and light pollution; CLI-12-12, 75 NRC 606 (2012)
organizations may base standing on either immediate or threatened injury to its organizational interests, or to the interests of identified members; LBP-12-8, 75 NRC 547 (2012)
to derive standing from a member, an organization must demonstrate that the individual member has standing to participate and has authorized the organization to represent his or her interests; LBP-12-8, 75 NRC 547 (2012)
to establish representational standing, organizations must show that at least one of its members may be harmed by the licensing action and would have standing to sue in his or her own right, identify that member by name and address, show that the organization is authorized to request a hearing on behalf of that member, and show that the interests that the representative organization seeks to protect are germane to its own interests; LBP-12-10, 75 NRC 638 (2012)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 120 (1995)
past violations of NRC regulations would indicate a deficiency in an application only if they are directly germane to the licensing action, rather than being of simply historical interest; CLI-12-2, 75 NRC 83-84 (2012)

GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 206 (2000)
contentions calling for requirements in excess of those imposed by regulations will be rejected as a collateral attack on regulations; CLI-12-5, 75 NRC 315 n.88 (2012)

GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000)
licensing boards may not assume that applicants will violate NRC regulations; LBP-12-3, 75 NRC 196 (2012)

LEGAL CITATIONS INDEX

CASES

Gulf States Utilities Co. (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 51 (1994)
a minimal showing that material facts are in dispute is sufficient to render a proposed contention admissible; LBP-12-8, 75 NRC 548 (2012)

Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station), ALAB-582, 11 NRC 239, 242 (1980)
standing claims based on economic impacts are only cognizable in NRC proceedings with regard to NEPA-based concerns; LBP-12-3, 75 NRC 184 n.15 (2012)

Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-631, 13 NRC 87, 89 (1981)
litigants are not entitled to challenge a board ruling unless and until that ruling has worked a concrete injury to their personal interests; CLI-12-6, 75 NRC 363 n.49 (2012)

Hydro Resources, Inc. (292 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119, 120 (1998)
licensing boards should not admit contentions alleging that the applicant must obtain permits from other agencies; LBP-12-12, 75 NRC 767 (2012)

Hydro Resources, Inc. (2929 Coors Road, Suite 101, Albuquerque, NM, 87120), CLI-99-22, 50 NRC 3, 14 (1999)
to constitute a basis for supplementing an EIS, the new information must present a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; CLI-12-7, 75 NRC 388-89, 390-91 (2012)

Hydro Resources, Inc. (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-1, 63 NRC 1, 2 (2006)
where a board's decision rests on a weighing of extensive fact-specific evidence presented by technical experts, the Commission generally will defer to the board's factual findings, unless there appears to be a clearly erroneous factual finding or related oversight; CLI-12-1, 75 NRC 46 (2012)

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-00-12, 52 NRC 1, 5 (2000)
alleged deficiency of applicant's severe accident mitigation alternatives analysis does not present an exceptionally grave issue that must call into question the licensed activity; LBP-12-1, 75 NRC 15 (2012)
an "exceptionally grave issue" is one that raises a sufficiently grave threat to public safety; LBP-12-11, 75 NRC 739 n.47 (2012)

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 54 (2001)
for the no-action alternative, there need not be much discussion in the environmental documents because it is most simply viewed as maintaining the status quo; LBP-12-8, 75 NRC 569 (2012)

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 55 (2001)
neither NRC nor applicant need consider any alternative that does not bring about the ends of the proposed action; CLI-12-5, 75 NRC 339, 343 (2012)
when reviewing a discrete license application filed by a private applicant, a federal agency may appropriately accord substantial weight to the preferences of the applicant in siting and design of the project, taking into account the economic goals of the project's sponsor; CLI-12-5, 75 NRC 339 n.222 (2012)

Idaho Sporting Congress Inc. v. Alexander, 222 F.3d 562, 566 n.2 (9th Cir. 2000)
NEPA imposes a continuing obligation on federal agencies to supplement an existing environmental impact statement, if the proposed action has not been taken, in response to significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; CLI-12-7, 75 NRC 388 (2012)

International Uranium (USA) Corp. (Request for Materials License Amendment), CLI-00-1, 51 NRC 9, 19 (2000)
license applications that comply with existing guidance may be challenged, provided that contention admissibility requirements are met; CLI-12-5, 75 NRC 339 (2012)
NRC is not bound by guidance documents, which do not carry the force of regulations and do not impose legal requirements on licensees; CLI-12-5, 75 NRC 339 n.219 (2012)

International Uranium (USA) Corp. (White Mesa Uranium Mill), CLI-98-6, 47 NRC 116, 118 (1998)
the Commission will defer to board rulings on standing absent an error of law or abuse of discretion; CLI-12-12, 75 NRC 608 (2012)

LEGAL CITATIONS INDEX

CASES

International Uranium (USA) Corp. (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252 (2001)
organization asserting standing in its own right must establish a discrete institutional injury to the organization's interests, which must be based on something more than a general environmental or policy interest in the subject matter of the proceeding; LBP-12-3, 75 NRC 177, 178 (2012)
petitioner's claim of organizational standing is of the sort that repeatedly has been found insufficient; CLI-12-12, 75 NRC 606 n.6 (2012)
the Commission will defer to board rulings on standing absent an error of law or abuse of discretion; CLI-12-12, 75 NRC 608 (2012)
International Uranium (USA) Corp. (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 253 (2001)
health-impact potential of facility traffic-associated dust, if properly pleaded, could provide a basis for standing; LBP-12-3, 75 NRC 187 (2012)
nonspeculative showing that increased traffic accidents could be another impact of increased road usage might establish standing; LBP-12-3, 75 NRC 186 n.20 (2012)
Jaroma v. Massey, 873 F.2d 17, 20 (1st Cir. 1989)
where a nonmoving party declines to oppose a motion for summary disposition, the board shall accept as admitted the moving party's prima facie showing of material facts, but boards cannot grant summary disposition unless movant discharges its burden of demonstrating that it is entitled to a decision as a matter of law; LBP-12-4, 75 NRC 219 (2012)
Kansas Gas and Electric Co. (Wolf Creek Generating Station, Unit 1), ALAB-462, 7 NRC 320, 328 (1978)
given the legal responsibility imposed upon a public utility to provide at all times adequate, reliable service, and the severe consequences that may attend upon a failure to discharge that responsibility, the most that can be required is that need-for-power forecasts be reasonable in the light of what is ascertainable at the time made; LBP-12-5, 75 NRC 237 n.56 (2012)
Kerr-McGee Chemical Corp. (West Chicago Rare Earths Facility), ALAB-928, 31 NRC 263, 269 (1990)
without a showing of irreparable injury, petitioners seeking a stay of effectiveness must demonstrate that reversal of the licensing board is a virtual certainty; CLI-12-11, 75 NRC 529 n.31 (2012)
Kleppe v. Sierra Club, 427 U.S. 390, 410 & n.20 (1976)
to require detailed analysis in the final environmental impact statement, a transmission corridor must be a proposed action rather than one that is merely contemplated; LBP-12-12, 75 NRC 779 n.211 (2012)
Kleppe v. Sierra Club, 427 U.S. 390, 410 n.21 (1976)
it is not necessary that every alternative device and thought conceivable by the mind of man be considered, but a hard look must be taken at the environmental consequences; LBP-12-1, 75 NRC 35 (2012)
NEPA requires that a hard look must be taken at environmental consequences; LBP-12-10, 75 NRC 679 (2012)
LaFlamme v. Federal Energy Regulatory Commission, 852 F.2d 389, 399-403 (9th Cir. 1988)
NRC must adequately consider impacts to visual and aesthetic resources in its NEPA review; LBP-12-3, 75 NRC 206-07 (2012)
Limerick Ecology Action, Inc. v. NRC, 869 F.2d 719, 737 (3d Cir. 1989)
NEPA requires that NRC take a hard look at alternatives, including severe accident mitigation alternatives, and to provide a rational basis for rejecting alternatives that are cost-effective; LBP-12-8, 75 NRC 549 (2012)
Limerick Ecology Action, Inc. v. NRC, 869 F.2d 719, 737, 738-41 (3rd Cir. 1989)
impacts that are remote and speculative may be excluded from consideration; LBP-12-1, 75 NRC 35 (2012)
Limerick Ecology Action, Inc. v. NRC, 869 F.2d 719, 739 (3d Cir. 1989)
consideration of remote and speculative impacts in an environmental impact statement is not required; LBP-12-5, 75 NRC 243 n.104 (2012)
Limerick Ecology Action, Inc. v. NRC, 869 F.2d 719, 741 (3d Cir. 1989)
careful consideration of severe accident mitigation design alternatives is required under NEPA, and NRC's failure to consider them is a violation of NEPA; LBP-12-8, 75 NRC 565 (2012)
Long Island Lighting Co. (Jamesport Nuclear Power Station, Units 1 & 2), ALAB-292, 2 NRC 631 (1975)
even if petitioner fails to establish good cause for an untimely petition, the other late-filing factors must be examined; LBP-12-12, 75 NRC 750 n.21 (2012)

LEGAL CITATIONS INDEX

CASES

Long Island Lighting Co. (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973)
agencies need only address reasonably foreseeable impacts, not those that are remote and speculative or inconsequentially small; LBP-12-5, 75 NRC 236-37 (2012)
NEPA's "hard look" is tempered by a rule of reason; LBP-12-5, 75 NRC 236-37 n.52 (2012)

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 71 (1991)
discussion of the no-action alternation need only include feasible, nonspeculative alternatives; LBP-12-8, 75 NRC 569 (2012)

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-91-8, 33 NRC 461, 468 (1991)
requests to stay effectiveness of future licensing action pending judicial appeal are more appropriately styled motions to reconsider and motions to hold in abeyance; CLI-12-11, 75 NRC 528 n.23 (2012)

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-91-8, 33 NRC 461, 568 n.2 (1991)
because 10 C.F.R. 2.342 does not apply to petitioners' motion for a stay, the Commission does not address applicant's request to strike the motion because it exceeds that rule's 10-page limit; CLI-12-11, 75 NRC 528 n.26 (2012)

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-92-4, 35 NRC 69, 80-82 (1992)
the Commission traditionally has entertained motions to stay agency action pending judicial review; CLI-12-11, 75 NRC 528 (2012)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 84 (1998)
under the migration tenet, boards may construe an admitted contention contesting the environmental report as a challenge to the subsequently issued draft or final environmental impact statement without the need for intervenors to file a new or amended contention; LBP-12-12, 75 NRC 767-68 n.140 (2012)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998)
NEPA does not mandate substantive results but, rather, imposes procedural restraints on agencies, requiring them to take a hard look at the environmental impacts of a proposed action and reasonable alternatives to that action; LBP-12-5, 75 NRC 236 (2012)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 88 (1998)
although NRC does not license construction or operation of a transmission corridor, it has the authority to deny the license for a proposed nuclear plant if, for example, the total environmental costs of the new reactor and connected actions exceed the benefits; LBP-12-12, 75 NRC 779-80 (2012)
taking a hard look at possible environmental effects and risk fosters both informed decisionmaking and informed public participation and thus ensures that the agency does not act upon incomplete information, only to regret its decision after it is too late to correct it; LBP-12-5, 75 NRC 236 (2012)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 88, 94 (1998)
need-for-power forecasts need not precisely identify future market conditions and energy demand, or develop detailed analyses of system generating assets, costs of production, capital replacement ratios, and the like in order to establish with certainty that the construction and operation of a nuclear power plant is the most economical alternative for generation of power; LBP-12-5, 75 NRC 237 (2012)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 89 (1998)
adjudicatory records and Board decisions and any Commission appellate decisions become, in effect, part of final environmental impact statements; LBP-12-5, 75 NRC 239 (2012)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 97 (1998)
the extent of the no-action discussion is governed by a rule of reason, and discussion in the environmental documents need not be exhaustive or inordinately detailed; LBP-12-8, 75 NRC 569 (2012)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 338-39 (1996)
although environmental contentions ultimately challenge NRC's compliance with the National Environmental Policy Act, applicant may advocate for a particular challenged position set forth in the environmental impact statement; LBP-12-5, 75 NRC 236 (2012)

LEGAL CITATIONS INDEX

CASES

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-25, 60 NRC 223, 224-25 (2004)
reply briefs may not be used to introduce new arguments to reinvigorate thinly supported contentions; CLI-12-5, 75 NRC 334 n.197 (2012)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004)
NRC's procedural rules do not allow using reply briefs to provide, for the first time, the necessary threshold support for contentions because that would effectively bypass and eviscerate its rules governing timely filing, contention amendment, and submission of late-filed contentions; LBP-12-7, 75 NRC 517 n.16 (2012)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005)
NEPA does not call for certainty or precision, but an estimate of anticipated (not unduly speculative) impacts; LBP-12-9, 75 NRC 623 (2012)
NEPA does not require consideration of speculative impacts; LBP-12-5, 75 NRC 243 n.104 (2012)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-05-21, 62 NRC 538, 539 (2005)
routine contention admissibility determinations generally are not appropriate for interlocutory review; CLI-12-12, 75 NRC 608 (2012)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-05-28, 62 NRC 721, 727-28 (2005)
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-12-10, 75 NRC 483 (2012)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-05-28, 62 NRC 721, 729 (2005)
NEPA does not require agencies to analyze impacts of alternatives that are speculative, remote, impractical, or unviable; CLI-12-5, 75 NRC 342 n.243 (2012)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-05-28, 62 NRC 721, 731 (2005)
adjudicatory records, board decisions, and any Commission decisions become effectively part of the environmental review document; CLI-12-1, 75 NRC 61 (2012)

Louisiana Energy Services, L.P. (National Enrichment Facility), LBP-05-13, 61 NRC 385, 410-11, 424-26, *aff'd,* CLI-05-28, 62 NRC 721, 723 (2005)
resolution of a mooted contention requires no more than a finding by the presiding officer that the matter has become moot; LBP-12-5, 75 NRC 238-39 n.64 (2012)

Louisiana Energy Services, L.P. (National Enrichment Facility), LBP-06-8, 63 NRC 241, 258-59 (2006)
NEPA's "hard look" is tempered by a rule of reason; LBP-12-5, 75 NRC 236 (2012)

Lujan v. Defenders of Wildlife, 504 U.S. 555, 561 (1992)
to meet its burden to establish standing, petitioner must provide plausible factual allegations that satisfy each element of standing; LBP-12-3, 75 NRC 177 (2012)

Luminant Energy Co. LLC (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 391-92 (2012)
NEPA requires that NRC Staff conduct its environmental review with the best information available when the review is undertaken; LBP-12-8, 75 NRC 554 (2012)

Luminant Energy Co. LLC (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 392 (2012)
contention in a license renewal proceeding based on applicant's failure to consider alleged new and significant information arising from NRC's Fukushima Task Force Report was rejected; LBP-12-8, 75 NRC 558 (2012)

Luminant Generation Co. LLC (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-11-9, 74 NRC 233, 236 (2011)
once all contentions have been decided, the contested proceeding is terminated; CLI-12-14, 75 NRC 699 (2012)

Luminant Generation Co. LLC (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-11-9, 74 NRC 233, 237 (2011)
standard for review of contention admissibility determinations is the same, whether an appeal lies under section 2.311 or 2.341, and the Commission will disturb a licensing board's contention admissibility ruling only if there has been an error of law or abuse of discretion; CLI-12-7, 75 NRC 386 (2012)

LEGAL CITATIONS INDEX

CASES

Luminant Generation Co. LLC (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 388-91 (2012)
board determined that petitioners had failed to articulate factual basis for Fukushima-based NEPA dispute with specific application; CLI-12-15, 75 NRC 727 n.122 (2012)
Luminant Generation Co. LLC (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 391 & n.47 (2012)
petitioners' proposed Fukushima contention was too vague for hearing under contention-admissibility rules and, as pleaded, lacked the kind of significance and potential for a different result that under the reopening rule would justify restarting already-closed hearings; CLI-12-11, 75 NRC 533 (2012)
Luminant Generation Co. LLC (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 391-92 (2012)
an application-specific NEPA review represents a snapshot in time, and while NEPA requires that NRC conduct its environmental review with the best information available at the time, it does not require that NRC wait until inchoate information matures into something that later might affect its review; CLI-12-11, 75 NRC 533 (2012)
Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 371 (1989)
it would be incongruous with NEPA's action-forcing purpose to allow an agency to put on blinders to adverse environmental effects, just because the EIS has been completed; LBP-12-1, 75 NRC 36 n.48 (2012); LBP-12-10, 75 NRC 680 n.69 (2012)
taking a hard look at possible environmental effects and risk fosters both informed decisionmaking and informed public participation and thus ensures that the agency does not act upon incomplete information, only to regret its decision after it is too late to correct it; LBP-12-5, 75 NRC 236 (2012)
Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 371-72 (1989)
NEPA cases have generally required agencies to file environmental impact statements when the remaining governmental action would be environmentally significant; LBP-12-1, 75 NRC 37 n.48 (2012)
Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 372 n.15 (1989)
continued construction was barred pending the filing of an adequate environmental impact statement, notwithstanding the fact that the project was initially approved and construction commenced prior to the effective date of NEPA; LBP-12-1, 75 NRC 37 n.48 (2012)
Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 373 (1989)
NRC need not supplement an environmental impact statement every time new information comes to light after the EIS is finalized; CLI-12-6, 75 NRC 376 n.146 (2012)
to constitute a basis for supplementing an EIS, the new information must present a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; CLI-12-7, 75 NRC 388-89, 390-91 (2012)
Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 373-74 (1989)
NEPA does not require that NRC wait until inchoate information matures into something that might affect its review; CLI-12-6, 75 NRC 376 (2012); CLI-12-15, 75 NRC 727 (2012)
NRC rules enable it to supplement an EIS if, before a proposed action is taken, new and significant information comes to light that bears on the proposed action or its impacts; CLI-12-7, 75 NRC 392 n.49 (2012); CLI-12-6, 75 NRC 376 n.147 (2012)
the Fukushima accident does not significantly alter the overall environmental picture for severe reactor accidents at the site; CLI-12-15, 75 NRC 727 (2012)
Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 373-77 (1989)
agencies have discretion on the manner in which they determine whether information is new or significant to warrant supplementation of an environmental impact statement, including the application of its procedural rules; CLI-12-3, 75 NRC 140 n.42 (2012)
federal courts leave to an agency's discretion the manner in which the agency determines whether information is new or significant to warrant supplementation of an environmental impact statement, including the application of its procedural rules; CLI-12-6, 75 NRC 364 n.57 (2012)

LEGAL CITATIONS INDEX

CASES

Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 374 (1989)
boards must consider environmental impacts that may affect the quality of the human environment in a significant manner or to a significant extent not already considered; LBP-12-1, 75 NRC 7 n.22 (2012)
NEPA does not require that the agency wait until inchoate information matures into something that later might affect its review; CLI-12-7, 75 NRC 392 (2012)
NEPA requires NRC to reevaluate any prior analysis if it is presented with any new and significant information that would cast doubt on a previous environmental analysis; LBP-12-8, 75 NRC 549-50 (2012)
Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 376 (1989)
agencies need not supplement an EIS every time new information comes to light after the EIS is finalized; CLI-12-7, 75 NRC 392 n.48 (2012)
NEPA requires that NRC conduct its review with the best information available at the time of the review; CLI-12-15, 75 NRC 727 (2012)
Massachusetts v. NRC, 924 F.2d 311, 334 (D.C. Cir. 1990)
unfettered ability to file a late contention may significantly undermine the efficiency of a proceeding even if the contention is based on newly discovered information; CLI-12-14, 75 NRC 700 (2012)
Massachusetts v. United States, 522 F.3d 115 (1st Cir. 2008)
severe accident mitigation alternatives analysis is a Category 2 issue and SAMAs must be considered for all plants that have not considered such alternatives; LBP-12-8, 75 NRC 551 (2012)
Massachusetts v. United States, 522 F.3d 115, 129-30 (1st Cir. 2008)
it makes more sense for NRC to study whether, as a technical matter, the agency should modify its requirements relating to spent fuel storage for all plants than to litigate the issue in particular adjudications; CLI-12-6, 75 NRC 365 (2012)
Massachusetts v. United States, 522 F.3d 115, 130 (1st Cir. 2008)
a brief stay of the close of a licensing proceeding was ordered to allow a state the opportunity to request status as an interested governmental entity; CLI-12-6, 75 NRC 357 (2012)
federal courts leave to an agency's discretion the manner in which the agency determines whether information is new or significant to warrant supplementation of an environmental impact statement, including the application of its procedural rules; CLI-12-6, 75 NRC 364 (2012)
Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 766 (1983)
psychological fears or stigma effects are not cognizable NEPA claims; CLI-12-5, 75 NRC 336 n.207 (2012)
Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 766, 775-79 (1983)
NEPA is not intended to encompass every possible impact, and does not encompass potential losses due to individuals' perception of a risk; CLI-12-15, 75 NRC 725 (2012)
Mississippi Power and Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 426 (1973)
boards do not adjudicate disputed facts at the contention admissibility stage; LBP-12-8, 75 NRC 548 (2012)
National Committee for the New River, Inc. v. Federal Energy Regulatory Commission, 373 F.3d 1323, 1330 (D.C. Cir. 2004)
the Fukushima accident does not significantly alter the overall environmental picture for severe reactor accidents at the site; CLI-12-15, 75 NRC 727 (2012)
National Football League v. McBee & Bruno's, Inc., 792 F.2d 726, 733 (8th Cir. 1986)
injury that has never been the focus of the lawsuit is insufficient to find irreparable harm; CLI-12-11, 75 NRC 531 n.39 (2012)
Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 834, 837 (D.C. Cir. 1972)
NEPA requires consideration of reasonable alternatives; CLI-12-8, 75 NRC 397 (2012)
Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 834, 837, 838 (D.C. Cir. 1972)
NEPA requires consideration of reasonable alternatives, not all conceivable ones; CLI-12-5, 75 NRC 338 (2012)
NEPA requires that agencies take a hard look at the environmental consequences of an action before proceeding; LBP-12-10, 75 NRC 643-44 (2012)

LEGAL CITATIONS INDEX

CASES

Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 837-38 (D.C. Cir. 1972)
NEPA documents need consider only those environmental impacts that are reasonably foreseeable, not those that are remote and speculative possibilities; LBP-12-9, 75 NRC 623 (2012)
remote and speculative alternatives need not be addressed in an applicant's environmental report; CLI-12-5, 75 NRC 340 (2012)
New Jersey Department of Environmental Protection v. NRC, 561 F.3d 132, 138-39 (3d Cir. 2009)
NEPA is not intended to encompass every possible impact, and does not encompass potential losses due to individuals' perception of a risk; CLI-12-15, 75 NRC 725 (2012)
New Jersey Environmental Federation v. NRC, 645 F.3d 220, 224 (3d Cir. 2011)
license renewal safety review and any associated license renewal adjudicatory proceeding focus on the detrimental effects of aging posed by long-term reactor operation; CLI-12-5, 75 NRC 303 (2012)
New Jersey Environmental Federation v. NRC, 645 F.3d 220, 232-33 (3d Cir. 2011)
courts of appeals have repeatedly approved NRC practice of closing the hearing record after resolution of the last live contention, and of holding new contentions to the higher reopening standard; CLI-12-14, 75 NRC 700, 701 (2012)
to accept the argument that a motion-to-reopen standard may never be applied in situations where a petitioner seeks to add previously unlitigated material would effectively render the regulation meaningless; CLI-12-3, 75 NRC 140 n.44 (2012)
New Jersey Environmental Federation v. NRC, 645 F.3d 220, 233 (3d Cir. 2011)
an exception for situations where parties seek to add previously unlitigated material would effectively render the reopening regulation meaningless; CLI-12-10, 75 NRC 496 (2012)
New Jersey Environmental Federation v. NRC, 645 F.3d 220, 234 (3d Cir. 2011)
evidence supporting a motion to reopen must be sufficiently compelling to suggest a likelihood of materially affecting the ultimate results in the proceeding; CLI-12-10, 75 NRC 499 (2012)
New York v. NRC, 589 F.3d 551, 553 (2d Cir. 2009)
issuance of a renewed operating license for a nuclear power reactor is a major federal action under NEPA; LBP-12-8, 75 NRC 549 (2012)
New York v. NRC, 681 F.3d 471, 482 (D.C. Cir. 2012)
primary responsibility for compliance with NEPA lies with NRC; LBP-12-12, 75 NRC 780 (2012)
Newton County Wildlife Association v. Rogers, 141 F.3d 803, 810-11 (8th Cir. 1998)
if an agency determines that a particular action will have no effect on an endangered or threatened species, the consultation requirements are not triggered; LBP-12-10, 75 NRC 671 (2012)
NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 307 (2012)
contentions shall not be admitted if at the outset they are not supported by some alleged fact or facts demonstrating a genuine material dispute; LBP-12-8, 75 NRC 561 (2012)
in 1989, NRC revised its rules to prevent the admission of poorly defined or supported contentions; CLI-12-8, 75 NRC 396 (2012)
NRC's hearing process is reserved for genuine, material controversies between knowledgeable litigants; CLI-12-8, 75 NRC 416 (2012)
NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 323 (2012)
the proper question is not whether there are plausible alternative choices for use in the severe accident mitigation alternatives analysis, but whether the analysis that was done is reasonable under NEPA; CLI-12-8, 75 NRC 406 (2012)
NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 323-24 (2012)
contentions proposing alternative inputs or methodologies must present some factual or expert basis for why the proposed changes in the severe accident mitigation alternatives analysis are warranted; CLI-12-8, 75 NRC 407 (2012)
NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 324-27 (2012)
because the board is the appropriate arbiter of fact-specific questions of contention admissibility, the Commission defers to the board; CLI-12-8, 75 NRC 409 (2012)
NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 340-42 (2012)
scope of the energy alternatives analysis is discussed; CLI-12-8, 75 NRC 397 (2012)
NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 342 (2012)
a reasonable energy alternative is one that is currently commercially viable, or will become so in the near term; CLI-12-8, 75 NRC 397 (2012)

to challenge an energy alternatives analysis, 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 a commercially viable alternative technology (or combination of technologies) is available now, or will become so in the near future, to supply baseload power; CLI-12-8, 75 NRC 397 (2012)

NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 342 n.245 (2012)
possibility of an energy alternatives contention with respect to a technology that is likely to be available during the period of extended operation is not excluded; CLI-12-8, 75 NRC 398 n.27 (2012)

Niagara Mohawk Power Corp. (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347, 365-68 (1975)
because a need-for-power assessment necessarily entails forecasting power demands in light of substantial uncertainty and the duty of providing adequate and reliable service to the public, need-for-power assessments are properly conservative; LBP-12-5, 75 NRC 238 (2012)

Niagara Mohawk Power Corp. (Nine Mile Point Nuclear Station, Unit 2), ALAB-264, 1 NRC 347, 366-67 (1975)
need-for-power forecasts are required only to be reasonable; LBP-12-5, 75 NRC 237 (2012)

Northeast Nuclear Energy Co. (Millstone Nuclear Power Station, Unit 3), CLI-00-25, 52 NRC 355, 357 (2000)
boards are in a better position than the Commission to consider any expert affidavit or affidavits that petitioner submits to support its motion to reopen; CLI-12-14, 75 NRC 702 n.64 (2012)

Northeast Nuclear Energy Co. (Millstone Nuclear Power Station, Unit 3), CLI-00-25, 52 NRC 355, 357 n.3 (2000)
after a petition to review a final order has been filed with the Commission, the board no longer has jurisdiction to consider a motion to reopen and the motion is properly filed with the Commission; CLI-12-14, 75 NRC 701 n.60 (2012)

Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-10-27, 72 NRC 481, 496 (2010)
intervenor has an iron-clad obligation to examine the publicly available documentary material with sufficient care to enable it to uncover any information that could serve as a foundation for a specific contention; LBP-12-13, 75 NRC 789-90 n.17 (2012)
intervenor may not delay filing a contention until a document becomes available that collects, summarizes, and places into context previously available facts supporting that contention; LBP-12-1, 75 NRC 13 n.50 (2012)

Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), LBP-08-26, 68 NRC 905, 931 (2008)
petitioner must challenge the environmental report, which acts as a surrogate for the environmental impact statement during the early stages of a relicensing proceeding; LBP-12-8, 75 NRC 553 (2012)

Northwest Resource Information Center v. National Marine Fisheries Service, 56 F.3d 1060, 1067-69 (9th Cir. 1995)
"connected actions" are those that lack independent utility; LBP-12-12, 75 NRC 779 (2012)
a new transmission corridor is a connected action and must be fully evaluated in the final environmental impact statement; LBP-12-12, 75 NRC 779 (2012)

Nuclear Fuel Services, Inc. (Erwin, Tennessee), CLI-04-13, 59 NRC 244, 248 (2004)
the Commission will defer to board rulings on standing absent an error of law or abuse of discretion; CLI-12-12, 75 NRC 608 (2012)

Nuclear Innovation North America LLC (South Texas Project, Units 3 and 4), CLI-11-6, 74 NRC 203, 208-09 (2011)
adjudicatory records and board decisions and any Commission appellate decisions become, in effect, part of final environmental impact statements; LBP-12-5, 75 NRC 239 (2012)

Nuclear Management Co., LLC (Palisades Nuclear Plant), CLI-06-17, 63 NRC 727, 728 (2006)
the board is the agency's expert body on matters of contention admissibility, and the Commission generally defers to its judgment on such matters; CLI-12-14, 75 NRC 702 (2012)

LEGAL CITATIONS INDEX

CASES

Nuclear Management Co. (Palisades Nuclear Plant), CLI-06-17, 63 NRC 727, 732 (2006)
petitioner may not remediate deficient contentions by introducing, in the reply, documents that were available to it during the time frame for initially filing contentions; LBP-12-7, 75 NRC 517 n.16 (2012)

Oystershell Alliance v. NRC, 800 F.2d 1201, 1207-08 (D.C. Cir. 1986)
courts of appeals have repeatedly approved NRC practice of closing the hearing record after resolution of the last live contention, and of holding new contentions to the higher reopening standard; CLI-12-14, 75 NRC 700 (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-12-3, 75 NRC 191 (2012)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 437 & n.49 (2011)
boards should not supply new information not otherwise present in the adjudicatory record in order to cure deficiencies in a petition; CLI-12-12, 75 NRC 611 n.39 (2012)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 449 (2011)
rule waiver petitioner must satisfy a four-factor test; CLI-12-6, 75 NRC 364 (2012)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 453 (2011)
any evaluation of the Fukushima events will include consideration of lessons learned that may apply to spent fuel pools; LBP-12-1, 75 NRC 22 n.82 (2012)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 457 (2011)
boards should not have to guess what aspects of the severe accident mitigation alternatives analysis the petitioner is challenging; LBP-12-1, 75 NRC 20 n.77 (2012)

Pacific Gas and Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-8, 67 NRC 193, 201 (2008)
where intervenors had submitted an earlier version of a contention several years ago in their petition to intervene, it is difficult to see how they can now make the required showing of good cause for their failure to file in a timely manner; LBP-12-12, 75 NRC 756 (2012)

Pacific Gas and Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, 68 NRC 509, 521 (2008)
on safety issues, license applicants have the burden of establishing entitlement to the applied-for license by a preponderance of the evidence; LBP-12-5, 75 NRC 235 n.42 (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 and the adjudicatory record become the pertinent environmental record of decision; LBP-12-5, 75 NRC 239 (2012)

Pacific Gas and Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 432 (2002), *aff'd,* CLI-03-1, 57 NRC 1 (2003)
generic, unsubstantiated claims regarding health, safety, and property devaluation impacts are insufficient to establish standing; LBP-12-3, 75 NRC 184 (2012)

Pacific Gas and Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-08-7, 67 NRC 361, 372 (2008)
where a nonmoving party declines to oppose a motion for summary disposition, the board shall accept as admitted the moving party's prima facie showing of material facts, but boards cannot grant summary disposition unless movant discharges its burden of demonstrating that it is entitled to a decision as a matter of law; LBP-12-4, 75 NRC 219 (2012)

Pacific Rivers Council v. Thomas, 30 F.3d 1050, 1054 n.8 (9th Cir. 1994)
if an agency determines that a particular action will have no effect on an endangered or threatened species, the consultation requirements are not triggered, and the finding of no effect obviates the

need for formal consultation under the Endangered Species Act; LBP-12-10, 75 NRC 657 n.153, 671-72 (2012)

Pa'ina Hawaii, LLC, CLI-06-13, 63 NRC 508, 509 (2006)
applicant may file an interlocutory appeal of board orders admitting contentions, but only if the appeal challenges the admissibility of all admitted contentions; CLI-12-12, 75 NRC 607 (2012)

Pa'ina Hawaii, LLC, CLI-10-18, 72 NRC 56, 74 (2010)
general statements by an agency about possible effects and some risk do not constitute the hard look required by NEPA absent a justification of why more definitive information could not be provided; LBP-12-5, 75 NRC 236 (2012)

Pa'ina Hawaii, LLC, CLI-10-18, 72 NRC 56, 82 (2010)
primary responsibility for compliance with NEPA lies with NRC; LBP-12-12, 75 NRC 780 (2012)

Perfect 10, Inc. v. Google, Inc., 653 F.3d 976, 982 (9th Cir. 2011)
where claimant has not shown a sufficient causal connection between the alleged irreparable harm and the underlying claim, relief will be denied; CLI-12-11, 75 NRC 531 n.39 (2012)

Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 705-07 (1985)
adjudicatory records and board decisions and any Commission appellate decisions become, in effect, part of final environmental impact statement; LBP-12-5, 75 NRC 239 (2012)

Piedmont Heights Social Club, Inc. v. Moreland, 637 F.2d 430, 436 (5th Cir. 1981)
discussion of the no-action alternation need only include feasible, nonspeculative alternatives; LBP-12-8, 75 NRC 569 (2012)

Powertech (USA), Inc. (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC 361, 378-80 (2010)
the in situ recovery process, which is also referred to as the in situ leach process, is described; LBP-12-3, 75 NRC 176 n.3 (2012)

Powertech (USA), Inc. (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC 361, 384-85 (2010)
as distance increases from the in situ recovery facility, petitioner with an upgradient water source must expect to provide the board with some analysis as to how any contamination will affect any wells alleged to be impacted by the facility; LBP-12-3, 75 NRC 182 n.13 (2012)

Powertech (USA), Inc. (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC 361, 386 (2010)
for petitioners claiming to be using water from the same aquifer as for the uranium ore source, regardless of distance from the facility in question, licensing boards have found that a plausible pathway connecting the proposed mining operation to their water source has been shown so as to establish petitioners' standing; LBP-12-3, 75 NRC 181 n.11 (2012)

Powertech (USA), Inc. (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC 361, 386-88 (2010)
where an ore zone and petitioner's water source existed in separate aquifers, the circumstances involved did not support a determination that the petitioners had established their right to intervene; LBP-12-3, 75 NRC 181-82 n.11 (2012)

Powertech (USA), Inc. (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC 361, 388 (2010)
when petitioners considerably upgradient of the mining area fail to explain how contaminated material from the in situ recovery site might plausibly enter their drinking water, they fail to demonstrate they fulfill the causation element necessary to establish their standing; LBP-12-3, 75 NRC 182 (2012)

Powertech (USA), Inc. (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC 361, 424 (2010)
contention asserting that NEPA requires a groundwater baseline characterization for an in situ recovery site is admissible; LBP-12-3, 75 NRC 193 (2012)

LEGAL CITATIONS INDEX

CASES

Powertech (USA), Inc. (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC 361, 427-28 (2010)
environmental contention regarding cumulative impact on groundwater quantity of the in situ recovery project and the planned expansion satisfies admissibility requirements; LBP-12-3, 75 NRC 200 (2012)
PPL Bell Bend, LLC (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 139 (2010)
if petitioner's factual claims in support of its standing are contested, untenable, conjectural, or conclusory, a board need not uncritically accept such assertions, but may weigh those informational claims and exercise its judgment about whether standing has been satisfied; LBP-12-3, 75 NRC 177 (2012)
petitioner bears the burden to provide facts sufficient to establish standing; LBP-12-3, 75 NRC 177 (2012)
PPL Bell Bend, LLC (Bell Bend Nuclear Power Plant), LBP-09-18, 70 NRC 385, 396-97 (2009), *aff'd on other grounds,* CLI-10-7, 71 NRC 133, 141 (2010)
in assessing whether petitioner has demonstrated its standing, licensing boards are to construe petitions in favor of petitioners; LBP-12-3, 75 NRC 177 (2012)
PPL Bell Bend, LLC (Bell Bend Nuclear Power Plant), LBP-11-27, 74 NRC 591 (2011)
the board denied Fukushima-related motions to reopen as premature; CLI-12-2, 75 NRC 70 (2012)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 322-25 (1999)
potential harm necessary to demonstrate standing in NRC proceedings need not relate to physical or bodily injury; CLI-12-12, 75 NRC 613 n.49 (2012)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 324 (1999)
the Commission will defer to board rulings on standing absent an error of law or abuse of discretion; CLI-12-12, 75 NRC 608 (2012)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-00-2, 51 NRC 77, 79-80 (2000)
routine contention admissibility decisions do not affect the basic structure of a proceeding in a pervasive or unusual manner; CLI-12-13, 75 NRC 688 (2012)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-00-13, 52 NRC 23, 29-31 (2000)
licensing board imposes a license condition directing implementation of a surveillance program for explosively actuated valves prior to fuel load; CLI-12-2, 75 NRC 93 (2012)
the Commission may formulate and impose a license condition in an adjudicatory order; CLI-12-9, 75 NRC 461 (2012)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-00-13, 52 NRC 23, 34 (2000)
NRC Staff verification of Fukushima-related license conditions should be a straightforward matter of applying a defined set of requirements; CLI-12-2, 75 NRC 129 (2012)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-01-1, 53 NRC 1 (2001)
challenges to board rulings on late-filed contentions normally fall under NRC rules for interlocutory review; CLI-12-7, 75 NRC 385-86 n.17 (2012)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-01-1, 53 NRC 1, 3 (2001)
when a petition for review is filed with the Commission at the same time as a motion for reconsideration is filed with the board, the Commission will delay considering the petition for review until after the board has ruled; CLI-12-5, 75 NRC 306 n.23 (2012)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264 (2001), *pet. for review held in abeyance, Ohngo Gaudadeh Devia v. NRC,* 492 F.3d 421 (D.C. Cir. 2007)
NRC guidance documents to assist in compliance with applicable regulations are entitled to special weight; CLI-12-5, 75 NRC 314 n.78 (2012)
Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-01-26, 54 NRC 376, 380 (2001)
three criteria are used to determine whether to suspend an adjudication; CLI-12-6, 75 NRC 373 (2012)

LEGAL CITATIONS INDEX

CASES

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348 (2002)

NEPA exists in part to ensure that important environmental effects will not be overlooked; LBP-12-10, 75 NRC 679-80 (2012)

NEPA has a dual purpose of ensuring that federal officials fully take into account the environmental consequences of a federal action before reaching major decisions, and informing the public, Congress, and other agencies of those consequences; LBP-12-1, 75 NRC 34 (2012)

NRC must fully take into account the environmental consequences of renewing an operating license; LBP-12-1, 75 NRC 38 (2012)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348-49 (2002)

environmental reports must discuss reasonably foreseeable environmental impacts of the proposed action in proportion to their significance, as well as adverse environmental effects that cannot be avoided if the proposed plan is implemented; LBP-12-9, 75 NRC 630 (2012)

NEPA documents need consider only those environmental impacts that are reasonably foreseeable, not those that are remote and speculative possibilities; LBP-12-7, 75 NRC 516, 517 (2012); LBP-12-9, 75 NRC 623 (2012)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 352 (2002), *rev'd in part on other grounds, San Luis Obispo Mothers for Peace v. NRC,* 449 F.3d 1016 (9th Cir. 2006)

to require worst-case analyses can easily lead to limitless NEPA analyses because it is always possible to introduce yet another additional variable to a hypothetical scenario to conjure up a worse worst case; CLI-12-1, 75 NRC 57 (2012)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-4, 59 NRC 31, 39 (2004), *pet. for review held in abeyance, Ohngo Gaudadeh Devia v. NRC,* 492 F.3d 421 (D.C. Cir. 2007)

contentions calling for requirements in excess of those imposed by regulations will be rejected as a collateral attack on regulations; CLI-12-5, 75 NRC 315 n.88 (2012)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-4, 59 NRC 31, 45 (2004)

intervenors are expected to file contentions on the basis of applicant's environmental report and not delay their contentions until after NRC Staff issues its environmental analysis; CLI-12-13, 75 NRC 687 n.31 (2012)

regardless of whether there is an affirmative duty to supplement an environmental report, applicants still face a continuing possibility of contentions in adjudicatory proceedings based upon omissions or deficiencies in their environmental report because NRC rules require the filing of contentions as early as possible; CLI-12-13, 75 NRC 687 n.31 (2012)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004)

although mere notice pleading is insufficient in NRC proceedings, petitioner need not prove its contentions at the admissibility stage; LBP-12-8, 75 NRC 548 (2012)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 145 (2004)

quibbling over details of an economic analysis would effectively stand NEPA on its head by asking that the license be rejected not due to environmental costs, but because the economic benefits are not as great as estimated; LBP-12-5, 75 NRC 238 (2012)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-06-3, 63 NRC 19, 28 (2006)

for new information to be sufficiently significant to merit the preparation of a supplemental final environmental impact statement, the information must paint a seriously different picture of the environmental landscape; CLI-12-7, 75 NRC 388-89 (2012); CLI-12-11, 75 NRC 533 n.53 (2012); LBP-12-1, 75 NRC 14 (2012)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-06-3, 63 NRC 19, 29 (2006)

claimed additional environmental impacts were not so significant or central to the FEIS's discussion of environmental impacts that a supplement (and consequent reopening of the adjudicatory record) was reasonable or necessary; LBP-12-1, 75 NRC 14-15 n.57 (2012)

new contentions must paint a seriously different picture of the environmental landscape that would require supplementation of an environmental impact statement; LBP-12-10, 75 NRC 656 (2012)

LEGAL CITATIONS INDEX

CASES

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181, *reconsideration granted in part and denied in part on other grounds,* LBP-98-10, 47 NRC 288, *aff'd on other grounds,* CLI-98-13, 48 NRC 26 (1998)

expert opinion that merely states a conclusion, e.g., the application is "deficient," "inadequate," or "wrong," without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the board of the ability to make the necessary, reflective assessment of the opinion; CLI-12-5, 75 NRC 320 n.117 (2012)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-99-23, 49 NRC 485, 493 (1999)

when omissions are cured by the subsequent issuance of licensing-related documents, intervenor must timely file a new or amended contention if it intends to challenge the sufficiency of the new information; LBP-12-5, 75 NRC 238 (2012)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-01-23, 54 NRC 163, 172 n.3 (2001)

under the migration tenet, boards may construe an admitted contention contesting the environmental report as a challenge to the subsequently issued draft or final environmental impact statement without the necessity for intervenors to file a new or amended contention; LBP-12-12, 75 NRC 768 n.140 (2012)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-02-2, 55 NRC 20, 30 (2002)

a significant change in the nature of the purported NEPA imperfection, from one focusing on comprehensive information omission to one centered on a deficient analysis of subsequently supplied information, warrants issue modification by the complaining party because otherwise, absent any new pleading, the other parties would be left to speculate whether the concerns first expressed had been satisfied by the new information; LBP-12-5, 75 NRC 247 n.124 (2012)

Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-08-15, 68 NRC 1, 3-4 (2008)

combined license applicant may reference an as-yet-uncertified design at its own risk; CLI-12-9, 75 NRC 429-30 (2012)

Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-10-9, 71 NRC 245, 251 (2010)

the Commission generally declines to hold oral argument on appeals, absent a specific showing that oral argument will assist it in reaching a decision; CLI-12-12, 75 NRC 614 (2012)

Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-10-9, 71 NRC 245, 278 n.205 (2010)

briefs on appeal to be comprehensive, concise, and self-contained and incorporation of pleadings or arguments by reference is discouraged; CLI-12-3, 75 NRC 139 n.41 (2012)

Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 29 (2010)

standard for review of contention admissibility determinations is the same, whether an appeal lies under section 2.311 or 2.341, and the Commission will disturb a licensing board's contention admissibility ruling only if there has been an error of law or abuse of discretion; CLI-12-7, 75 NRC 386 (2012)

Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 46 (2010)

absent a licensed low-level radioactive waste disposal facility that will accept waste from a combined license applicant's facility, it is reasonably foreseeable that LLRW generated by normal operations will be stored at the site for a longer term than is currently envisioned in that COL application; LBP-12-4, 75 NRC 218 (2012)

level of low-level radioactive waste storage information required by 10 C.F.R. 52.79(a)(3) is tied to the combined license applicant's particular plans for compliance through design, operational organization, and procedures; LBP-12-4, 75 NRC 218 (2012)

LEGAL CITATIONS INDEX

CASES

Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 47 (2010)
level of low-level radioactive waste storage information required by 10 C.F.R. 52.79(a)(3) is tied to how that applicant intends to handle an accumulation of LLRW; LBP-12-4, 75 NRC 218 (2012)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 88 (2009), *aff'd in part and rev'd in part on other grounds,* CLI-10-2, 71 NRC 27 (2010)
challenging the environmental report preserves petitioner's right to challenge the environmental impact statement at a later stage of the proceedings; LBP-12-8, 75 NRC 553 (2012)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 102 (2009), *aff'd in part and rev'd in part on other grounds,* CLI-10-2, 71 NRC 27 (2010)
contention that raises a genuine dispute with the sufficiency of the cumulative impacts analysis, or the lack thereof, in the environmental report is admissible; LBP-12-3, 75 NRC 202 (2012)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-10-20, 72 NRC 571, 603 (2010)
consistency of this decision with the *Vogtle* decision on construction of section 52.79(a)(3) is discussed; LBP-12-4, 75 NRC 223-24 n.15 (2012)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-1, 73 NRC 19, 25-26 (2011)
under the migration tenet, boards may construe an admitted contention contesting the environmental report as a challenge to the subsequently issued draft or final environmental impact statement without the need for intervenors to file a new or amended contention; LBP-12-12, 75 NRC 768 (2012)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-1, 73 NRC 19, 26 (2011)
the migration tenet 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; LBP-12-12, 75 NRC 768 (2012)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-1, 73 NRC 19, 26 n.13 (2011)
challenges to only the draft environmental impact statement apply equally to the final environmental impact statement under the migration tenet; LBP-12-5, 75 NRC 232 n.17, 238 n.63 (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)
although environmental contentions ultimately challenge NRC's compliance with the National Environmental Policy Act, applicant may advocate for a particular challenged position set forth in the environmental impact statement; LBP-12-5, 75 NRC 236 (2012)
Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 & n.11 (1988), *aff'd in part and remanded in part on other matters, Massachusetts v. NRC,* 924 F.2d 311 (D.C. Cir.), *cert. denied,* 502 U.S. 899 (1991)
intervenor is not free to change the focus of its admitted contention, at will, as the litigation progresses; LBP-12-5, 75 NRC 239 n.68 (2012)
Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-89-8, 29 NRC 399, 412 (1989)
without a showing of irreparable injury, petitioners seeking a stay of effectiveness must make an overwhelming showing of likely success on the merits; CLI-12-11, 75 NRC 529 (2012)
Ramadan v. Chase Manhattan Corp., 229 F.3d 194, 201 (3d Cir. 2000)
regulations cannot trump statutory mandates; LBP-12-8, 75 NRC 553 (2012)
Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989)
focusing government and public attention on the environmental effects of proposed agency action ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct; LBP-12-1, 75 NRC 36-37 n.48 (2012)
NEPA exists in part to ensure that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast; LBP-12-1, 75 NRC 36 (2012); LBP-12-10, 75 NRC 679-80 (2012)

NEPA has a dual purpose of ensuring that federal officials fully take into account the environmental consequences of a federal action before reaching major decisions, and informing the public, Congress, and other agencies of those consequences; LBP-12-1, 75 NRC 34 (2012)

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349-50 (1989)

NEPA is intended to require federal agencies to consider the environmental consequences of their actions and to foster informed public participation in the decisionmaking process; LBP-12-12, 75 NRC 750 (2012)

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989)

although NEPA does not direct any particular substantive result, all environmental consequences of the proposed action, including connected actions, must be fully evaluated in the FEIS; LBP-12-12, 75 NRC 780 (2012)

NEPA itself does not mandate particular results, but simply prescribes the necessary process; LBP-12-12, 75 NRC 770 n.154 (2012)

NEPA requires that NRC take a hard look at alternatives, including severe accident mitigation alternatives, and to provide a rational basis for rejecting alternatives that are cost-effective; LBP-12-8, 75 NRC 549 (2012)

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 353 (1989)

NEPA neither requires nor authorizes NRC to order implementation of mitigation measures analyzed in an environmental analysis; CLI-12-10, 75 NRC 488 (2012)

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 354-55, 359 (1989)

NEPA does not require a worst-case analysis; LBP-12-5, 75 NRC 237 (2012)

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 354-56 (1989)

a NEPA mitigation alternatives analysis need not reflect the most conservative, or worst-case, analysis; CLI-12-1, 75 NRC 57 (2012); CLI-12-10, 75 NRC 487 (2012)

Roosevelt Campobello International Park Commission v. Environmental Protection Agency, 684 F.2d 1041, 1047 (1st Cir. 1982)

for siting alternatives, an agency's duty under NEPA is to study all alternatives that appear reasonable and appropriate for study at the time of drafting the environmental impact statement; CLI-12-5, 75 NRC 342 n.244 (2012)

Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), CLI-93-3, 37 NRC 135, 144-45 (1993)

NRC Staff's environmental impact statement need only discuss those alternatives that will bring about the ends of the proposed action; CLI-12-5, 75 NRC 339 (2012)

Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), CLI-93-3, 37 NRC 135, 147 (1993)

intervenor has an iron-clad obligation to examine the publicly available documentary material with sufficient care to enable it to uncover any information that could serve as a foundation for a specific contention; LBP-12-13, 75 NRC 789-90 n.17 (2012)

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

routine contention admissibility decisions do not affect the basic structure of a proceeding in a pervasive or unusual manner; CLI-12-13, 75 NRC 688 (2012)

Scientists' Institute for Public Information, Inc. v. AEC, 481 F.2d 1079, 1092 (D.C. Cir. 1973)

NEPA only requires reasonable forecasting of need for power; LBP-12-5, 75 NRC 237 (2012)

Seacoast Anti-Pollution League v. NRC, 598 F.2d 1221, 1230 (1st Cir. 1979)

for siting alternatives, an agency must consider alternatives that appear reasonable at the time of the NEPA review; CLI-12-5, 75 NRC 342 n.244 (2012)

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-9, 40 NRC 1, 7 (1994)

without a showing of irreparable injury, petitioners seeking a stay of effectiveness must make an overwhelming showing of likely success on the merits; CLI-12-11, 75 NRC 529 (2012)

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 74 (1994)

petitioners are not required to demonstrate their asserted injury with certainty at the contention admissibility stage of the proceeding; CLI-12-12, 75 NRC 613 (2012)

LEGAL CITATIONS INDEX

CASES

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994)
in lieu of the injury and causation showings for standing, petitioner has been able to establish promixity-plus by showing that the proposed licensing action involves a significant source of radiation that has an obvious potential for offsite consequences; LBP-12-3, 75 NRC 179 (2012)

Sequoyah Fuels Corp. (Gore, Oklahoma Site), CLI-03-15, 58 NRC 349 (2003)
section 11e(2) byproduct material is tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content; LBP-12-3, 75 NRC 174 n.1 (2012)

Sequoyah Fuels Corp. (Gore, Oklahoma Site), CLI-03-15, 58 NRC 349, 353-54 (2003)
the byproduct material category was created in 1978 by the Uranium Mill Tailings and Reclamation Act to afford NRC regulatory jurisdiction over mill tailings at active and inactive uranium milling sites; LBP-12-3, 75 NRC 174 n.1 (2012)

Sequoyah Fuels Corp. (Gore, Oklahoma Site Decommissioning), CLI-01-2, 53 NRC 9, 14 (2001)
the Commission will defer to board rulings on standing absent an error of law or abuse of discretion; CLI-12-12, 75 NRC 608 (2012)

Sequoyah Fuels Corp. (Gore, Oklahoma Site Decommissioning), CLI-01-2, 53 NRC 9, 19 (2001)
the Commission declined to take review of board rulings that were not inextricably linked to appealable issues, and the resolution of which did not have the potential to dispose of the entire litigation; CLI-12-12, 75 NRC 607 n.13 (2012)

Sequoyah Fuels Corp. (Gore, Oklahoma Site Decommissioning), CLI-01-2, 53 NRC 9, 20 (2001)
the Commission declines to take pendent jurisdiction of contention admissibility determinations, to avoid encouraging interlocutory appeals riding on the coattails of appealable issues; CLI-12-12, 75 NRC 607 (2012)

Shaw AREVA MOX Services, LLC (Mixed Oxide Fuel Fabrication Facility), CLI-09-2, 69 NRC 55, 65 (2009)
in unusual circumstances, where fairness dictates, the Commission has been willing to soften or waive its reopening requirements; CLI-12-14, 75 NRC 700 n.56 (2012)

Shaw AREVA MOX Services, LLC (Mixed Oxide Fuel Fabrication Facility), CLI-09-2, 69 NRC 55, 65 n.47 (2009)
intervention petitioners have an ironclad obligation to review the application thoroughly and to base their challenges on its contents; CLI-12-5, 75 NRC 312 n.67 (2012)

Shieldalloy Metallurgical Corp. (Decommissioning of the Newfield, New Jersey Facility), CLI-09-1, 69 NRC 1, 5 (2009)
given the delays that already have taken place in the proceeding, the Commission expects that, absent compelling circumstances, the Staff will accord sufficient priority and devote sufficient resources to meeting its current estimated safety and environmental review schedule; CLI-12-4, 75 NRC 158 n.22 (2012)

Shieldalloy Metallurgical Corp. (Decommissioning of the Newfield, New Jersey Site), CLI-10-8, 71 NRC 142, 147 & n.25 (2010)
NRC traditionally has entertained motions to stay agency action pending judicial review; CLI-12-11, 75 NRC 528 (2012)

Shieldalloy Metallurgical Corp. (Decommissioning of the Newfield, New Jersey Site), CLI-10-8, 71 NRC 142, 150-51 (2010)
in deciding motions seeking a stay of agency action pending judicial review, the Commission looks to the same four-part test that governs stays of licensing board decisions pending Commission review; CLI-12-11, 75 NRC 529 (2012)

Shieldalloy Metallurgical Corp. (Decommissioning of the Newfield, New Jersey Site), CLI-10-8, 71 NRC 142, 151 (2010)
irreparable injury is the most important of the stay criteria; CLI-12-11, 75 NRC 529 (2012)

Shieldalloy Metallurgical Corp. (Decommissioning of the Newfield, New Jersey Site), CLI-10-8, 71 NRC 142, 154 (2010)
without a showing of irreparable injury, petitioners seeking a stay of effectiveness must demonstrate that reversal of the licensing board is a virtual certainty; CLI-12-11, 75 NRC 529 (2012)

LEGAL CITATIONS INDEX

CASES

Shieldalloy Metallurgical Corp. (Decommissioning of the Newfield, New Jersey Site), CLI-10-8, 71 NRC 142, 163 (2010)
if motions for stay of effectiveness demonstrate neither irreparable injury nor that reversal of the licensing board is a virtual certainty, then the remaining factors need not be considered; CLI-12-11, 75 NRC 529 n.32 (2012)
Sierra Club v. Froehlke, 816 F.2d 205, 210 (5th Cir. 1987)
to constitute a basis for supplementing an EIS, the new information must present a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; CLI-12-7, 75 NRC 388-89, 390-91 (2012)
Sierra Club v. Marsh, 769 F.2d 868, 878 (1st Cir. 1985)
NEPA requires that NRC consider the reasonably foreseeable environmental impacts of the proposed licensing action, but the agency need not consider remote and speculative impacts, particularly if the impact cannot easily be estimated at the current time, and an appropriate future opportunity will exist for the agency to analyze the impact; LBP-12-3, 75 NRC 197 (2012)
Sierra Club v. Morton, 405 U.S. 727, 734-35 (1972)
aesthetic harms may amount to an injury in fact sufficient for standing; CLI-12-12, 75 NRC 613 n.49 (2012)
Sierra Club v. U.S. Army Corps of Engineers, 645 F.3d 978, 987-88 (8th Cir. 2011)
standing can be based on diminishment of recreational enjoyment of wildlife area due to, among other factors, an increase in dust due to traffic on adjacent highway; CLI-12-12, 75 NRC 613 n.49 (2012)
Society Hill Towers Owners' Association v. Rendell, 210 F.3d 168, 181 (3d Cir. 2000)
"connected actions" are those that lack independent utility; LBP-12-12, 75 NRC 779 (2012)
a new transmission corridor is a connected action and must be fully evaluated in the final environmental impact statement; LBP-12-12, 75 NRC 779 (2012)
South Carolina Electric & Gas Co. (Virgil C. Summer Nuclear Station, Unit 1), ALAB-642, 13 NRC 881 (1981)
predecessor regulation to section 2.311 (10 C.F.R. 2.714a) was applied to Commission review of an initial intervention petition filed over 4 years after the deadline; CLI-12-7, 75 NRC 386 n.20 (2012)
South Carolina Electric & Gas Co. (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 5 n.20 (2010)
arguments made for the first time on appeal will not be considered; CLI-12-3, 75 NRC 146 n.87 (2012)
South Carolina Electric & Gas Co. (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 7 (2010)
petitioner has some latitude to supplement or cure a standing showing in its reply pleading, but any additional arguments should be supported by either the declaration that accompanied the original hearing request or a supplemental affidavit; LBP-12-3, 75 NRC 186 (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 contention pleading requirements is grounds for dismissing the contention; LBP-12-3, 75 NRC 191 (2012)
South Carolina Electric & Gas Co. (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 17 (2010)
need-for-power assessments must be only at a level of detail sufficient to reasonably characterize the costs and benefits associated with proposed licensing actions; LBP-12-5, 75 NRC 237-38 (2012)
South Carolina Electric & Gas Co. (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-21, 72 NRC 197, 200 (2010)
absent error of law or abuse of discretion, the Commission generally defers to board rulings on contention admissibility; CLI-12-5, 75 NRC 307 (2012); CLI-12-10, 75 NRC 484 (2012); CLI-12-8, 75 NRC 397 (2012); CLI-12-15, 75 NRC 710 (2012)
South Texas Project Nuclear Operating Co. (South Texas Project, Units 3 and 4), CLI-09-18, 70 NRC 859, 862 (2009)
challenges to board rulings on late-filed contentions normally fall under NRC rules for interlocutory review; CLI-12-7, 75 NRC 385 n.17 (2012)

contentions filed after the initial petition generally are not subject to appeal pursuant to 10 C.F.R. 2.311; CLI-12-3, 75 NRC 138 n.26 (2012); CLI-12-6, 75 NRC 361 n.38 (2012); CLI-12-7, 75 NRC 385 n.15 (2012)

South Texas Project Nuclear Operating Co. (South Texas Project, Units 3 and 4), CLI-10-16, 71 NRC 486, 491 (2010)

intervenor normally is not allowed to challenge a board's rejection of contentions where the board has granted a hearing on any contention; CLI-12-12, 75 NRC 607 n.12 (2012)

routine contention admissibility determinations generally are not appropriate for interlocutory review; CLI-12-12, 75 NRC 608 (2012)

Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), LBP-77-35, 5 NRC 1290, 1291 (1977)

licensing boards have authority to adjudicate exemption issues, but NRC Staff serves as an initial reviewer of exemption requests; LBP-12-6, 75 NRC 273 n.101 (2012)

Southern Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), CLI-10-5, 71 NRC 90, 98-99 (2010)

where a board's decision rests on a weighing of extensive fact-specific evidence presented by technical experts, the Commission generally will defer to the board's factual findings, unless there appears to be a clearly erroneous factual finding or related oversight; CLI-12-1, 75 NRC 46 (2012)

Southern Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), CLI-10-5, 71 NRC 90, 100 (2010)

the scope of a contention is limited to the issues of law and fact pleaded with particularity in the contention and any factual and legal material in support thereof; LBP-12-5, 75 NRC 239 (2012)

Southern Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), CLI-10-5, 71 NRC 90, 100-01 (2010)

contention claims must be set forth with particularity; CLI-12-1, 75 NRC 55 (2012)

Southern Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 258-59 (2007)

contention that raises a genuine dispute with the sufficiency of the cumulative impacts analysis, or the lack thereof, in the environmental report is admissible; LBP-12-3, 75 NRC 202 (2012)

Southern Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), LBP-08-2, 67 NRC 54, 63-64 (2008)

the migration tenet applies only as long as the DEIS analysis or discussion at issue is essentially *in para materia* with the ER analysis or discussion that is the focus of the contention; LBP-12-12, 75 NRC 768 (2012)

Southern Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), LBP-08-2, 67 NRC 54, 64 (2008)

intervenor may need to amend an admitted environmental contention based on applicant's environmental report, or file a new contention altogether challenging Staff's draft environmental impact statement; LBP-12-12, 75 NRC 768 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-16, 70 NRC 33, 36 (2009)

section 52.79(a)(3) specifies no quantity or time restrictions relative to onsite storage of low-level radioactive waste; LBP-12-4, 75 NRC 218 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-16, 70 NRC 33, 36-37 (2009)

section 52.79(a)(3) requires that a combined license application contain information pertaining to how applicant intends, through its design, operational organization, and procedures, to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20 including, but not limited to, LLRW handling and storage; LBP-12-4, 75 NRC 223 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-16, 70 NRC 33, 37 (2009)

applicant's FSAR must identify particular plans pertaining to design, operational organization, and procedures that demonstrate how it intends to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20 including, but not limited to, LLRW handling and storage; LBP-12-4, 75 NRC 223 (2012)

level of low-level radioactive waste storage information required by 10 C.F.R. 52.79(a)(3) is tied to the combined license applicant's particular plans for compliance through design, operational organization, and procedures; LBP-12-4, 75 NRC 218 (2012)
Part 20 outlines a number of radiation protection requirements with which licensees must comply, such as procedures and controls to reduce occupational doses and doses to members of the public to levels that are as low as reasonably achievable; LBP-12-4, 75 NRC 217 (2012)
scope and specificity of information required under section 52.79(a)(3) is a fact-bound determination that is tied to applicant's particular plans for compliance through, but not necessarily the details of, design, operational organization, and procedures associated with any contingent long-term LLRW facility; LBP-12-4, 75 NRC 223 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 217 n.1 (2011)
once all contentions have been decided, the contested proceeding is terminated; CLI-12-14, 75 NRC 699-700 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 218 & n.8 (2011)
although NRC regulations do not provide a precise definition of "timely," licensing boards have often found a new contention to be timely if it has been filed within 30 days of the availability of information on which the contention is based; LBP-12-11, 75 NRC 737 (2012)
new contentions are considered timely when filed within 30 days of the date that asserted foundational information became available; LBP-12-10, 75 NRC 653-54 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 218 & n.8 (2011)
new contentions are timely when filed within 30 days of the date that asserted foundational information became available; LBP-12-1, 75 NRC 14 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 219 (2011)
briefs on appeal must be comprehensive, concise, and self-contained, and incorporation of pleadings or arguments by reference is discouraged; CLI-12-3, 75 NRC 139 n.41 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 219-20 (2011)
the Commission generally declines to hold oral argument on appeals, absent a specific showing that oral argument will assist it in reaching a decision; CLI-12-12, 75 NRC 614 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 220 (2011)
boards are in a better position than the Commission to consider any expert affidavit or affidavits that petitioner submits to support its motion to reopen; CLI-12-14, 75 NRC 702 n.64 (2012)
decisions on the admissibility of contentions will be affirmed where no error of law or abuse of discretion is found; CLI-12-3, 75 NRC 138 (2012); CLI-12-6, 75 NRC 361 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 221-22 (2011)
failure to address the reopening criteria is enough to reject contentions that are filed after a record has closed; CLI-12-3, 75 NRC 143 n.72 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 222 (2011)
boards should not have to hunt for information that the agency's procedural rules require be explicitly identified and fully explained; CLI-12-3, 75 NRC 145 n.86 (2012); LBP-12-10, 75 NRC 652 n.127 (2012)
litigants seeking to reopen a record must comply fully with section 2.326(b); CLI-12-3, 75 NRC 145 n.86 (2012)
motions to reopen could be rejected solely on the basis of the appellants' failure to address the reopening standards in the supporting affidavit; LBP-12-10, 75 NRC 639 n.33 (2012)

LEGAL CITATIONS INDEX

CASES

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 225 n.44 (2011)

where a motion to reopen is untimely, the section 2.326(a)(1) "exceptionally grave" test supplants the section 2.326(a)(2) "significant safety or environmental issue" test; LBP-12-1, 75 NRC 16 n.62 (2012); LBP-12-10, 75 NRC 655-56 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 228 (2011)

introduction of a new contention, long after the evidentiary record has otherwise closed, would broaden and delay the proceeding and therefore tends to weigh against admission of a new contention; CLI-12-15, 75 NRC 723-24 n.96 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-2, 75 NRC 63 (2012)

departing from NRC's stable, predictable licensing process could unintentionally impact NRC Staff's disciplined work; CLI-12-9, 75 NRC 445 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 391-92 (2012)

an application-specific NEPA review represents a snapshot in time, and although NEPA requires that NRC conduct its environmental review with the best information available at that time, it does not require that NRC wait until inchoate information matures into something that later might affect its review; LBP-12-10, 75 NRC 659 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), LBP-10-8, 71 NRC 433, 439 (2010)

Subpart L provides for motions for summary disposition, and such motions are governed by the same standards as those in Subpart G proceedings; LBP-12-2, 75 NRC 163 n.18 (2012)

summary disposition may be entered with respect to all or any part of the matters involved in the proceeding if the motion, along with any appropriate supporting materials, shows that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-12-2, 75 NRC 163 n.18 (2012)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), LBP-10-8, 71 NRC 433, 444 (2010)

scope and specificity of information required under section 52.79(a)(3) is a fact-bound determination that is tied to applicant's particular plans for compliance through, but not necessarily the details of, design, operational organization, and procedures associated with any contingent long-term LLRW facility; LBP-12-4, 75 NRC 223 (2012)

there is a longstanding agency recognition of the availability of the mechanisms under 10 C.F.R. 50.59 or 50.90 for obtaining authorization to construct additional onsite LLRW storage facilities; LBP-12-4, 75 NRC 225 n.17 (2012)

Southwest Center for Biological Diversity v. U.S. Forest Service, 100 F.3d 1443, 1447 (9th Cir.1996)

if an agency determines that a particular action will have no effect on an endangered or threatened species, the consultation requirements are not triggered, and the finding of no effect obviates the need for formal consultation under the Endangered Species Act; LBP-12-10, 75 NRC 657 n.153 (2012)

Southwest Center for Biological Diversity v. U.S. Forest Service, 100 F.3d 1443, 1447-48 (9th Cir. 1996)

if an agency determines that a particular action will have no effect on an endangered or threatened species, the consultation requirements are not triggered; LBP-12-10, 75 NRC 671-72 (2012)

State of Ohio v. NRC, 814 F.2d 258, 262-64 (6th Cir. 1987)

courts of appeals have repeatedly approved NRC practice of closing the hearing record after resolution of the last live contention, and of holding new contentions to the higher reopening standard; CLI-12-14, 75 NRC 700 (2012)

Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 21 (1998)

the Commission enforces the 10-day deadline for filing appeals strictly and excuses it only in unavoidable and extreme circumstances; LBP-12-12, 75 NRC 749 n.18 (2012)

LEGAL CITATIONS INDEX

CASES

Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 22 (1998)
proponent of a contention, not the licensing board, is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement its admission; CLI-12-5, 75 NRC 349 n.277 (2012); CLI-12-13, 75 NRC 686 n.30 (2012)

Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 23 (1998)
under 10 C.F.R. 2.311, appeal of a ruling on contentions is allowed only if the order wholly denies an intervention petition or a party other than the petitioner alleges that a petition for leave to intervene or a request for hearing should have been wholly denied; CLI-12-7, 75 NRC 385 n.16 (2012)

Statement of Policy on Conduct of Licensing Proceedings, CLI-81-8, 13 NRC 452, 454 (1981)
petitioners' argument that their counsel was busy on other legal matters disregards longstanding policy that the fact that a party may have other obligations does not relieve that party of its hearing obligations; LBP-12-12, 75 NRC 749 n.18 (2012)

Swint v. Chambers County Commission, 514 U.S. 35, 49-50 (1995)
the Commission declines to take pendent jurisdiction of contention admissibility determinations, to avoid encouraging interlocutory appeals riding on the coattails of appealable issues; CLI-12-12, 75 NRC 607 (2012)

Taxpayers Watchdog, Inc. v. Stanley, 819 F.2d 294, 298 (D.C. Cir. 1987)
segmentation is to be avoided in order to ensure that interrelated projects, the overall effect of which is environmentally significant, not be fractionalized into smaller, less significant actions; LBP-12-12, 75 NRC 778 n.204 (2012)

Tennessee Valley Authority v. Hill, 437 U.S. 154, 173 (1978)
the Endangered Species Act affirmatively commands all federal agencies to ensure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of an endangered species or result in destruction or modification of habitats of such species, with no exception; LBP-12-10, 75 NRC 670 (2012)

Tennessee Valley Authority v. Hill, 437 U.S. 154, 180 (1978)
the Secretary of the Interior has been given extensive power to develop regulations and programs for the preservation of endangered and threatened species; LBP-12-10, 75 NRC 670 (2012)

Tennessee Valley Authority v. Hill, 437 U.S. 154, 181-82 (1978)
federal agencies should seek to preserve endangered species only insofar as is practicable and consistent with their primary purposes; LBP-12-10, 75 NRC 671 (2012)

Tennessee Valley Authority v. Hill, 437 U.S. 153, 188 n.34 (1978)
it would make sense to hold NEPA inapplicable at some point in the life of a project, because the agency would no longer have a meaningful opportunity to weigh the benefits of the project versus the detrimental effects on the environment; LBP-12-1, 75 NRC 37 n.48 (2012)

Tennessee Valley Authority (Bellefonte Nuclear Plant, Units 1 and 2), CLI-10-26, 72 NRC 474, 476 (2010)
parties' other professional obligations do not relieve them of their obligations to meet mandatory deadlines; LBP-12-12, 75 NRC 749 n.18 (2012)
the Commission enforces the 10-day deadline for filing appeals strictly and excuses it only in unavoidable and extreme circumstances; LBP-12-12, 75 NRC 749 n.18 (2012)

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 72 (2009)
boards are encouraged to refer rulings that raise significant and novel legal or policy issues, the resolution of which would materially advance the orderly disposition of the proceeding; CLI-12-13, 75 NRC 685 n.23 (2012)

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 76-77 (2009)
questions of safety impacts of onsite low-level waste storage are largely site- and design-specific, and appropriately decided in an individual licensing proceeding; LBP-12-4, 75 NRC 224 n.15 (2012)

Tennessee Valley Authority (Clinch River Breeder Reactor Plant), ALAB-345, 4 NRC 212, 213 (1976)
although a party who is not injured by a board's ruling has no right to appeal that ruling, it may file a supporting brief at the appropriate time; CLI-12-6, 75 NRC 363 n.51 (2012)
petitioner may act to vindicate its own rights, but it has no standing to assert the rights of others; CLI-12-6, 75 NRC 363 (2012)

LEGAL CITATIONS INDEX

CASES

Tennessee Valley Authority (Watts Bar Nuclear Plant, Unit 2), CLI-10-12, 71 NRC 319, 322-23 (2010)
the late-filing factor given the most weight is whether there is good cause for the failure to file on time; CLI-12-15, 75 NRC 723 n.96 (2012)

Tennessee Valley Authority (Watts Bar Nuclear Plant, Unit 2), CLI-10-12, 71 NRC 319, 323 (2010)
absent good cause, there must be a compelling showing on the remaining late-filing factors; CLI-12-10, 75 NRC 492 n.69 (2012); CLI-12-15, 75 NRC 723 n.96 (2012)
good cause for the late filing is the most important of the late-filing factors; CLI-12-10, 75 NRC 489 n.47, 492 n.69 (2012)

Tennessee Valley Authority (Watts Bar Nuclear Plant, Units 1 and 2), ALAB-413, 5 NRC 1418, 1420-21 (1977)
standing claims based on economic impacts are only cognizable in NRC proceedings with regard to NEPA-based concerns; LBP-12-3, 75 NRC 184 n.15 (2012)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Unit 2), CLI-93-2, 37 NRC 55, 59 n.4 (1993)
the Commission generally declines to hold oral argument on appeals, absent a specific showing that oral argument will assist it in reaching a decision; CLI-12-12, 75 NRC 614 (2012)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Unit 2), CLI-93-4, 37 NRC 156, 165 (1993)
failure to demonstrate good cause for a late-filed contention requires a compelling showing on the remaining factors; CLI-12-15, 75 NRC 723 n.96 (2012)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Unit 2), CLI-93-11, 37 NRC 251, 263 (1993)
section 2.342 does not apply to requests for stays of Commission decisions pending judicial review; CLI-12-11, 75 NRC 528 (2012)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Unit 2), CLI-93-11, 37 NRC 251, 263-65 (1993)
the Commission traditionally has entertained motions to stay agency action pending judicial review; CLI-12-11, 75 NRC 528 (2012)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-1, 35 NRC 1, 6 n.5 (1992)
as long as license review is ongoing, the licensing proceeding is still in existence; CLI-12-14, 75 NRC 696 (2012)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 68-69 (1992)
the Commission generally declines to hold oral argument on appeals, absent a specific showing that oral argument will assist it in reaching a decision; CLI-12-12, 75 NRC 614 (2012)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 73 (1992)
where petitioner fails to establish good cause for late filing, its demonstration on the other factors must be particularly strong; LBP-12-7, 75 NRC 510 (2012); LBP-12-9, 75 NRC 622 (2012)

Town of Huntington v. Marsh, 859 F.2d 1134, 1142 (2d Cir. 1988)
segmentation occurs when an action is divided into component parts, each involving action with less significant environmental effects; LBP-12-12, 75 NRC 778 n.204 (2012)

Town of Winthrop v. Federal Aviation Administration, 535 F.3d 1, 9-13 (1st Cir. 2008)
NRC need not supplement an environmental impact statement with information in an area of research that is still developing; CLI-12-6, 75 NRC 376 n.146 (2012); CLI-12-7, 75 NRC 392 n.48 (2012)

Town of Winthrop v. Federal Aviation Administration, 535 F.3d 1, 11-13 (1st Cir. 2008)
environmental impact statements are not intended to be research documents, reflecting the frontiers of scientific methodology, studies, and data; CLI-12-5, 75 NRC 341 (2012)

Town of Winthrop v. Federal Aviation Administration, 535 F.3d 1, 13 (1st Cir. 2008)
NEPA allows agencies to select their own methodology as long as that methodology is reasonable; CLI-12-6, 75 NRC 369 n.96 (2012)

Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141 (2011)
motions and petitions related to the Fukushima events are denied as premature; CLI-12-7, 75 NRC 383-84 (2012)

NRC continues to comprehensively assess the accident at Fukushima, including carefully reviewing all recommendations outlined by NRC's Task Force studying the accident; CLI-12-10, 75 NRC 501 (2012)
petitioner does not identify how the Fukushima accident paints a seriously different picture of the environment, given the bounding severe accident scenarios assumed in the GEIS analysis and its consideration of liquid pathways; CLI-12-15, 75 NRC 726 (2012)
petitions requesting suspension of all combined license decisions regarding pending completion of actions associated with the Fukushima accident are granted in part and denied in part; CLI-12-2, 75 NRC 70 (2012); CLI-12-14, 75 NRC 696 n.31 (2012)
the Commission declined to suspend any adjudications or final licensing decisions, finding no imminent risk to public health and safety or to common defense and security because of the Fukushima accident; CLI-12-5, 75 NRC 349 (2012); CLI-12-11, 75 NRC 528 n.22 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 147-49 (2011)
in response to the Fukushima accident in Japan, NRC is conducting a comprehensive safety review of the requirements and guidance associated with accident mitigation measures; CLI-12-1, 75 NRC 57 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 158-59 (2011)
three criteria are used to determine whether to suspend an adjudication; CLI-12-6, 75 NRC 373 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 159-66 (2011)
petitioners' requests to suspend various licensing proceedings, pending completion of long-term analyses of the Fukushima events and the issuance of any resulting regulatory changes were denied; CLI-12-9, 75 NRC 437 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 161 (2011)
no information that NRC has learned so far from the Fukushima accident puts into question the continued safety of currently operating regulated facilities, including reactors and spent fuel pools; CLI-12-10, 75 NRC 501 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 161-63 (2011)
there is no imminent safety reason to halt new reactor licensing because there is sufficient time to implement new Fukushima-related requirements before operation; CLI-12-2, 75 NRC 126 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 162-63 (2011)
NRC has in place well-established regulatory processes by which to impose any new Fukushima-related requirements or other enhancements that may be needed; CLI-12-2, 75 NRC 120 (2012); CLI-12-6, 75 NRC 375-76 (2012); CLI-12-9, 75 NRC 444 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 162-63, 166 (2011)
NRC has in place well-established regulatory processes by which to impose any new requirements or other enhancements that may be needed following completion of regulatory actions associated with the Fukushima events; CLI-12-3, 75 NRC 151 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 164 (2011)
any rule or policy changes NRC may make as a result of its post-Fukushima review may be made irrespective of whether a license renewal application is pending, or whether final action on an application has been taken; CLI-12-6, 75 NRC 375 (2012)
events of Fukushima do not present a sufficiently grave threat to public safety that reactor licensing proceedings should be suspended; LBP-12-1, 75 NRC 15 n.59 (2012)
for license renewal safety review, it is not clear at this point whether any enhancements or changes considered by the Fukushima Task Force will bear on license renewal regulations, which are focused more narrowly on the proper management of aging; CLI-12-10, 75 NRC 501 (2012)
ongoing regulatory and oversight processes provide reasonable assurance that each plant continues to comply with its current licensing basis, which can be adjusted by future Commission order or by modification to the facility's operating license outside the renewal proceeding; CLI-12-3, 75 NRC 150 (2012); CLI-12-5, 75 NRC 349 (2012); CLI-12-6, 75 NRC 374 (2012); CLI-12-8, 75 NRC 419 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 166 (2011)
continuing licensing processes in accordance with current regulations pending completion of long-term analyses of the Fukushima events would cause no imminent risk to public health and safety because

current regulations provide for incorporating new requirements into existing licenses as they are shown to be necessary; CLI-12-9, 75 NRC 437-38 (2012)
for licenses issued before completion of Fukushima review, any new Fukushima-driven requirements can be imposed later, if necessary to protect the public health and safety; LBP-12-1, 75 NRC 22 n.83, 36 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 166-67 (2011)
Fukushima-related contentions are rejected as premature, and would not have addressed the reopening or contention admissibility standards, or the waiver petition; CLI-12-6, 75 NRC 355 n.33 (2012)
request for analysis of whether Fukushima events constitute new and significant information under NEPA is premature; LBP-12-1, 75 NRC 25 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 167 (2011)
because NRC does not know today the full implications of the Fukushima events for U.S. facilities, any generic NEPA duty, if one is appropriate at all, does not accrue now; CLI-12-7, 75 NRC 389 (2012); LBP-12-8, 75 NRC 558 (2012)
events at Fukushima, and the ensuing NRC response, are not, at this point, to be considered new and significant information under NEPA; LBP-12-8, 75 NRC 559 (2012)
for our NEPA-based evaluations, if new and significant information comes to light that is relevant to ongoing application-specific NEPA documents, NRC will evaluate the information as appropriate; CLI-12-7, 75 NRC 388 (2012); CLI-12-10, 75 NRC 501 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 167-68 (2011)
an environmental issue is "significant" for the purposes of reopening a closed record if it will paint a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; LBP-12-10, 75 NRC 656 (2012)
asserted new Fukushima-related information must present a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; CLI-12-10, 75 NRC 501 (2012); LBP-12-1, 75 NRC 15 n.57, 26 n.2 (2012); CLI-12-13, 75 NRC 688 n.39 (2012)
to constitute a basis for supplementing an EIS, the new information must present a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; CLI-12-7, 75 NRC 388-89, 390-91 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 168 (2011)
the Commission declined to conduct a generic NEPA analysis on the effects of Fukushima-related events; CLI-12-7, 75 NRC 387 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 168, 176 (2011)
petitioners' request for a safety analysis relative to Fukushima-related concerns was granted to the extent that the requested analyses had already been undertaken; CLI-12-9, 75 NRC 437 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 170 (2011)
boards are encouraged to refer rulings that raise significant and novel legal or policy issues, the resolution of which would materially advance the orderly disposition of the proceeding; CLI-12-13, 75 NRC 685 n.23 (2012)
NRC procedural rules contain ample provisions through which litigants may seek admission of new or amended contentions, seek stays of licensing board decisions, appeal adverse decisions, and file motions to reopen the record, as appropriate; CLI-12-3, 75 NRC 141 (2012); CLI-12-13, 75 NRC 689 (2012)
raising new issues related to the Fukushima events does not warrant new procedures or a separate timetable; CLI-12-6, 75 NRC 363 n.50 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 170 & n.120 (2011)
licensing boards applied existing procedural rules to new contentions and motions to reopen filed in response to the Three Mile Island accident and the September 11, 2001, terrorist attacks; CLI-12-13, 75 NRC 689 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 171 (2011)
for Fukushima-related contentions the Commission will monitor its proceedings and issue additional guidance as appropriate; CLI-12-3, 75 NRC 153 (2012)
neither new procedures nor a separate timetable for raising new issues related to the Fukushima events are warranted; CLI-12-3, 75 NRC 141 (2012); CLI-12-13, 75 NRC 689 (2012); CLI-12-15, 75 NRC 713 n.43 (2012)

LEGAL CITATIONS INDEX

CASES

Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 171-72 (2011)
request to suspend this license renewal proceedings is denied; CLI-12-6, 75 NRC 360 n.33 (2012)
Union Electric Co. (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 174-75 (2011)
depending on NRC Staff's resolution of Fukushima-related rulemaking petitions, NRC Staff could seek Commission permission to suspend one or more of the generic determinations in the license renewal environmental rules and include a new analysis in pending, plant-specific environmental impact statements; LBP-12-1, 75 NRC 22 n.82 (2012)
Union of Concerned Scientists v. NRC, 735 F.2d 1437, 1447 (D.C. Cir. 1984)
the Commission cannot restrict the opportunity for a hearing so much that it effectively removes from the hearing issues that are material to the licensing decision; CLI-12-14, 75 NRC 698 (2012)
Union of Concerned Scientists v. NRC, 920 F.2d 50, 55 (D.C. Cir. 1990)
a licensing hearing does not embrace *anything* new revealed in the safety evaluation report or the NEPA documents; CLI-12-14, 75 NRC 701 n.57 (2012)
argument that applying heightened late-filing standards to contentions triggered by the NRC Staff's review documents violates a petitioner's AEA hearing rights has been considered and rejected; CLI-12-14, 75 NRC 700-01 (2012)
Union of Concerned Scientists v. NRC, 920 F.2d 50, 55-56 (D.C. Cir. 1990)
AEA does not guarantee all private parties the right to have NRC Staff studies as a sort of precomplaint discovery tool; CLI-12-14, 75 NRC 701 (2012)
agencies have discretion on the manner in which they determine whether information is new or significant to warrant supplementation of an environmental impact statement, including the application of its procedural rules; CLI-12-3, 75 NRC 140 n.42 (2012); CLI-12-6, 75 NRC 364 (2012)
United States v. 5800 SW 74th Ave., 363 F.3d 1099, 1101-02 (11th Cir. 2004)
where a nonmoving party declines to oppose a motion for summary disposition, the board shall accept as admitted the moving party's prima facie showing of material facts, but boards cannot grant summary disposition unless movant discharges its burden of demonstrating that it is entitled to a decision as a matter of law; LBP-12-4, 75 NRC (2012)
United States v. Green Acres Enterprises, Inc., 86 F.3d 130, 133 (8th Cir. 1996)
to qualify as irreparable harm justifying a stay, the asserted harm must be related to the underlying claim; CLI-12-11, 75 NRC 530-31 (2012)
U.S. Army Installation Command (Schofield Barracks, Oahu, Hawaii, and Pohakuloa Training Area, Island of Hawaii, Hawaii), CLI-10-20, 72 NRC 185, 188 (2010)
whether a petitioner could be affected by a materials licensing action must be determined on a case-by-case basis, taking into account petitioner's distance from the source, nature of the licensed activity, and significance of the radioactive source; LBP-12-3, 75 NRC 179 (2012)
U.S. Army Installation Command (Schofield Barracks, Oahu, Hawaii, and Pohakuloa Training Area, Island of Hawaii, Hawaii), CLI-10-20, 72 NRC 185, 189 (2010)
if proximity-based standing cannot be demonstrated, then standing must be established according to traditional principles of redressability, injury, and causation; LBP-12-3, 75 NRC 179 (2012)
in lieu of the injury and causation showings for standing, petitioner has been able to establish proximity-plus by showing that the proposed licensing action involves a significant source of radiation that has an obvious potential for offsite consequences; LBP-12-3, 75 NRC 179 (2012)
U.S. Army Installation Command (Schofield Barracks, Oahu, Hawaii, and Pohakuloa Training Area, Island of Hawaii, Hawaii), LBP-10-4, 71 NRC 216, 229 (2010), *aff'd,* CLI-10-20, 72 NRC 185 (2010)
to meet its burden to establish standing, petitioner must provide plausible factual allegations that satisfy each element of standing; LBP-12-3, 75 NRC 177 (2012)
U.S. Army Installation Command (Schofield Barracks, Oahu, Hawaii, and Pohakuloa Training Area, Island of Hawaii, Hawaii), LBP-10-4, 71 NRC 216, 230 & n.14 (2010)
if petitioner's factual claims in support of its standing are contested, untenable, conjectural, or conclusory, a board need not uncritically accept such assertions, but may weigh those informational claims and exercise its judgment about whether standing has been satisfied; LBP-12-3, 75 NRC 177 (2012)

petitioners considerably upgradient of a mining area must provide scientific or technical support for how contaminated material from an in situ recovery site might plausibly enter their drinking water to fulfill the causation element necessary to establish their standing; LBP-12-3, 75 NRC 182-83 (2012)

U.S. Energy Research and Development Administration (Clinch River Breeder Reactor Plant), CLI-76-13, 4 NRC 67, 77 (1976)

need-for-power forecasts are required only to be reasonable; LBP-12-5, 75 NRC 237 (2012)

USEC Inc. (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 437 (2006)

failure to comply with any of the admissibility criteria of 10 C.F.R. 2.309(f)(1) is grounds for rejection of a contention; LBP-12-7, 75 NRC 511 (2012); LBP-12-9, 75 NRC 622 (2012)

USEC Inc. (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 439-40 (2006)

the board is the agency's expert body on matters of contention admissibility, and the Commission generally defers to its judgment on such matters; CLI-12-14, 75 NRC 702 (2012)

USEC Inc. (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 444-45 (2006)

resolution of a mooted contention requires no more than a finding by the presiding officer that the matter has become moot; LBP-12-5, 75 NRC 238 (2012)

USEC Inc. (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 448 (2006)

NRC's NEPA responsibilities to conduct a rigorous and objective review are described; LBP-12-9, 75 NRC 626 n.16 (2012)

USEC Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 457 (2006)

contentions must make clear why cited references provide a basis; CLI-12-5, 75 NRC 332 n.189 (2012)

petitioner is obliged to present factual allegations and/or expert opinion necessary to support its contention; LBP-12-3, 75 NRC 191 (2012)

USEC Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 458 (2006)

new claims cannot be raised for the first time on appeal; CLI-12-1, 75 NRC 59 (2012)

USEC Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 462-63 (2006)

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-12-3, 75 NRC 192 (2012)

USEC Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006)

expert opinion that merely states a conclusion, e.g., the application is "deficient," "inadequate," or "wrong" without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the board of the ability to make the necessary, reflective assessment of the opinion; CLI-12-5, 75 NRC 320 n.117 (2012)

USEC Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 477 (2006)

contentions admitted for litigation must point to a deficiency in the application, and not merely suggest other ways an analysis could have been done, or other details that could have been included; CLI-12-5, 75 NRC 323 (2012)

USEC Inc. (American Centrifuge Plant), LBP-05-28, 62 NRC 585, 618-19 (2005)

past violations of NRC regulations would indicate a deficiency in an application only if they are directly germane to the licensing action, rather than being of simply historical interest; CLI-12-2, 75 NRC 83-84 (2012)

Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 551 (1978)

it is not necessary that every alternative device and thought conceivable by the mind of man be considered, but a hard look must be taken at the environmental consequences; LBP-12-1, 75 NRC 35 (2012)

NEPA documents need consider only those environmental impacts that are reasonably foreseeable, not those that are remote and speculative possibilities; LBP-12-9, 75 NRC 623 (2012)

remote and speculative alternatives need not be addressed in an applicant's environmental report; CLI-12-5, 75 NRC 340 (2012)

under the rule of reason governing NEPA, the concept of alternatives must be bounded by some notion of feasibility; CLI-12-15, 75 NRC 724 (2012)

LEGAL CITATIONS INDEX

CASES

Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 44 (1989)
consideration of remote and speculative impacts in an environmental impact statement is not required; LBP-12-5, 75 NRC 243 (2012)
Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded,* CLI-90-4, 31 NRC 333 (1990)
although boards do not decide the merits at the contention admissibility stage, materials cited as the basis for a contention are subject to scrutiny to determine whether, on their face, they actually support the facts alleged; LBP-12-12, 75 NRC 774 (2012)
Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 163 (2000)
entity seeking representational standing must show it has an individual member who can fulfill all the necessary standing elements and who has authorized the organization to represent his or her interests; LBP-12-3, 75 NRC 177 (2012)
Village of Bensenville v. Federal Aviation Administration, 457 F.3d 52, 71-72 (D.C. Cir. 2006)
NEPA requires that NRC conduct its environmental review with the best information available at that time; CLI-12-6, 75 NRC 376 n.146 (2012); CLI-12-7, 75 NRC 391-92 n.48 (2012)
the review method chosen by NRC in creating its models with the best information available when it began its analysis and then checking the assumptions of those models as new information becomes available is a reasonable means of balancing competing considerations, particularly given the many months required to conduct full modeling with new data; CLI-12-7, 75 NRC 391-92 n.48 (2012)
Washington Toxics Coalition v. U.S. Department of Interior, 457 F. Supp. 2d 1158, 1163 (W.D. Wash. 2006)
no consultation is required by the Endangered Species Act for actions that have no effect on listed species; LBP-12-10, 75 NRC 671 (2012)
Washington Toxics Coalition v. U.S. Department of Interior, 457 F. Supp. 2d 1158, 1163, 1179-80 (W.D. Wash. 2006)
rules permitting the Environmental Protection Agency to make "not likely to adversely affect" determinations without consultation or concurrence of the National Marine Fisheries Service or the Fish and Wildlife Service are discussed; LBP-12-10, 75 NRC 671 (2012)
Washington Toxics Coalition v. U.S. Department of Interior, 457 F. Supp. 2d 1158, 1179-80 (W.D. Wash. 2006)
agencies cannot unilaterally determine that an action will not jeopardize species listed under the Endangered Species Act; LBP-12-10, 75 NRC 658 (2012)
Water Keeper Alliance v. U.S. Department of Defense, 271 F.3d 21, 25 (1st Cir. 2001)
determination of possible effects on an endangered species is ultimately the acting agency's responsibility; LBP-12-10, 75 NRC 640 (2012)
Water Keeper Alliance v. U.S. Department of Defense, 271 F.3d 21, 31-32 (1st Cir. 2001)
formal consultation follows only if a biological assessment shows that the action may affect listed species or critical habitat; LBP-12-10, 75 NRC 647 (2012)
Western Watersheds Project v. Kraayenbrink, 632 F.3d 472, 491-93 (9th Cir. 2011)
although NRC must respond to the significant views of other agencies, particularly if they are critical of NRC's analysis, that duty applies at the final environmental impact statement stage after the draft EIS has been circulated to interested federal and state agencies for their review and comment; LBP-12-12, 75 NRC 760 (2012)
Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996)
intervention petitioner must demonstrate that it has suffered a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute and that the injury can fairly be traced to the challenged action and is likely to be redressed by a favorable decision; LBP-12-8, 75 NRC 546-47 (2012)
NRC generally applies contemporaneous judicial standing concepts in section 189a adjudicatory proceedings; LBP-12-3, 75 NRC 177 (2012)
there is no contention-based requirement mandating that to have standing, besides showing that a cognizable injury is associated with a proposed licensing action and that granting the relief sought

will address that injury, petitioner also must establish a link between that injury and the issues it wishes to litigate in challenging an application; LBP-12-3, 75 NRC 190 n.28 (2012)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-05-15, 61 NRC 365, 375 n.26 (2005)
the GALL Report and the Standard Review Plan are guidance documents, and therefore not binding, but they do carry special weight; CLI-12-5, 75 NRC 314 n.78 (2012)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90 n.30, *rev'd in part on other grounds,* CLI-96-7, 43 NRC 235 (1996)
although boards do not decide the merits at the contention admissibility stage, materials cited as the basis for a contention are subject to scrutiny to determine whether, on their face, they actually support the facts alleged; LBP-12-12, 75 NRC 774 (2012)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998)
to establish organizational standing, petitioner must show that its interests will be harmed by the licensing action, while an organization seeking representational standing must demonstrate that the interests of at least one of its members will be harmed; LBP-12-10, 75 NRC 637 (2012)

LEGAL CITATIONS INDEX
REGULATIONS

10 C.F.R. 2.100-2.103
licensing boards have authority to adjudicate exemption issues, but NRC Staff serves as an initial reviewer of exemption requests; LBP-12-6, 75 NRC 273 (2012)
10 C.F.R. 2.206
any person whose interests may be affected by the license renewal proceeding, and who wishes to participate as a party, must file a petition for leave to intervene within 60 days of the notice of hearing in accordance with this section; LBP-12-8, 75 NRC 544-45 (2012)
if an Indian tribe is of the view that its members face imminent harm from ongoing site operations, then it may, at any time, file a petition for enforcement action; CLI-12-4, 75 NRC 156 (2012)
petitioner's request for enforcement action on earthquake-related issues is denied in part and granted in part; DD-12-1, 75 NRC 574-602 (2012)
10 C.F.R. 2.309
environmental contention regarding cumulative impact on groundwater quantity of the in situ recovery project and the planned expansion satisfies admissibility requirements; LBP-12-3, 75 NRC 200 (2012)
organizations that seek to establish standing to intervene may do so by demonstrating either organizational standing or representational standing; LBP-12-10, 75 NRC 637 (2012)
the standard for admission of new or amended contentions involves a balancing of eight factors; CLI-12-15, 75 NRC 723 n.96 (2012)
10 C.F.R. 2.309(a)
request for hearing and/or petition for leave to intervene will be granted if the board determines that requestor/petitioner has standing and has proposed at least one admissible contention; LBP-12-8, 75 NRC 546 (2012)
10 C.F.R. 2.309(c)
amended contentions must satisfy either the timeliness standards of section 2.309(f)(2) or the balancing test in this section for nontimely contentions, and the general contention admissibility criteria in section 2.309(f)(1); LBP-12-9, 75 NRC 620 (2012)
consideration of a contention under a balancing of the factors set forth in this section must weigh in favor of admitting the contention; LBP-12-11, 75 NRC 735 (2012)
contentions that fail to satisfy timeliness standards in section 2.309(f)(2) may still be admitted pursuant to a balancing test governing nontimely filings that weighs the factors set forth in this section; LBP-12-7, 75 NRC 510 (2012)
motions to reopen relating to a contention not previously in controversy among the parties must also satisfy the requirements for nontimely contentions and the admissibility requirements of 10 C.F.R. 2.309(f)(1); CLI-12-3, 75 NRC 140 (2012); LBP-12-10, 75 NRC 639 (2012)
proponent of a contention is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for its admission; CLI-12-13, 75 NRC 686 n.30 (2012)
the balance of factors must weigh in favor of granting a motion to reopen that relates to a contention not previously in controversy; LBP-12-1, 75 NRC 5-6 (2012)
10 C.F.R. 2.309(c)(1)
good cause is the most important of the late-filing factors; CLI-12-10, 75 NRC 489 n.47 (2012); LBP-12-12, 75 NRC 749 (2012)
if a new or amended contention is deemed untimely under section 2.309(f)(2)(iii), it will be evaluated under this section, which requires a balancing of eight factors to determine whether it is admissible; LBP-12-12, 75 NRC 748 (2012)

the standard for admission of new or amended contentions involves a balancing of eight factors; CLI-12-10, 75 NRC 489 n.47 (2012)

10 C.F.R. 2.309(c)(1)(i)
the late-filing factor given the most weight is whether there is good cause for the failure to file on time; CLI-12-15, 75 NRC 723 n.96 (2012)

10 C.F.R. 2.309(c)(1)(i)-(viii)
contentions that fail to satisfy timeliness standards in section 2.309(f)(2) may still be admitted pursuant to a balancing of the eight criteria of this section; LBP-12-9, 75 NRC 621 (2012)

10 C.F.R. 2.309(c)(1)(ii)
intervenors have standing based upon their proximity to the proposed facility; LBP-12-12, 75 NRC 750 (2012)

10 C.F.R. 2.309(c)(1)(vii)
where admission of a late-filed contention would cause a material delay in the proceeding weighed against admission of the contention; CLI-12-15, 75 NRC 723 n.96 (2012)

10 C.F.R. 2.309(d)
to establish representational standing, organizations must show that at least one of its members may be harmed by the licensing action and would have standing to sue in his or her own right, identify that member by name and address, show that the organization is authorized to request a hearing on behalf of that member, and show that the interests that the representative organization seeks to protect are germane to its own interests; LBP-12-10, 75 NRC 638 (2012)

10 C.F.R. 2.309(d)(1)(i)-(iv)
intervention petitions must include petitioner's name, address, and telephone contact information, nature of petitioner's right under the Atomic Energy Act to be made a party, nature of petitioner's interest in the proceeding, and possible effect of any decision or order that might be issued on petitioner's interest; LBP-12-3, 75 NRC 176 (2012)

10 C.F.R. 2.309(f)
to be accepted for hearing, contentions must meet strict admission standards; CLI-12-15, 75 NRC 709 (2012)

10 C.F.R. 2.309(f)(1)
all contentions, regardless of when they are filed, must also satisfy admissibility requirements; LBP-12-1, 75 NRC 6 (2012)
amended contentions must satisfy general contention admissibility criteria and either the timeliness standards of section 2.309(f)(2) or the balancing test in section 2.309(c) for nontimely contentions; LBP-12-9, 75 NRC 620 (2012)
contention asserting that NRC's environmental review of the license renewal application has not met the requirements of the Endangered Species Act and the Magnuson-Stevens Fishery Conservation and Management Act is inadmissible; LBP-12-10, 75 NRC 635 (2012)
contention challenging applicant's consideration of new and significant information regarding cleanup costs is inadmissible; LBP-12-8, 75 NRC 560 (2012)
contention claims must be set forth with particularity; CLI-12-1, 75 NRC 55 (2012)
contention that the environmental report is deficient in concluding that environmental impacts from proposed deep injection wells will be small because the ER fails to identify the source data of the chemical concentrations for ethylbenzene, heptachlor, tetrachloroethylene, and toluene is admissible; LBP-12-9, 75 NRC 625 (2012)
for any contention to be admissible, regardless of when it is filed, it must satisfy each of the six criteria; LBP-12-10, 75 NRC 661 (2012)
hearing requests or intervention petitions must set forth with particularity the contentions sought to be raised, meeting all six pleading standards of this section; CLI-12-5, 75 NRC 306-07 (2012); CLI-12-8, 75 NRC 396 (2012)
in addition to satisfying the timeliness standards in 10 C.F.R. 2.309(f)(2) or the balancing test in 10 C.F.R. 2.309(c), a newly proffered contention must satisfy the admissibility criteria of this section; LBP-12-7, 75 NRC 510-11 (2012)
in addition to satisfying the timeliness standards in 10 C.F.R. 2.309(f)(2) or the balancing test in section 2.309(c), amended contentions must satisfy the admissibility criteria of this section; LBP-12-9, 75 NRC 622 (2012)

intervention petitioners must not only demonstrate standing, but must also put forward at least one admissible contention; LBP-12-8, 75 NRC 548 (2012)
motions to reopen relating to a contention not previously in controversy among the parties must also satisfy the requirements for nontimely contentions and the admissibility requirements; LBP-12-10, 75 NRC 639 (2012)
requirements for an admissible contention are specified; LBP-12-3, 75 NRC 190-91 (2012)
statement of supporting facts or expert opinion to establish how the project would impair visual resources, rather than mere speculation, is required for an admissible contention; LBP-12-3, 75 NRC 207 (2012)
to be accepted for hearing, contentions must meet strict admissibility standards; CLI-12-10, 75 NRC 482 (2012)
when omissions are cured by the subsequent issuance of licensing-related documents, intervenor must timely file a new or amended contention if it intends to challenge the sufficiency of the new information; LBP-12-5, 75 NRC 238 (2012)
10 C.F.R. 2.309(f)(1)(i)-(vi)
each proffered contention must meet all six pleading requirements; LBP-12-8, 75 NRC 548 (2012)
late-filed contentions must satisfy the general contention admissibility requirements; LBP-12-11, 75 NRC 735 (2012)
10 C.F.R. 2.309(f)(1)(iii)
all proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-12-3, 75 NRC 191 (2012)
given that petitioner is challenging an omission in applicant's environmental report of material that petitioner alleges is required to be there, the issue is within the scope of the proceeding; LBP-12-8, 75 NRC 556-57 (2012)
petitioner must demonstrate that the issue raised in a contention is within the scope of the proceeding and material to the findings NRC must make to support the action involved in the proceeding; LBP-12-3, 75 NRC 191 (2012)
petitioner's challenge to applicant's use of Three Mile Island data constitutes a genuine dispute on a material issue and is within the scope of the license renewal proceeding because it challenges the adequacy of the environmental report; LBP-12-8, 75 NRC 560 (2012)
10 C.F.R. 2.309(f)(1)(iv)
although NRC's Fukushima lessons-learned review continues, petitioners have not pointed to concrete information that is material to the findings the NRC must make to support the actions proposed by petitioners; CLI-12-7, 75 NRC 389 (2012)
petitioner fails to demonstrate that the issue of radiation dispersal due to site inundation is material to the findings the NRC must make to support approving a combined license application; LBP-12-7, 75 NRC 517 (2012)
petitioner must demonstrate that the issue raised in a contention is within the scope of the proceeding and material to the findings NRC must make to support the action involved in the proceeding; CLI-12-15, 75 NRC 709 (2012); LBP-12-13, 75 NRC 790 (2012); LBP-12-3, 75 NRC 191 (2012)
there is no legal requirement that applicant consider population projections to the end of the license term, but petitioner could succeed in raising such a contention if it demonstrated that considering such data would be material to the proceeding; LBP-12-8, 75 NRC 555 (2012)
10 C.F.R. 2.309(f)(1)(v)
concern about computer modeling methodology used to calculate groundwater quantity impacts is inadmissible as lacking sufficient factual or expert support and as failing to establish a material factual or legal dispute; LBP-12-3, 75 NRC 200 (2012)
for a contention to be admissible, petitioner must, among other things, provide a concise statement of the alleged facts or expert opinions that support its position on the issue and on which petitioner intends to rely at hearing, together with references to the specific sources and documents that support its position; CLI-12-5, 75 NRC 346 n.265 (2012)
petitioner has provided adequate support for its claim that there are numerous new severe accident mitigation alternatives candidates that should be evaluated for their significance; LBP-12-8, 75 NRC 557 (2012)

petitioner is obliged to present factual allegations and/or expert opinion necessary to support its contention; LBP-12-3, 75 NRC 191 (2012); CLI-12-7, 75 NRC 390 (2012); LBP-12-8, 75 NRC 559 (2012)
petitioner is required to make reference to specific sources and documents on which it intends to rely; LBP-12-8, 75 NRC 560 (2012)
support required for a motion to reopen is greater than that required for a contention under the general admissibility requirements of 10 C.F.R. 2.309(f)(1); CLI-12-3, 75 NRC 138 (2012)
the board erred in admitting a contention that lacks the required support; CLI-12-5, 75 NRC 322 (2012)
10 C.F.R. 2.309(f)(1)(v)-(vi)
contentions must raise a genuine dispute with the license application and must have underlying factual or legal support; CLI-12-15, 75 NRC 709 (2012)
10 C.F.R. 2.309(f)(1)(vi)
all properly formulated contentions must focus on the license application in question, challenging either specific portions of or alleged omissions from the application so as to establish that a genuine dispute exists with the applicant on a material issue of law or fact; LBP-12-3, 75 NRC 192 (2012)
by failing to acknowledge, much less challenge with specificity, the safety and environmental evaluations that applicant will perform prior to construction and operation of a supplemental onsite LLRW storage facility, the contention fails to demonstrate the existence of a genuine dispute with the combined license application on a material issue of law or fact; LBP-12-7, 75 NRC 518 (2012)
concern about computer modeling methodology used to calculate groundwater quantity impacts is inadmissible as lacking sufficient factual or expert support and as failing to establish a material factual or legal dispute; LBP-12-3, 75 NRC 200 (2012)
contention admissibility rules require that a proposed contention be supported by alleged fact or expert opinion; CLI-12-7, 75 NRC 390 (2012)
contention must provide sufficient information to show that a genuine dispute exists on a material issue of law or fact; LBP-12-13, 75 NRC 790 (2012)
contention that merely predicts that at some future date petitioner might petition to intervene in this adjudication fails to identify any dispute with the license application or the DEIS, and thus fails to satisfy the admission requirement; LBP-12-12, 75 NRC 752-53 (2012)
contention was inadmissible because petitioner offered nothing to link the outcome of the Fukushima events to either the nuclear power plant or the license renewal application and thus failed to show any dispute with the application; CLI-12-13, 75 NRC 685 (2012)
licensing boards do not conduct evidentiary hearings to decide whether a future petition to intervene will be filed as predicted; LBP-12-12, 75 NRC 752-53 (2012)
to demonstrate the admissibility of a NEPA contention that an applicant failed to consider a viable alternative to its proposed action, petitioner must show that its contention presents a genuine dispute; CLI-12-5, 75 NRC 342-43 (2012)
10 C.F.R. 2.309(f)(1)(vii)
contentions for adjudicatory hearings must raise a genuine dispute with the applicant/licensee on a material issue of law or fact; CLI-12-10, 75 NRC 486 (2012)
10 C.F.R. 2.309(f)(2)
amendment of contentions and submission of new contentions are allowed when good cause is shown; CLI-12-1, 75 NRC 56 (2012)
because the motion and contention are based on information that is neither new nor materially different from information that was previously available, the motion to reopen and accompanying contention are untimely; LBP-12-11, 75 NRC 739 (2012)
challenge to the inputs and methodology in the SAMA analysis is impermissibly late; CLI-12-10, 75 NRC 488-89 (2012)
claims in a contention that did not genuinely stem from the specific amendments to the aging management plan or from particular information in the revised GALL Report were untimely under standards for admission of new or amended contentions; CLI-12-10, 75 NRC 492 (2012)
contention filed after the deadline for initial intervention petitions must have been submitted in a timely fashion, based on new information that is materially different from information previously available; LBP-12-11, 75 NRC 734-35 (2012)

contentions filed after the deadline for initial intervention petitions also must satisfy the standards for late-filed contentions; CLI-12-10, 75 NRC 483 (2012); CLI-12-15, 75 NRC 709 (2012)
filing of amended or new contentions is permitted only with leave of the board and upon a showing that it is based on information not previously available and materially different and the filing is timely; LBP-12-13, 75 NRC 788 n.13 (2012)
intervenor may need to amend an admitted environmental contention based on applicant's environmental report, or file a new contention altogether challenging Staff's draft environmental impact statement; LBP-12-12, 75 NRC 768 (2012)
intervenors fail to show that, with respect to terrestrial and wetland mitigation plans, there are data or conclusions in the draft environmental impact statement that differ significantly from the data or conclusions in the applicant's documents; LBP-12-12, 75 NRC 759 (2012)
intervenors must file their NEPA contentions based on the environmental report; LBP-12-12, 75 NRC 752 (2012)
late-filed contentions must show that the information upon which the new contention is based was not previously available and is materially different than information previously available; CLI-12-10, 75 NRC 492 n.69 (2012)
new contentions must be timely and based on new information relevant to the plant and the application that is materially different from information previously available; LBP-12-1, 75 NRC 12 (2012)
new or amended contentions filed after the initial filing period has expired may be admitted as timely only with leave of the licensing board if it meets the timeliness standards of this section; LBP-12-7, 75 NRC 509 (2012); LBP-12-12, 75 NRC 748 (2012)
NRC rules contain ample provisions through which litigants may seek admission of new or amended contentions; CLI-12-13, 75 NRC 689 (2012)
petitioner must file NEPA-related contentions based on applicant's environmental report, but new or amended contentions are explicitly permitted if there are data or conclusions in the NRC draft or final environmental impact statement that differ significantly from data or conclusions in applicant's documents; LBP-12-12, 75 NRC 752, 755-56 (2012); LBP-12-13, 75 NRC 788 n.13 (2012)
proponent of a contention is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for its admission; CLI-12-13, 75 NRC 686 n.30 (2012)
the time for challenging the environmental report passes when NRC Staff releases its draft supplemental environmental impact statement, but contentions challenging the ER can be filed with the initial petition and prior to the time Staff's environmental review documents are completed; LBP-12-11, 75 NRC 737 (2012)
10 C.F.R. 2.309(f)(2)(i) & (ii)
because petitioner fails to show that the possibility of site inundation is based on new and materially different information added to the environmental report as part of applicant's revised low-level radioactive waste management plan or identify any new and materially different information on which its site-inundation argument is based, this argument is not timely; LBP-12-7, 75 NRC 514-15 (2012)
10 C.F.R. 2.309(f)(2)(i)-(iii)
amended contentions filed after the initial filing period has expired may be admitted only with leave of the licensing board if they satisfy the three criteria of this section; LBP-12-9, 75 NRC 620-21 (2012)
intervenors may file new or amended contentions in response to the draft environmental impact statement if they can satisfy the test of this section; LBP-12-12, 75 NRC 752 (2012)
new or amended contentions may be filed based on the draft environmental impact statement if based on new and materially different information, whether contained in the DEIS itself or some other source, and if it is filed in a timely manner once the new information becomes available or any delay is excused pursuant to section 2.309(c)(1); LBP-12-12, 75 NRC 752 (2012)
10 C.F.R. 2.309(f)(2)(iii)
any contention filed within 30 days of the date when new and material information on which it is based first became available is regarded as timely; LBP-12-9, 75 NRC 621 (2012)
proposed new or amended contentions shall be deemed timely if filed within 60 days of the date when the document containing the new and material information first becomes available; LBP-12-12, 75 NRC 748 (2012)
10 C.F.R. 2.309(h)(2)
petitioner is generally afforded 7 days to file its reply; LBP-12-3, 75 NRC 187 n.21 (2012)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 2.311
appeal as of right on the question of whether an initial intervention petition should have been wholly denied, or alternatively, was granted improperly are governed by this section; CLI-12-7, 75 NRC 385 n.16 (2012)
10 C.F.R. 2.311(a)
this section governs appeals of board rulings on hearing requests, petitions to intervene, and access to certain nonpublic information; CLI-12-6, 75 NRC 361 (2012)
10 C.F.R. 2.311(a)(1) & (2)
appeals as of right are allowed on the question of whether an intervention petition should have been wholly denied; CLI-12-12, 75 NRC 606 (2012)
10 C.F.R. 2.311(b)
replies to appeals filed pursuant to 10 C.F.R. 2.311 are not permitted; CLI-12-6, 75 NRC 260 n.36 (2012)
10 C.F.R. 2.311(c)
NRC rules of practice provide for an automatic right to appeal a licensing board decision deciding standing and contention admissibility, on the question whether a petition to intervene and request for hearing should have been granted, or denied in its entirety; CLI-12-8, 75 NRC 396-97 (2012)
10 C.F.R. 2.311(d)(1)
appeals as of right are allowed on the question of whether an intervention petition should have been wholly denied; CLI-12-12, 75 NRC 606 (2012)
NRC rules of practice provide for an automatic right to appeal a licensing board decision deciding standing and contention admissibility, on the question whether a petition to intervene and request for hearing should have been granted, or denied in its entirety; CLI-12-8, 75 NRC 396-97 (2012)
the Commission discourages piecemeal appeals; CLI-12-12, 75 NRC 607 (2012)
10 C.F.R. 2.318
commencement of a proceeding is described; CLI-12-3, 75 NRC 140 n.47 (2012)
10 C.F.R. 2.318(a)
board jurisdiction terminates when the period within which the Commission may direct that the record be certified to it for final decision expires, when the Commission renders a final decision, or when the presiding officer withdraws from the case; CLI-12-14, 75 NRC 697 (2012)
this section does not purport to provide an exhaustive list of every situation where board jurisdiction lapses; CLI-12-14, 75 NRC 701 (2012)
10 C.F.R. 2.319
licensing boards have authority to adjudicate exemption issues, but NRC Staff serves as an initial reviewer of exemption requests; LBP-12-6, 75 NRC 273 (2012)
10 C.F.R. 2.319(*l*)
boards are encouraged to refer rulings that raise significant and novel legal or policy issues, the resolution of which would materially advance the orderly disposition of the proceeding; CLI-12-13, 75 NRC 685 n.23 (2012)
10 C.F.R. 2.321(c)
licensing boards have authority to adjudicate exemption issues, but NRC Staff serves as an initial reviewer of exemption requests; LBP-12-6, 75 NRC 273 (2012)
motion to reply is denied because no compelling circumstances are presented; CLI-12-6, 75 NRC 373 (2012)
10 C.F.R. 2.323(f)
boards are encouraged to refer rulings that raise significant and novel legal or policy issues, the resolution of which would materially advance the orderly disposition of the proceeding; CLI-12-13, 75 NRC 685 n.23 (2012)
10 C.F.R. 2.325
applicant for an exemption bears the burden of proof on all issues; LBP-12-6, 75 NRC 268 (2012)
on safety issues, license applicants have the burden of establishing entitlement to the applied-for license by a preponderance of the evidence; LBP-12-5, 75 NRC 235 (2012)
10 C.F.R. 2.326
because the motion to reopen and contention are based on information that is neither new nor materially different from information that was previously available, the motion and contention are untimely; LBP-12-11, 75 NRC 739 (2012)

because the record is closed, petitioner's motion must meet the requirements for reopening; LBP-12-11, 75 NRC 734 (2012)
contention asserting that the NRC's environmental review of the license renewal application has not met the requirements of the Endangered Species Act and the Magnuson-Stevens Fishery Conservation and Management Act fails to satisfy the requirements for reopening the record; LBP-12-10, 75 NRC 635 (2012)
intervenors seeking to have new evidence admitted after a licensing board has closed the evidentiary record must demonstrate sufficient grounds for reopening the record; CLI-12-10, 75 NRC 483 (2012)
motions to reopen a closed record are governed by this section; CLI-12-3, 75 NRC 138 (2012); CLI-12-6, 75 NRC 367 (2012)
NRC rules contain ample provisions through which litigants may seek admission of new or amended contentions; CLI-12-13, 75 NRC 689 (2012)
10 C.F.R. 2.326(a)
all factors must be met for a motion to reopen to be granted; CLI-12-3, 75 NRC 143 (2012)
because the previous licensing board terminated the adjudicatory proceeding that was convened to consider challenges to the operating license renewal application, challengers must satisfy the stringent requirements for reopening; LBP-12-10, 75 NRC 638-39 (2012)
exceptionally grave issues may be considered in the discretion of the presiding officer even if untimely presented; LBP-12-1, 75 NRC 5 (2012)
motions to reopen must be timely, address a significant safety or environmental issue, and must demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially; LBP-12-1, 75 NRC 5 (2012)
petitioners' proposed Fukushima contention lacked the kind of significance and potential for a different result that would justify restarting already-closed hearings; CLI-12-11, 75 NRC 533 (2012)
to have a new contention admitted after the contested proceeding has terminated, petitioner must meet three criteria; CLI-12-14, 75 NRC 700 n.54 (2012)
10 C.F.R. 2.326(a)(1)
claims in a contention that did not genuinely stem from the specific amendments to the aging management plan or from particular information in the revised GALL Report were untimely under standards for reopening the evidentiary record; CLI-12-10, 75 NRC 492 (2012)
exceptionally grave issues may be considered in the discretion of the presiding officer even if untimely presented; CLI-12-10, 75 NRC 496 n.84 (2012); LBP-12-1, 75 NRC 14 (2012); LBP-12-11, 75 NRC (2012)
motions to reopen must be timely and based on new information relevant to the plant and the application that is materially different from information previously available; LBP-12-1, 75 NRC 12 (2012)
reopening will only be allowed where proponent presents material, probative evidence that either could not have been discovered before or could have been discovered but is so grave that, in the judgment of the presiding officer, it must be considered anyway; CLI-12-10, 75 NRC 498 (2012)
10 C.F.R. 2.326(a)(1)-(3)
motions to reopen must be timely, address a significant safety or environmental issue, and show that a materially different result would be or would have been likely had the newly proffered evidence been considered initially; CLI-12-3, 75 NRC 138 (2012); CLI-12-6, 75 NRC 367 (2012); CLI-12-10, 75 NRC 496 (2012); CLI-12-15, 75 NRC 713 (2012)
10 C.F.R. 2.326(a)(3)
boards are better positioned than the Commission to consider, in the first instance, whether petitioner has shown that a materially different result is likely should it prove the claims in the contention; CLI-12-14, 75 NRC 702 (2012)
motions to reopen must demonstrate that a materially different result would likely have been reached had its purported new evidence been considered initially; LBP-12-1, 75 NRC 16 (2012); CLI-12-10, 75 NRC 498 (2012); CLI-12-10, 75 NRC 498 (2012)
petitioner does not demonstrate, with the level of support required under section 2.326(b), that a materially different result would have been likely had the possibility of recriticality over a period longer than 24 hours, or even 4 days, been considered in the SAMA analysis initially; CLI-12-3, 75 NRC 143-44 (2012)

petitioner must satisfy the reopening criteria, which include demonstrating the likelihood of a materially different result in the SAMA analysis if the newly proffered evidence were considered; CLI-12-15, 75 NRC 715 (2012)
to meet the reopening standards, petitioner needed to demonstrate a likelihood that the aqueous modeling would lead to a materially different cost-benefit analysis conclusion; CLI-12-15, 75 NRC 719 (2012)
10 C.F.R. 2.326(b)
a reply affidavit that did not accompany the motion to reopen will not be considered in determining whether petitioners have satisfied this section; LBP-12-10, 75 NRC 652 n.124 (2012)
affidavits setting forth factual and/or technical bases for the reopening criteria must address each criterion separately and provide a specific explanation of why it has been met; CLI-12-3, 75 NRC 138 (2012); CLI-12-6, 75 NRC 367 (2012); CLI-12-10, 75 NRC 496 (2012); CLI-12-15, 75 NRC 713 (2012); LBP-12-1, 75 NRC 5 (2012); LBP-12-10, 75 NRC 639 (2012)
affidavits supporting a motion to reopen must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised; CLI-12-3, 75 NRC 139 (2012); CLI-12-6, 75 NRC 367 (2012); CLI-12-15, 75 NRC 713 (2012)
bare assertions are insufficient to demonstrate a genuine dispute on a material issue of law or fact under NRC's general contention admissibility requirements in section 2.309(f)(1)(vi), let alone a motion to reopen, which sets a higher evidentiary standard; CLI-12-3, 75 NRC 149 (2012)
level of support required to sustain a motion to reopen is greater than that required for a contention under the general admissibility requirements of 10 C.F.R. 2.309(f)(1); CLI-12-6, 75 NRC 367 (2012)
motions to reopen must be accompanied by affidavits that set forth the factual and/or technical bases for movant's claim that the criteria for reopening have been satisfied; CLI-12-3, 75 NRC 138, 149 n.112 (2012); CLI-12-14, 75 NRC 700 n.54 (2012); LBP-12-1, 75 NRC 5 (2012); LBP-12-10, 75 NRC 639, 651-52 (2012)
10 C.F.R. 2.326(d)
boards are to consider NRC Staff's projected schedule for completion of its safety and environmental evaluations in developing the hearing schedule; LBP-12-3, 75 NRC 208 (2012)
motions to reopen relating to a contention not previously in controversy among the parties must also satisfy the requirements for nontimely contentions in 10 C.F.R. 2.309(c)and the admissibility requirements of 10 C.F.R. 2.309(f)(1); LBP-12-1, 75 NRC 5-6 (2012); LBP-12-10, 75 NRC 639 (2012)
reopening standards expressly contemplate contentions that raise issues not previously litigated; CLI-12-3, 75 NRC 140 (2012)
10 C.F.R. 2.335(a)
combined license applicant may reference an as-yet-uncertified design at its own risk; CLI-12-9, 75 NRC 429-30 (2012)
contentions calling for requirements in excess of those imposed by regulations will be rejected as a collateral attack on regulations; CLI-12-5, 75 NRC 315 n.88 (2012)
NRC regulations may not be challenged in an adjudicatory proceeding absent a request for a waiver under section 2.335(b); CLI-12-6, 75 NRC 364 (2012); LBP-12-8, 75 NRC 566 (2012); LBP-12-12, 75 NRC 755 (2012)
to the extent that intervenors challenge all radiological releases from nuclear power plants, the contention presents an impermissible challenge to the NRC's regulations; LBP-12-12, 75 NRC 782 (2012)
10 C.F.R. 2.335(b)
parties seeking a rule waiver must attach an affidavit that, among other things, states with particularity the special circumstances claimed to justify the waiver or exception requested; CLI-12-6, 75 NRC 364 (2012)
petition for rule waiver or exception must allege special circumstances that were not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived and those circumstances must be unique rather than common to a large class of facilities; LBP-12-6, 75 NRC 271 (2012)
sole ground for petition for waiver or exception is that special circumstances with respect to the subject matter of the proceeding are such that the application of the rule or regulation or a provision of it would not serve the purposes for which it was adopted; CLI-12-6, 75 NRC 364 (2012); LBP-12-6, 75 NRC 271 (2012)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 2.336(a)
the board suspended mandatory disclosure obligations until further notice; CLI-12-14, 75 NRC 695 (2012)
10 C.F.R. 2.336(a)(3), (b)(5)
claims and identification of privileged materials must occur within the time provided for disclosing withheld materials; LBP-12-3, 75 NRC 208 n.37 (2012)
10 C.F.R. 2.337
evidence contained in affidavits supporting a motion to reopen must meet the admissibility standards of this section; CLI-12-6, 75 NRC 367 (2012)
10 C.F.R. 2.337(a)
evidence contained in affidavits supporting a motion to reopen must meet the admissibility standards, i.e., be relevant, material, and reliable; CLI-12-3, 75 NRC 138-39 (2012); CLI-12-6, 75 NRC 367 (2012)
10 C.F.R. 2.337(f)(1)
Google Maps and Mapquest searches of distance from petitioners address may be used to establish proximity to a proposed facility; LBP-12-3, 75 NRC 189 n.26 (2012)
10 C.F.R. 2.341
as a consequence of the Commission ruling that the board should have terminated the proceeding once it resolved all contentions, all of the board's earlier interlocutory orders become ripe for appellate review; CLI-12-14, 75 NRC 699 (2012)
challenges to board rulings on late-filed contentions normally fall under NRC rules for interlocutory review; CLI-12-7, 75 NRC 385 (2012)
petitioners have a right to reply to petitions for review subject to this section; CLI-12-6, 75 NRC 360 n.33 (2012)
the Commission exercises its discretion to review a board decision that raises a potentially recurring procedural issue of some importance; CLI-12-14, 75 NRC 699 (2012)
the time for petitioning for review of any of a board's prior interlocutory rulings will run from the date of the Commission's ruling closing the record; CLI-12-14, 75 NRC 703 (2012)
this section applies to appeals of rulings on new contentions filed after initial intervention petitions; CLI-12-7, 75 NRC 385 (2012)
10 C.F.R. 2.341(a)(1)
this section governs review of the majority of presiding officer decisions; CLI-12-6, 75 NRC 361 (2012)
10 C.F.R. 2.341(b)
petitioner will have an opportunity to challenge the board's contention admissibility decision at the end of the case; CLI-12-13, 75 NRC 688-89 (2012)
10 C.F.R. 2.341(b)(2)-(3)
petitions for review of partial initial decision and any answer shall conform to the requirements of this section; LBP-12-5, 75 NRC 255 (2012)
10 C.F.R. 2.341(b)(4)
partial initial decisions by presiding officers will be reviewed as a matter of discretion if petitions raise a substantial question in regard to any of the paragraphs of this section; CLI-12-1, 75 NRC 45-46 (2012)
10 C.F.R. 2.341(b)(4)(i)-(v)
petitions 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-12-3, 75 NRC 138 (2012); CLI-12-6, 75 NRC 361 (2012); CLI-12-7, 75 NRC 385 (2012); CLI-12-10, 75 NRC 483 (2012); CLI-12-15, 75 NRC 710 (2012)
10 C.F.R. 2.341(f)(1)
boards are encouraged to refer rulings that raise significant and novel legal or policy issues, the resolution of which would materially advance the orderly disposition of the proceeding; CLI-12-13, 75 NRC 685 (2012)
10 C.F.R. 2.341(f)(2)
appropriate mechanism to challenge individual contention admissibility determinations following a ruling on an initial petition is a request for interlocutory review; CLI-12-12, 75 NRC 607 (2012)
interlocutory review is allowed where the ruling threatens petitioner with immediate and serious irreparable harm, or has a pervasive and unusual effect on the basic structure of the proceeding; CLI-12-12, 75 NRC 607 (2012); CLI-12-13, 75 NRC 687-88 (2012)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 2.342
because this section does not apply to petitioners' motion for a stay, the Commission does not address applicant's request to strike the motion because it exceeds that rule's 10-page limit; CLI-12-11, 75 NRC 528 n.26 (2012)
the Commission considers requests for stays of licensing board decisions under this section; CLI-12-11, 75 NRC 528 (2012)
10 C.F.R. 2.342(e)
in deciding motions seeking a stay of agency action pending judicial review, the Commission looks to the same four-part test that governs stays of licensing board decisions pending Commission review; CLI-12-11, 75 NRC 528-29 (2012)
10 C.F.R. 2.343
at its discretion, the Commission may allow oral argument upon the request of a party made in a petition for review; CLI-12-12, 75 NRC 613-14 (2012)
10 C.F.R. 2.346(i)
the Secretary of the Commission refers motions to reopen to the Atomic Safety and Licensing Board Panel pursuant to her authority; CLI-12-14, 75 NRC 702 n.61 (2012)
10 C.F.R. 2.710(a)
if the opponent of summary disposition declines to oppose the moving party's prima facie showing of undisputed material facts, those facts will be considered admitted; LBP-12-4, 75 NRC 218-19 (2012)
summary disposition may be entered with respect to all or any part of the matters involved in the proceeding if the motion, along with any appropriate supporting materials, shows that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-12-2, 75 NRC 163 n.18 (2012)
10 C.F.R. 2.710(b)
opponent of a summary disposition motion cannot rest on the allegations or denials of a pleading, but instead must go beyond the pleadings and by its own affidavits, or the depositions, answers to interrogatories, and admissions on file, designate specific facts showing that there is a genuine issue for trial; LBP-12-4, 75 NRC 218 (2012)
10 C.F.R. 2.710(d)(2)
motions for summary disposition shall be granted if 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 dispute as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-12-2, 75 NRC 163 n.18 (2012); LBP-12-4, 75 NRC 218 (2012)
where a nonmoving party declines to oppose a motion for summary disposition, the board shall accept as admitted the moving party's prima facie showing of material facts, but boards cannot grant summary disposition unless movant discharges its burden of demonstrating that it is entitled to a decision as a matter of law; LBP-12-4, 75 NRC 219 (2012)
10 C.F.R. 2.802
insofar as applicant contends that NRC's requirements for self-guarantors are not useful or relevant in evaluating the financial condition of numerous similarly situated corporations, applicant may petition NRC to amend its rules at any time; LBP-12-6, 75 NRC 260 (2012)
10 C.F.R. 2.802(d)
rulemaking petitioner may request that NRC suspend all or any part of any licensing proceeding to which petitioner is a party pending disposition of the petition for rulemaking; CLI-12-6, 75 NRC 357 n.12 (2012)
10 C.F.R. 2.1205
the "materially different result" requirement of section 2.326(a)(3) is analyzed using the Commission's test of whether it has been shown that a motion for summary disposition could be defeated; LBP-12-1, 75 NRC 27 (2012)
10 C.F.R. 2.1205(a)
motions for summary disposition must be in writing and must include a written explanation of the basis of the motion, and affidavits to support statements of fact; LBP-12-4, 75 NRC 218 (2012)
10 C.F.R. 2.1205(b)
summary disposition opponent has 20 days from proponent's filing of its motion to oppose that motion; LBP-12-7, 75 NRC 511-12 (2012)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 2.1205(c)
motions for summary disposition are to be evaluated pursuant to the same standards for summary disposition set forth in 10 C.F.R. Part 2, Subpart G; LBP-12-4, 75 NRC 218 (2012)
Subpart L provides for motions for summary disposition, and such motions are governed by the same standards as those in Subpart G proceedings; LBP-12-2, 75 NRC 163 n.18 (2012)
10 C.F.R. 2.1207
taking of evidence for the record in a Subpart L hearing is described; CLI-12-3, 75 NRC 140 n.47 (2012)
10 C.F.R. 2.1210
partial initial decision constitutes a final decision of the Commission 40 days from the date of issuance or the first agency business day following that date if it is a Saturday, Sunday, or federal holiday unless a petition for review is filed in accordance with section 2.1212; LBP-12-5, 75 NRC 255 (2012)
10 C.F.R. 2.1213
if NRC Staff grants a renewed license before a hearing takes place, the Tribe may seek a stay of Staff's action; CLI-12-4, 75 NRC 156 (2012)
10 C.F.R. Part 2, Appendix B, § II
schedule for Subpart L proceedings, including the closing of the record, is described; CLI-12-3, 75 NRC 140 n.47 (2012)
10 C.F.R. 20.1003
annual 100-millirem limit for members of the public is defined to include radiation exposure to construction workers; CLI-12-2, 75 NRC 108 (2012)
10 C.F.R. 20.1101(b)
radiation protection requirements with which licensees must comply, such as procedures and controls to reduce occupational doses and doses to members of the public to levels that are as low as reasonably achievable, are outlined; LBP-12-4, 75 NRC 217 (2012)
10 C.F.R. 20.1301
annual 100-millirem limit for members of the public is defined to include radiation exposure to construction workers; CLI-12-2, 75 NRC 108 (2012)
10 C.F.R. 20.1406
combined license applications include operational procedures to minimize contamination of the facility and environment, facilitate eventual decommissioning, and minimize generation of radioactive waste; CLI-12-2, 75 NRC 108 (2012)
10 C.F.R. Part 20, Appendix D
even with the additional conservatisms, concentrations at potential receptor locations resulting from bounding accidental effluent release scenarios remain within applicable regulatory limits; CLI-12-9, 75 NRC 451 (2012)
10 C.F.R. Part 30, Appendix C
licensees have not been permitted to include the value of goodwill to meet the 10:1 tangible net worth requirement; LBP-12-6, 75 NRC 262 (2012)
request for exemption from requirements of this regulation to allow applicant to act as a self-guarantor of decommissioning funds without satisfying the financial test for self-guarantors is denied; LBP-12-6, 75 NRC 259 (2012)
10 C.F.R. Part 30, Appendix C, § II.A
the financial test for self-guarantee of the decommissioning funding obligation requires that licensee maintain a bond rating of "A" or better and have a tangible net worth at least 10 times the total current decommissioning cost estimate; LBP-12-6, 75 NRC 261 (2012)
10 C.F.R. Part 30, Appendix C, § II.B.3
to use the self-guarantee mechanism to fulfill its decommissioning funding obligation, a licensee that issues bonds must annually satisfy the financial test set forth in this regulation; LBP-12-6, 75 NRC 261 (2012)
10 C.F.R. 40.4
"construction" and "commencement of construction" are defined; LBP-12-3, 75 NRC 193-94 (2012)
grounds for license denial exist if, prior to issuance of a license to possess and use source and byproduct materials for uranium milling, there is commencement of construction by an applicant; LBP-12-3, 75 NRC 193 (2012)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 40.14
exemption from decommissioning funding requirements to allow applicant to act as a self-guarantor without satisfying the financial test for self-guarantors must be in the public interest or otherwise satisfy the requirements of this section; LBP-12-6, 75 NRC 259, 269 (2012)
exemptions from the alternative financial test for self-guarantee of the decommissioning funding obligation that are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest are permitted; LBP-12-6, 75 NRC 262 (2012)
10 C.F.R. 40.32(e)
applicant is not prohibited from gathering complete information on baseline water quality; LBP-12-3, 75 NRC 193 (2012)
grounds for license denial exist if, prior to issuance of a license to possess and use source and byproduct materials for uranium milling, there is commencement of construction by an applicant; LBP-12-3, 75 NRC 193 (2012)
10 C.F.R. 40.36
request for exemption from requirements of this regulation to allow applicant to act as a self-guarantor of the funds necessary for eventually decommissioning a facility, without satisfying the financial test for self-guarantors is denied; LBP-12-6, 75 NRC 259 (2012)
source materials licensees must demonstrate that sufficient funds will be available to cover the cost of decommissioning its facility; LBP-12-6, 75 NRC 260-61 (2012)
10 C.F.R. 40.36(e)
source materials licensees have numerous options for meeting their decommissioning funding obligations; LBP-12-6, 75 NRC 261 (2012)
10 C.F.R. 40.42(a)
a specific license expires on the expiration date stated in the license, unless the licensee has filed a request for renewal not less than 30 days prior to the expiration date, and a license in timely renewal expires on the day on which NRC makes a final determination to deny the request, or, if the determination states an expiration date, then the stated expiration date; CLI-12-4, 75 NRC 156 n.9 (2012)
10 C.F.R. Part 40, Appendix A, Criterion 5B(5)(c)
contention asserting that because no previous ISL/ISR mining operation has been able to restore groundwater to baseline standards, applicant will be required to request that the Commission set an alternate concentration limit for aqueous contaminants is admissible; LBP-12-3, 75 NRC 196 (2012)
10 C.F.R. 50.10
determination the Commission must make is whether NRC Staff review of a limited work authorization has been adequate to support the findings found in this section; CLI-12-2, 75 NRC 74 (2012)
10 C.F.R. 50.10(a)(2)(iii), (vii)
construction of a transmission line is defined as a preconstruction activity; LBP-12-12, 75 NRC 778 (2012)
10 C.F.R. 50.10(e)(iii)-(iv)
scope of Commission examination of the adequacy of NRC Staff's safety review of a limited work authorization application is described; CLI-12-2, 75 NRC 75 (2012)
10 C.F.R. 50.12(a)(2)(ii)
demonstration that application of a regulation is not necessary to achieve its underlying purpose is listed as a special circumstance warranting an exemption; CLI-12-9, 75 NRC 448 (2012)
exemption should be granted if special circumstances exist, such as when compliance is not necessary to satisfy the purpose of the regulations from which an exemption is sought; LBP-12-6, 75 NRC 270 (2012)
10 C.F.R. 50.12(a)(2)(vi)
exemption may be appropriate where there is present any circumstance that was not considered by NRC when it promulgated the pertinent regulation in the first place; LBP-12-6, 75 NRC 270 (2012)
10 C.F.R. 50.33(g)
emergency planning zones are approximately a 10-mile radius around a reactor unit as adjusted to reflect the road network and land use; CLI-12-9, 75 NRC 458 (2012)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 50.43(a)(3)
notice of combined license applications must be published in the *Federal Register* for 4 consecutive weeks; CLI-12-2, 75 NRC 74 n.46 (2012)
10 C.F.R. 50.47(a)(2)
NRC Staff considers FEMA's findings on emergency plans in making its necessary finding of reasonable assurance that adequate protective measures can, and will, be taken in the event of a radiological emergency; CLI-12-9, 75 NRC 456 (2012)
10 C.F.R. 50.47(b)
emergency planning zones are approximately a 10-mile radius around a reactor unit as adjusted to reflect the road network and land use; CLI-12-9, 75 NRC 458 (2012)
10 C.F.R. 50.49
particular requirements for the environmental qualification of electric components important to safety for nuclear power plants are set forth; CLI-12-10, 75 NRC 490 n.49 (2012)
10 C.F.R. 50.49(c)
a mild environment would at no time be significantly more severe than the environment that would occur during normal plant operation, including anticipated operational occurrences; CLI-12-10, 75 NRC 490 n.49 (2012)
electric equipment important to safety but located in a mild environment does not fall within the scope of this rule; CLI-12-10, 75 NRC 490 n.49 (2012)
10 C.F.R. 50.54(q)
relocation of a technical support center requires separate NRC approval; CLI-12-9, 75 NRC 456 (2012)
10 C.F.R. 50.54(hh)(2)
licensees must develop and implement guidance and strategies to maintain or restore core cooling, containment, and spent-fuel pool cooling capabilities to address loss of large areas from fires or explosions that arise from a beyond-design-basis event; CLI-12-2, 75 NRC 100 (2012)
10 C.F.R. 50.55a
applicants must implement the edition and addendum of the ASME Code for Operation and Maintenance of Nuclear Plants incorporated by reference in this section 12 months before fuel loading; CLI-12-2, 75 NRC 92 (2012)
the ASME Code for Operation and Maintenance of Nuclear Power Plants is incorporated by reference; CLI-12-9, 75 NRC 461 (2012)
10 C.F.R. 50.55a(f)(4)
even if licensee chooses to satisfy a license condition by incorporating the condition into its IST program, it still must comply with this section throughout the life of the plant; CLI-12-9, 75 NRC 464 (2012)
10 C.F.R. 50.63
for purposes of the license renewal rule, NRC Staff has determined that the plant system portion of the offsite power system that is used to connect the plant to the offsite power source should be included within the scope of the station blackout rule; CLI-12-5, 75 NRC 321 (2012)
10 C.F.R. 50.71(e)
final safety analysis reports must be updated so that NRC is aware of changes that are made that do not require prior NRC approval; CLI-12-2, 75 NRC 81 (2012)
10 C.F.R. 50.75(e)(3)
applicant is required to submit a report on its decommissioning funding assurance mechanism after combined licenses are issued and no later than 30 days after the NRC publishes notice of intended operation in the *Federal Register*; CLI-12-2, 75 NRC 83 (2012)
10 C.F.R. 50.109
if combined licenses issue without including license conditions, NRC regulations relevant to the finality of decisions could result in some additional administrative requirements to satisfy in imposing new requirements on licensee; CLI-12-9, 75 NRC 439 (2012)
licenses may be amended to add appropriate conditions, depending on whether the conditions are within the scope of the certified design; CLI-12-9, 75 NRC 438 (2012)
the Commission administratively exempted from the backfit rule, an order to the combined license holder to address spent fuel pool instrumentation requirements not specified in the certified design as enhanced protective measures that represent a substantial increase in the protection of public health and safety; CLI-12-9, 75 NRC 443 n.101 (2012)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 50.109(a)(3)
when NRC imposes new regulatory requirements that are important safety enhancements but not deemed necessary to ensure adequate protection of public health and safety, NRC often does not require existing licensees to implement them based on considerations such as whether they are cost-beneficial; CLI-12-2, 75 NRC 127 (2012)
10 C.F.R. 50.109(a)(4)(i)
NRC could require modifications to the inservice testing program pursuant to compliance backfit provisions; CLI-12-2, 75 NRC 93 (2012)
10 C.F.R. 50.109(a)(4)(ii)
an exception to the backfit rule is provided if the Commission determines that 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; CLI-12-9, 75 NRC 440 n.98 (2012)
10 C.F.R. Part 50, Appendix A, GDC 11
reactors must exhibit a negative void coefficient in the power operating range; LBP-12-12, 75 NRC 774-75 (2012)
10 C.F.R. Part 50, Appendix A, GDC 19
applicant must ensure that its control room remains habitable in case of accidental release of hazardous gases; CLI-12-9, 75 NRC 454 (2012)
10 C.F.R. Part 50, Appendix E
emergency planning zones are approximately a 10-mile radius around a reactor unit as adjusted to reflect the road network and land use; CLI-12-9, 75 NRC 458 (2012)
10 C.F.R. Part 50, Appendix E, § IV.F.2
every 2 years, licensee stages full-participation emergency exercises, which are evaluated by both FEMA and NRC; CLI-12-9, 75 NRC 456 (2012)
10 C.F.R. 51.1
section 51.28(a)(5) is subject to the general limitation that the NRC's NEPA regulations do not apply to any environmental effects that NRC's domestic licensing and related regulatory functions may have upon the environment of foreign nations; LBP-12-12, 75 NRC 754-55 (2012)
10 C.F.R. 51.4
construction of a transmission line is defined as a preconstruction activity; LBP-12-12, 75 NRC 778 (2012)
10 C.F.R. 51.10
compliance with NEPA is ultimately the responsibility of NRC; CLI-12-13, 75 NRC 684 (2012)
10 C.F.R. 51.14(a)
purpose of applicant's environmental report is to aid the Commission in its preparation of an environmental impact statement; LBP-12-9, 75 NRC 623 (2012)
10 C.F.R. 51.14(b)
Council on Environmental Quality regulations that define the scope of an environmental impact statementto include cumulative impacts are incorporated ; LBP-12-3, 75 NRC 201 (2012)
separate actions are connected if, among other things, they cannot or will not proceed unless other actions are taken previously or simultaneously, or they are interdependent parts of a larger action and depend on the larger action for their justification; LBP-12-12, 75 NRC 779 (2012)
10 C.F.R. 51.20(b)(2)
an environmental impact statement is required for renewal of an operating license for a nuclear power reactor; LBP-12-1, 75 NRC 36 (2012)
10 C.F.R. 51.28(a)(5)
First Nations in Canada must receive invitations to participate in the environmental impact statement scoping process when there are transboundary environmental impacts from a project; LBP-12-12, 75 NRC 753 (2012)
10 C.F.R. 51.29(a)(1)
NRC is directed to use the Council on Environmental Quality regulation 40 C.F.R. 1502.4 in defining the scope of its impact statements; LBP-12-12, 75 NRC 778-79 n.212 (2012)
10 C.F.R. 51.41
NEPA obligates NRC Staff to undertake a full and independent evaluation of the environmental impacts of applicant's proposed action; LBP-12-9, 75 NRC 626 n.16 (2012)

NRC Staff relies heavily on applicant's environmental report in preparing its environmental impact statement; LBP-12-5, 75 NRC 236 (2012)
10 C.F.R. 51.45(a)
applicant may submit a supplement to an environmental report at any time; CLI-12-13, 75 NRC 687 n.31 (2012); LBP-12-13, 75 NRC 788 (2012)
10 C.F.R. 51.45(b)
environmental reports must discuss impacts of the proposed action on the environment, adverse environmental effects that cannot be avoided, alternatives to the proposed action, relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitments of resources; LBP-12-9, 75 NRC 623 n.10 (2012)
10 C.F.R. 51.45(b)(1)
cumulative impacts analysis is included within the scope of environmental impact statements; LBP-12-3, 75 NRC 202 n.33 (2012)
environmental reports must discuss environmental impacts in proportion to their significance; LBP-12-9, 75 NRC 623 (2012)
10 C.F.R. 51.45(b)(1)-(2)
environmental reports must discuss reasonably foreseeable environmental impacts of the proposed action in proportion to their significance, as well as adverse environmental effects that cannot be avoided if the proposed plan is implemented; LBP-12-9, 75 NRC 630 (2012)
10 C.F.R. 51.45(b)(3)
an environmental report's discussion of alternatives shall be sufficiently complete to aid the Commission in developing and exploring its own set of alternatives in its environmental impact statement; LBP-12-8, 75 NRC 567 (2012)
applicant is to provide in its environmental report an analysis of alternatives to the proposed action that is sufficiently complete to aid NRC Staff in developing and exploring its own set of alternatives; LBP-12-8, 75 NRC 562 (2012)
applicant must provide a discussion of the no-action alternative in its environmental report; LBP-12-8, 75 NRC 567 (2012)
10 C.F.R. 51.45(b)(5)
applicants environmental report is to discuss any irreversible and irretrievable commitments of resources that would be involved in the proposed action; LBP-12-3, 75 NRC 196 (2012)
10 C.F.R. 51.45(c)
environmental reports must contain an analysis of the cumulative impacts of the activities to be authorized by the combined license in light of preconstruction impacts described in the ER; LBP-12-9, 75 NRC 623 n.10 (2012)
environmental reports shall include an analysis that considers and balances environmental effects of the proposed action, environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects; LBP-12-8, 75 NRC 562 (2012); LBP-12-9, 75 NRC 623 n.10 (2012)
environmental reports should contain sufficient data to aid the Commission in its development of an independent analysis; CLI-12-13, 75 NRC 687 n.31 (2012); LBP-12-9, 75 NRC 623 (2012)
it is applicant's responsibility to include information in the environmental report that NRC Staff needs to prepare the draft environmental impact statement, including information on alternatives available for reducing or avoiding adverse environmental effects; LBP-12-12, 75 NRC 769-70 (2012)
NRC limits the scope of environmental analysis of preconstruction activities to activities falling within the scope of its regulatory authority; CLI-12-9, 75 NRC 472 (2012)
NRC Staff relies heavily on applicant's environmental report in preparing its environmental impact statement; LBP-12-5, 75 NRC 236 (2012)
10 C.F.R. 51.45(d)
applicant must discuss in an environmental report the status of its compliance with environmental quality standards and requirements that have been imposed by federal, state, regional, and local agencies having responsibility for environmental protection; LBP-12-12, 75 NRC 763 (2012)
applicant's environmental report is required to list required federal permits and approvals and the current status of compliance with those requirements; LBP-12-12, 75 NRC 763 (2012)

if applicant was required to update its environmental report every time NRC issued a request for additional information, there would need to be dozens, if not hundreds, of such updates; LBP-12-13, 75 NRC 787 n.9 (2012)
10 C.F.R. 51.50(c)
contentions that challenge applicant's environmental report are within the scope of a combined license proceeding; LBP-12-9, 75 NRC 630 (2012)
every combined license application must be accompanied by an environmental report; LBP-12-9, 75 NRC 623 (2012)
10 C.F.R. 51.52
every environmental report prepared for the construction permit stage, the early site permit stage, or the combined license stage of a light-water-cooled nuclear power reactor must contain a statement concerning transportation of fuel and radioactive wastes to and from the reactor; LBP-12-12, 75 NRC 771 (2012)
10 C.F.R. 51.52(b)
for reactors not meeting the conditions of section 51.52(a), the environmental report shall contain a full description and detailed analysis of the environmental effects of transportation of fuel and wastes to and from the reactor, including assessments of the environmental impact under normal conditions of transport and for the environmental risk from accidents in transport; LBP-12-12, 75 NRC 773 (2012)
this section does not establish limits on power or on fuel enrichment, but instead requires applicant to perform an analysis if the conditions of section 51.52(a) are not met; LBP-12-12, 75 NRC 773 (2012)
10 C.F.R. 51.53(c)
license renewal applicants must submit an environmental report to aid NRC Staff in its preparation of a supplemental environmental impact statement; CLI-12-13, 75 NRC 684 (2012)
10 C.F.R. 51.53(c)(1)
license renewal applications must include an environmental report to assist NRC Staff in preparing its environmental impact statement; LBP-12-8, 75 NRC 549 (2012)
10 C.F.R. 51.53(c)(2)
license renewal applicant's environmental report must address environmental impacts of the proposed action and compare them to impacts of alternative actions; CLI-12-5, 75 NRC 338 (2012); CLI-12-8, 75 NRC 397 (2012); LBP-12-8, 75 NRC 549, 567 (2012)
10 C.F.R. 51.53(c)(3)
issues that a license renewal applicant must address in its environmental report, as well as those that it need not address, are listed; LBP-12-8, 75 NRC 549 (2012)
10 C.F.R. 51.53(c)(3)(ii)(B)
license renewal applicants whose plants use once-through cooling systems must provide a copy of current Clean Water Act 316(b) determinations and, if necessary, a 316(a) variance in accordance with 40 C.F.R. Part 125, or equivalent state permits and supporting documentation; LBP-12-10, 75 NRC 676 (2012)
10 C.F.R. 51.53(c)(3)(ii)(L)
although disagreement over proper interpretation of NRC regulations may give rise to an admissible contention, petitioner's proposed interpretation is in direct conflict with the plain meaning of the regulation and its Statement of Considerations; LBP-12-8, 75 NRC 566 (2012)
license renewal applicants must provide a severe accident mitigation alternatives analysis if NRC Staff has not yet previously considered SAMAs for the applicant's plant in an environmental impact statement or related supplement, or in an environmental assessment; CLI-12-5, 75 NRC 322-23 (2012); LBP-12-8, 75 NRC 564 (2012)
severe accident mitigation alternatives analysis is a Category 2 issue and SAMAs must be considered for all plants that have not considered such alternatives; LBP-12-8, 75 NRC 551 (2012)
severe accident mitigation alternatives analysis is part of the NRC's license renewal review under the National Environmental Policy Act; CLI-12-1, 75 NRC 41 (2012)
the intent of NRC in promulgating this regulation is to exempt applicants from being required to submit SAMA analyses in the license renewal proceedings for Limerick, Watts Bar, and Comanche Peak; LBP-12-8, 75 NRC 566 (2012)
the requirement for license renewal applicants to consider severe accident mitigation alternatives stems from this environmental regulation; CLI-12-10, 75 NRC 484 (2012)

the severe accident mitigation alternatives analysis is not part of NRC's safety review for license renewal under the Atomic Energy Act, but is instead a mitigation alternatives analysis conducted pursuant to the National Environmental Policy Act; CLI-12-15, 75 NRC 706 (2012)

10 C.F.R. 51.53(c)(3)(iv)

given that petitioner is challenging an omission in applicant's environmental report of material that petitioner alleges is required to be there, the issue is within the scope of the proceeding; LBP-12-8, 75 NRC 556-57 (2012)

license renewal applicant's environmental report is required to consider any new and significant information that might alter previous environmental conclusions; LBP-12-8, 75 NRC 549, 550 (2012)

10 C.F.R. 51.53(c)(3)(ii)(E)

license renewal applicants must assess the impact of the proposed action on threatened or endangered species in accordance with the Endangered Species Act as part of their environmental report; LBP-12-10, 75 NRC 642 (2012)

10 C.F.R. 51.71

for each license renewal application, NRC Staff must prepare a plant-specific supplement to the generic environmental impact statement that adopts applicable generic impact findings from the GEIS and analyzes site-specific impacts; LBP-12-8, 75 NRC 549 (2012)

there is no enumeration of the required contents of a draft environmental impact statement regarding endangered or threatened species; LBP-12-12, 75 NRC 762 (2012)

10 C.F.R. 51.71(c)

although NRC Staff, in its draft environmental impact statement, did not explain the Great Lakes Compact's review process, it satisfied its duty by stating that applicant must obtain a water withdrawal permit from the state and citing the governing Michigan statute; LBP-12-12, 75 NRC 764-65 (2012)

10 C.F.R. 51.72

asserted new information must present a seriously different picture of the environmental impact of the proposed project than what was previously envisioned; LBP-12-1, 75 NRC 15 n.57 (2012)

10 C.F.R. 51.72(a)

NRC will supplement an EIS if there are substantial changes in the proposed action relevant to environmental concerns or new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; CLI-12-7, 75 NRC 388 (2012)

10 C.F.R. 51.73, 51.74

although NRC must respond to the significant views of other agencies, particularly if they are critical of NRC's analysis, that duty applies at the final environmental impact statement stage after the draft EIS has been circulated to interested federal and state agencies for their review and comment; LBP-12-12, 75 NRC 760 (2012)

10 C.F.R. 51.92

when an environmental impact statement is prepared at the early site permit stage, NRC Staff must prepare a supplemental EIS for the combined license focusing on issues related to the impacts of construction and operation for which new and significant information has been identified; CLI-12-2, 75 NRC 117 (2012)

10 C.F.R. 51.92(a)

a final environmental impact statement may be supplemented if, before a proposed action is taken, new and significant information comes to light that bears on the proposed action or its impacts; CLI-12-6, 75 NRC 376 n.147 (2012); CLI-12-7, 75 NRC 388 (2012)

the duty to supplement the final supplemental environmental impact statement is mandatory, is not avoidable through findings of compliance with the agency's safety regulations, and is waivable only where the consequences are remote and highly improbable; CLI-12-11, 75 NRC 532 (2012)

10 C.F.R. 51.92(c)(3)

final supplemental environmental impact statement did not contain a separate discussion of alternative sites because these were assessed at the early site permit stage; CLI-12-2, 75 NRC 118 n.352 (2012)

10 C.F.R. 51.95(c)

for each license renewal application, NRC Staff must prepare a plant-specific supplement to the generic environmental impact statement that adopts applicable generic impact findings from the GEIS and analyzes site-specific impacts; LBP-12-8, 75 NRC 549 (2012); LBP-12-10, 75 NRC 644 (2012)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 51.95(c)(4)
NRC Staff must make a recommendation of the environmental acceptability of the license renewal action, and the Commission shall determine whether or not the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable; CLI-12-8, 75 NRC 399 n.36 (2012)

10 C.F.R. 51.107
the Commission must determine whether the NRC Staff's review of a combined license application has been adequate to support the findings set forth in this regulation; CLI-12-9, 75 NRC 428 (2012)

10 C.F.R. 51.107(a)
determination the Commission must make is whether NRC Staff review of a combined license application has been adequate to support the findings found in this section; CLI-12-2, 75 NRC 74 (2012)

10 C.F.R. 51.107(a)(1)-(4)
scope of Commission examination of whether environmental requirements of a combined license application have been met is described; CLI-12-2, 75 NRC 75 (2012)

10 C.F.R. 51.107(a)(2)
under NEPA, NRC independently considers the final balance among the conflicting factors contained in the record in determining whether the combined licenses should issue; CLI-12-9, 75 NRC 465 (2012)

10 C.F.R. 51.107(a)(3)
although NRC does not license construction or operation of a transmission corridor, it has the authority to deny the license for a proposed nuclear plant if, for example, the total environmental costs of the new reactor and connected actions exceed the benefits; LBP-12-12, 75 NRC 779-80 (2012)
only by evaluating all environmental costs of the proposed action can the NRC adequately fulfill its obligation to determine, after weighing the environmental, economic, technical, and other benefits against environmental and other costs whether the combined license should be issued, denied, or appropriately conditioned to protect environmental values; LBP-12-12, 75 NRC 780 (2012)

10 C.F.R. 51.107(d)
determination the Commission must make is whether NRC Staff review of a limited work authorization has been adequate to support the findings found in this section; CLI-12-2, 75 NRC 74 (2012)

10 C.F.R. 51.107(d)(1)(i)-(iv)
scope of Commission examination of whether environmental requirements of a limited work authorization have been met is described; CLI-12-2, 75 NRC 75 (2012)

10 C.F.R. Part 51, Subpart A, Appendix A
environmental impact statements must consider the alternative of no action; LBP-12-8, 75 NRC 567 (2012)

10 C.F.R. Part 51, Subpart A, Appendix A, § 5
the environmental review identified an appropriate range of alternatives with respect to both alternative power sources and alternative sites, and adequately described the environmental impacts of each alternative; CLI-12-9, 75 NRC 474 (2012)
the NEPA alternatives analysis is the heart of the environmental impact statement; CLI-12-9, 75 NRC 473 (2012)

10 C.F.R. Part 51, Subpart A, Appendix B, tab. B-1
although potential severe accident mitigation alternatives must be considered for license renewal, no site-specific severe accident impacts analysis needs to be done; CLI-12-15, 75 NRC 709 (2012)
consultation with appropriate agencies is needed at the time of license renewal to determine whether threatened or endangered species are present and whether they would be adversely affected; LBP-12-10, 75 NRC 642 (2012)
endangered/threatened species is a Category 2 issue that requires site-specific analysis in the supplemental environmental impact statement; LBP-12-10, 75 NRC 644 (2012)
groundwater quality degradation for cooling ponds in salt marshes is a Category 1 issue; LBP-12-8, 75 NRC 552 (2012)
risk from groundwater releases at ocean sites would be a small fraction of that from atmospheric releases; CLI-12-15, 75 NRC 726 n.112 (2012)
risk of severe accidents is small for all plants; LBP-12-8, 75 NRC 565 (2012)
severe accident mitigation alternatives analysis is a Category 2 issue and SAMAs must be considered for all plants that have not considered such alternatives; LBP-12-8, 75 NRC 551, 554 (2012)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. Part 51, Subpart A, Appendix B, tbl. B-1 n.2
Category 1 issues are those resolved generically by the generic environmental impact statement and need not be addressed as part of license renewal; LBP-12-8, 75 NRC 549 (2012)
Category 2 issues require plant-specific review as part of license renewal; LBP-12-8, 75 NRC 549 (2012)
10 C.F.R. 52.17(b)(2), (3)
early site permit applicants may propose complete and integrated emergency plans for review and approval in conjunction with their application, but they are not required to do so; CLI-12-2, 75 NRC 103 n.237 (2012)
10 C.F.R. 52.55(c)
combined license applicant may reference an as-yet-uncertified design at its own risk; CLI-12-9, 75 NRC 429-30 (2012)
10 C.F.R. 52.63
the Commission administratively exempted, from the issue finality requirements, an order to the combined license holder to address spent fuel pool instrumentation requirements not specified in the certified design as enhanced protective measures that represent a substantial increase in the protection of public health and safety; CLI-12-9, 75 NRC 443 n.101 (2012)
10 C.F.R. 52.63(a)
where the combined license application references a certified design, elements of the licensing basis already have been established, and thus NRC would have to establish a regulatory basis for any change to the established design regardless of whether the COLs have issued; CLI-12-9, 75 NRC 438 n.87 (2012)
10 C.F.R. 52.73
combined license applications may reference a standard design certification and an early site permit; CLI-12-2, 75 NRC 67-68 (2012)
10 C.F.R. 52.79(a)(3)
COL applications must include kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in 10 C.F.R. Part 20; LBP-12-4, 75 NRC 217, 223 (2012)
no quantity or time restrictions relative to onsite storage of low-level radioactive waste is specified; LBP-12-4, 75 NRC 218 (2012)
whether offsite low-level radioactive waste storage and disposal facilities will ultimately be available is not material to summary disposition because applicant's FSAR provides an adequate contingency plan for long-term onsite storage of LLRW in the event that offsite storage and disposal facilities are not available; LBP-12-4, 75 NRC 222-23(2012)
10 C.F.R. 52.79(a)(21)
combined license applications must provide an emergency plan for the site; CLI-12-9, 75 NRC 455 (2012)
10 C.F.R. 52.80(d)
combined license applications must include a description and plan for implementing the requirements for maintaining or restoring core cooling, containment, and spent fuel pool cooling capabilities; CLI-12-2, 75 NRC 100 (2012)
10 C.F.R. 52.83
where the combined license application references a certified design, elements of the licensing basis already have been established, and thus NRC would have to establish a regulatory basis for any change to the established design regardless of whether the COLs have issued; CLI-12-9, 75 NRC 438 n.87 (2012)
10 C.F.R. 52.93(a)(1)
NRC Staff review included evaluation of exemption criteria; CLI-12-2, 75 NRC 82 (2012)
10 C.F.R. 52.97
basis of NRC Staff's reasonable assurance finding on combined license applicant's squib valve inspection program for which the current version of the ASME code is insufficient is explained; CLI-12-2, 75 NRC 91 (2012)
determination the Commission must make is whether NRC Staff review of a combined license application has been adequate to support the findings found in this section; CLI-12-2, 75 NRC 74 (2012); CLI-12-9, 75 NRC 427-28 (2012)

to authorize issuance of combined licenses, NRC must determine that applicable regulations have been met, there is reasonable assurance that the new reactors will be constructed and will operate in conformity with NRC regulations, and issuance of the licenses will not be inimical to the public health and safety; CLI-12-2, 75 NRC 125 (2012)

10 C.F.R. 52.97(a)(1)(i)-(v)
scope of Commission examination of the adequacy of NRC Staff's safety review of a combined license application is described; CLI-12-2, 75 NRC 74-75 (2012)

10 C.F.R. 52.97(a)(1)(iv)
combined license applicant's status as a current power reactor licensee generally provides the necessary support for NRC Staff's finding that applicant is technically qualified for a new license; CLI-12-2, 75 NRC 83 (2012)

10 C.F.R. 52.98
licenses may be amended to add appropriate conditions, depending on whether the conditions are within the scope of the certified design; CLI-12-9, 75 NRC 438 (2012)

10 C.F.R. 52.98(a)
when NRC imposes new regulatory requirements that are important safety enhancements but not deemed necessary to ensure adequate protection of public health and safety, NRC often does not require existing licensees to implement them based on considerations such as whether they are cost-beneficial; CLI-12-2, 75 NRC 127 (2012)

10 C.F.R. 52.98(c)
final safety analysis reports must be updated so that NRC is aware of changes that are made that do not require prior NRC approval; CLI-12-2, 75 NRC 81 (2012)

10 C.F.R. 52.103(a)
applicant is required to submit a report on its decommissioning funding assurance mechanism after combined licenses are issued and no later than 30 days after the NRC publishes notice of intended operation in the *Federal Register*; CLI-12-2, 75 NRC 83 (2012)

10 C.F.R. Part 52, Appendix D, § II.E
compliance with design-related information contained in the generic design control document that is approved but not certified (Tier 2 information) is required, but generic changes to and plant-specific departures from Tier 2 are governed by 10 C.F.R. Part 52, Appendix D, § VIII; CLI-12-2, 75 NRC 87 n.131 (2012)

10 C.F.R. Part 52, Appendix D, § II.F
"Tier 2*" means the portion of the Tier 2 information, designated as such in the generic design control document, that is subject to the change process in 10 C.F.R. Part 52, Appendix D, §VIII.B.6; CLI-12-2, 75 NRC 97 n.190 (2012)

10 C.F.R. Part 52, Appendix D, § IV.A.2
NRC Staff evaluated and approved exemption from regulatory requirements for organization and numbering of the combined license application; CLI-12-2, 75 NRC 82 (2012)

10 C.F.R. Part 52, Appendix D, § IV.A.2.d
because departure from the wet-bulb noncoincident temperature is considered Tier 1 information or part of the AP1000 certified design, a regulatory exemption is required; CLI-12-9, 75 NRC 445 (2012)

10 C.F.R. Part 52, Appendix D, § VIII
the Commission administratively exempted, from the issue finality requirements, an order to the combined license holder to address spent fuel pool instrumentation requirements not specified in the certified design as enhanced protective measures that represent a substantial increase in the protection of public health and safety; CLI-12-9, 75 NRC 443 n.101 (2012)

10 C.F.R. Part 52, Appendix D, § VIII.A.4
because departure from the wet-bulb noncoincident temperature is considered Tier 1 information or part of the AP1000 certified design, a regulatory exemption is required; CLI-12-9, 75 NRC 445 (2012)

10 C.F.R. Part 52, Appendix D, § VIII.B.5.b
final safety analysis reports must be updated so that NRC is aware of changes that are made that do not require prior NRC approval; CLI-12-2, 75 NRC 81 (2012)

10 C.F.R. 54.4(a)
focus of license renewal safety review is described; CLI-12-5, 75 NRC 303 (2012)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 54.4(a)(3)
for purposes of the license renewal rule, NRC Staff has determined that the plant system portion of the offsite power system that is used to connect the plant to the offsite power source should be included within the scope of the station blackout rule; CLI-12-5, 75 NRC 321 (2012)

10 C.F.R. 54.4(b)
limited scope of the intended functions of structures, systems, and components subject to aging management review is described; CLI-12-5, 75 NRC 304 (2012)

10 C.F.R. 54.21(a)(1)(i)
a variety of electrical and instrumentation and control components are excluded from an aging management review for license renewal; CLI-12-5, 75 NRC 317 (2012)
an illustrative list of structures and components that are subject to aging management review is provided in this section; CLI-12-5, 75 NRC 316 n.91 (2012)
license renewal applicants must conduct aging management reviews of any structure, system, or component that performs one of the intended functions if the SSC is passive (performs its intended function(s) without moving parts or without a change in configuration or properties); CLI-12-5, 75 NRC 303-04 (2012)
transformers perform their intended function through a change in state similar to switchgear, power supplies, battery chargers, and power inverters, which have been excluded from aging management review; CLI-12-5, 75 NRC 318 n.99 (2012)

10 C.F.R. 54.21(a)(1)(ii)
license renewal applicants must conduct aging management reviews of any structure, system, or component that performs one of these intended functions if the SSC is long-lived (not subject to replacement based on a qualified life or specified time period); CLI-12-5, 75 NRC 304 (2012)

10 C.F.R. 54.21(a)(3)
applicants must demonstrate reasonable assurance that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis for the period of extended operation; CLI-12-5, 75 NRC 304 (2012)
structures and components associated only with active functions can be generically excluded from a license renewal aging management review; CLI-12-5, 75 NRC 304 (2012)

10 C.F.R. 54.29(a)
if NRC concludes that an aging management program is consistent with the GALL Report, then it accepts applicant's commitment to implement that AMP, finding the commitment itself to be an adequate demonstration of reasonable assurance; CLI-12-5, 75 NRC 304 (2012)

10 C.F.R. 54.29(a)(1)
structures and components associated only with active functions can be generically excluded from a license renewal aging management review; CLI-12-5, 75 NRC 304 (2012)

10 C.F.R. 61.55(a)(1) & (2)
NRC divides low-level radioactive waste into three classes (A, B, and C) based on the concentration and types of long-lived and short-lived radionuclides; LBP-12-4, 75 NRC 216 n.5 (2012); LBP-12-7, 75 NRC 505 n.5 (2012)

10 C.F.R. 70.22(b) & 70.32(c)
NRC Staff evaluated and approved exemption from regulatory requirements for special nuclear material control and accounting program description; CLI-12-2, 75 NRC 82 (2012)

10 C.F.R. 72.75
licensee assessed the structural integrity and radiation shielding capability of both the TN-32 cask and NUHOMS-HD dry cask storage systems for an earthquake and reviewed the event for reportability; DD-12-1, 75 NRC 595 (2012)

10 C.F.R. 73.54
cyber security plans must be submitted for NRC approval; CLI-12-2, 75 NRC 105 (2012)

10 C.F.R. 73.54(e)(1)
cyber security plans must take into account site-specific conditions; CLI-12-2, 75 NRC 105 (2012)

10 C.F.R. 73.54(f)
written policies, implementing procedures, site-specific analysis, and other supporting technical information developed to implement cyber security plans are subject to periodic inspection by NRC Staff; CLI-12-2, 75 NRC 105 (2012)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 74.31, 74.41, & 74.51
NRC Staff evaluated and approved exemption from regulatory requirements for special nuclear material control and accounting program description; CLI-12-2, 75 NRC 82 (2012)
10 C.F.R. Part 100
facility design and operation should ensure that radiological consequences of design basis events do not exceed 10 percent of dose limits; LBP-12-7, 75 NRC 518 (2012)
10 C.F.R. 100.21
NRC Staff's steps in the geographic and demographic review in the final safety evaluation report to determine whether the COL applicant has proposed an acceptable site, including acceptable site boundaries, with appropriate consideration of nearby populations and natural and manmade features, are described; CLI-12-9, 75 NRC 450 (2012)
10 C.F.R. Part 100, Appendix A
design bases for earthquakes are to be determined through evaluation of the geologic and seismic history of the site and surrounding region; DD-12-1, 75 NRC 589 (2012)
none of the faults known to exist at the North Anna site are capable faults; DD-12-1, 75 NRC 597 (2012)
10 C.F.R. Part 100, Appendix A, § V(a)(2)
before restart, licensee is required to demonstrate to NRC that no functional damage from seismic events has occurred to those features necessary for continued operation without undue risk to the health and safety of the public; DD-12-1, 75 NRC 576 (2012)
nuclear power plants are required to be shut down when the vibratory ground motion exceeds that of the operating basis earthquake; DD-12-1, 75 NRC 576 (2012)
when an earthquake results in ground accelerations greater than those assumed in the design of the nuclear power plant, the plant is required to be shut down and to 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-12-1, 75 NRC 588 (2012)
40 C.F.R. 1502.4(a)
proposals or parts of proposals that are related to each other closely enough to be, in effect, a single course of action shall be evaluated in a single impact statement; LBP-12-12, 75 NRC 779 (2012)
40 C.F.R. 1502.14
the NEPA alternatives analysis is the heart of the environmental impact statement; CLI-12-9, 75 NRC 473 (2012)
40 C.F.R. 1503.1
although NRC must respond to the significant views of other agencies, particularly if they are critical of NRC's analysis, that duty applies at the final environmental impact statement stage after the draft EIS has been circulated to interested federal and state agencies for their review and comment; LBP-12-12, 75 NRC 760 (2012)
40 C.F.R. 1508.7
cumulative impacts analysis is included within the scope of environmental impact statements; LBP-12-3, 75 NRC 201 (2012)
40 C.F.R. 1508.25
scope of an environmental impact statement is defined as the range of action, alternatives, and impacts to be considered in the EIS; LBP-12-12, 75 NRC 778 (2012)
40 C.F.R. 1508.25(a)(1)
although NEPA does not direct any particular substantive result, all environmental consequences of the proposed action, including connected actions, must be fully evaluated in the FEIS; LBP-12-12, 75 NRC 780 (2012)
40 C.F.R. 1508.25(a)(1)(ii) & (iii)
separate actions are connected if, among other things, they cannot or will not proceed unless other actions are taken previously or simultaneously, or they are interdependent parts of a larger action and depend on the larger action for their justification; LBP-12-12, 75 NRC 779 (2012)
40 C.F.R. 1508.25(c)
cumulative impacts analysis is included within the scope of environmental impact statements; LBP-12-3, 75 NRC 201 (2012)

LEGAL CITATIONS INDEX

REGULATIONS

50 C.F.R. 402.02
"major construction activity" is defined as a construction project, or other undertaking having similar physical impacts, that is a major federal action significantly affecting the quality of the human environment as referred to in NEPA; LBP-12-10, 75 NRC 640 n.42 (2012)

50 C.F.R. 402.06
preparation of the biological assessment may be consolidated with interagency cooperation procedures required by other statutes, such as NEPA; LBP-12-11, 75 NRC 736 (2012)

50 C.F.R. 402.06(a)
agencies are encouraged to incorporate consultation procedures on endangered/threatened species and essential fish habitat into their NEPA review; LBP-12-10, 75 NRC 644 n.69 (2012)

50 C.F.R. 402.10(a)
a conference is required on any action likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat; LBP-12-10, 75 NRC 672 n.21 (2012)

50 C.F.R. 402.12
clarification is provided on the requirements with respect to biological assessments; LBP-12-11, 75 NRC 736 (2012)

50 C.F.R. 402.12(a)
each agency proposing to take an action that might be covered by the Endangered Species Act is to review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat; LBP-12-10, 75 NRC 640 (2012)
formal consultation is only required if the acting agency makes a determination that its action may affect listed species or critical habitat; LBP-12-10, 75 NRC 640 (2012)
the action agency's biological assessment may be used by the federal agency in determining whether formal consultation or a conference is necessary; LBP-12-10, 75 NRC 672 (2012)

50 C.F.R. 402.12(a) & (b)(1)
where an acting agency is engaged in major construction activities, the acting agency is to evaluate, through preparation of a biological assessment, whether the action is likely to adversely affect species or habitat; LBP-12-10, 75 NRC 640 (2012)

50 C.F.R. 402.12(c), (d)
to prepare a biological assessment, the acting agency must first request from the Services a list of endangered or threatened species or habitat that may be present in the area of the action, or provide to the Services its own list for their review; LBP-12-10, 75 NRC 640-41 (2012)

50 C.F.R. 402.12(d)
candidate species have no legal status and are accorded no protection under the Endangered Species Act; LBP-12-10, 75 NRC 659 n.160 (2012)

50 C.F.R. 402.12(f)
content of the biological assessment is at the discretion of the federal agency; LBP-12-11, 75 NRC 736 (2012)

50 C.F.R. 402.12(j)
the acting agency submits its completed biological assessment to the appropriate Service and awaits its determination of concurrence or nonconcurrence, which under the Services' regulations is to be returned within 30 days; LBP-12-10, 75 NRC 641 (2012)

50 C.F.R. 402.12(k)
the action agency's biological assessment may be used by the federal agency in determining whether formal consultation or a conference is necessary; LBP-12-10, 75 NRC 672 (2012)

50 C.F.R. 402.12(k)(2)
even if the National Marine Fisheries Service disagrees with NRC's no-effect determination, it may only request that NRC enter formal consultation, but NRC is not required to consent to the request; LBP-12-10, 75 NRC 657 (2012)
if the acting agency makes a "likely to affect" determination in the biological assessment, it is required to enter into formal consultation with the appropriate Service; LBP-12-10, 75 NRC 641 (2012)
National Marine Fisheries Service may request that NRC initiate formal consultation if it finds this to be appropriate; LBP-12-10, 75 NRC 673 n.22 (2012)

LEGAL CITATIONS INDEX

REGULATIONS

50 C.F.R. 402.13(a)
"informal consultation" is any communication between the acting agency and one of the Services designed to assist the acting agency in determining whether formal consultation is required; LBP-12-10, 75 NRC 658 n.155, 672 n.20 (2012)
50 C.F.R. 402.14(a)
each federal agency shall review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat; LBP-12-10, 75 NRC 672 n.20 (2012)
even if the National Marine Fisheries Service disagrees with NRC's no-effect determination, it may only request that NRC enter formal consultation, but NRC is not required to consent to the request; LBP-12-10, 75 NRC 657 (2012)
if a determination is made that the action may affect listed species or critical habitat, formal consultation is required; LBP-12-10, 75 NRC 672 n.20 (2012)
if the acting agency makes a "likely to affect" determination in the biological assessment, it is required to enter into formal consultation with the appropriate Service; LBP-12-10, 75 NRC 641 (2012)
if the Service does not concur with the agency's "not likely to affect" determination, it may request that the acting agency enter into formal consultation; LBP-12-10, 75 NRC 641 (2012)
National Marine Fisheries Service may request that NRC initiate formal consultation if it finds this to be appropriate; LBP-12-10, 75 NRC 673 n.22 (2012)
the only mandatory trigger for initiating formal consultation is if the acting agency itself determines that its action may affect listed species or critical habitat; LBP-12-10, 75 NRC 657 (2012)
when a request is made to a federal agency to enter into consultation, the Director shall forward to the federal agency a written explanation of the basis for the request; LBP-12-10, 75 NRC 672 n.20 (2012)
50 C.F.R. 402.14(b)
a federal agency need not initiate formal consultation if it determines, with the written concurrence of the Director, that the proposed action is not likely to adversely affect any listed species or critical habitat; LBP-12-10, 75 NRC 672 n.20 (2012)
50 C.F.R. 402.14(b)(1)
if the acting agency concludes in the biological assessment that the action is not likely to affect listed habitats or species, and the Service concurs, the acting agency need not enter formal consultation; LBP-12-10, 75 NRC 641 (2012)
50 C.F.R. 402.14(g)-(h)
formal consultation includes preparation of a biological opinion by the Service, detailing the likely effects of the action on listed species or habitat as well as mitigation alternatives; LBP-12-10, 75 NRC 640 n.40, 641 n.46 (2012)
50 C.F.R. 600.905)
agencies are advised to consult with National Marine fisheries Service as early as practicable for any federal action that may adversely affect essential fish habitats, including renewals of licenses; LBP-12-10, 75 NRC 677 (2012)
all federal agencies must consult with the National Marine fisheries Service on any proposed actions that may adversely affect essential fish habitat; LBP-12-10, 75 NRC 677 (2012)
50 C.F.R. 600.905(a)(1)
consultation duty on essential fish habitats applies to license renewals; LBP-12-10, 75 NRC 643 (2012)
50 C.F.R. 600.905(a)(3)
consultation with the National Marine Fisheries Service on essential fish habitats should be initiated by the acting agency as early as practicable; LBP-12-10, 75 NRC 643 (2012)
50 C.F.R. 600.920(a)(1)-(3)
agencies are advised to consult with National Marine fisheries Service as early as practicable for any federal action that may adversely affect essential fish habitats, including renewals of licenses; LBP-12-10, 75 NRC 677 (2012)
agencies must provide a written assessment of the effects of their action on essential fish habitats; LBP-12-10, 75 NRC 677 (2012)
all federal agencies must consult with the National Marine fisheries Service on any proposed actions that may adversely affect essential fish habitat; LBP-12-10, 75 NRC 677 (2012)
50 C.F.R. 600.920(b)

issues of concern relative to living marine resources and essential fish habitat would be most appropriately addressed through the EPA's National Pollutant Discharge Elimination System permit renewal process; LBP-12-10, 75 NRC 677 (2012)
National Marine Fisheries Service has the authority to consult with other agencies if, for example, only one of the agencies has the authority to implement measures necessary to minimize adverse effects on essential fish habitat and that agency does not act as the lead agency; LBP-12-10, 75 NRC 660 n.166 (2012)
the agency with authority to implement conservation recommendations must consult with the National Marine Fisheries Service on implementation of any conservation recommendations; LBP-12-10, 75 NRC 677 (2012)
50 C.F.R. 600.920(e)
satisfying the requirements of other statutes does not in itself relieve a federal agency of its obligations to comply with the procedures set forth in the Endangered Species Act; LBP-12-10, 75 NRC 644 n.69 (2012)
50 C.F.R. 600.920(e)(1)
for any federal action that may adversely affect essential fish habitats, federal agencies must provide the National Marine Fisheries Service with a written assessment of the effects of that action; LBP-12-10, 75 NRC 643 (2012)
50 C.F.R. 600.920(e)(1)-(4)
agencies must provide a written assessment of the effects of their action on essential fish habitats; LBP-12-10, 75 NRC 677 (2012)
50 C.F.R. 600.920(e)(3)
essential fish habitat assessment must describe the action, its potential effects on EFH, and proposed mitigation activities, if any; LBP-12-10, 75 NRC 643 (2012)
50 C.F.R. 600.920(f)(1)
when preparation of the essential fish habitat assessment is consolidated with other environmental review procedures, the National Marine Fisheries Service is to have timely notification of actions that may adversely affect EFH, and whenever possible, at least 60 days' notice prior to a final decision on an action; LBP-12-10, 75 NRC 643 (2012)
50 C.F.R. 600.920(k)
federal agencies are not required to implement conservation recommendations where that agency does not have the statutory authority to implement those recommendations; LBP-12-10, 75 NRC 677 (2012)
50 C.F.R. 600.925(a)
federal agencies are not required to implement conservation recommendations where that agency does not have the statutory authority to implement those recommendations; LBP-12-10, 75 NRC 677 (2012)
National Marine Fisheries Service will not recommend that federal agencies take actions beyond their statutory authority; LBP-12-10, 75 NRC 651 (2012)
the agency with authority to implement conservation recommendations must consult with the National Marine Fisheries Service on implementation of any conservation recommendations; LBP-12-10, 75 NRC 677 (2012)
50 C.F.R. 600.925(a)-(b)
National Marine Fisheries Service will not recommend that state or federal agencies take actions beyond their statutory authority; LBP-12-10, 75 NRC 643 (2012)

LEGAL CITATIONS INDEX
STATUTES

28 U.S.C. § 2342
only a party aggrieved can seek judicial review; CLI-12-11, 75 NRC 532 n.47 (2012)
only final NRC action is subject to judicial review; CLI-12-11, 75 NRC 528 n.26 (2012)
Administrative Procedure Act, 5 U.S.C. § 558(c)
agencies must set and complete proceedings on license applications with due regard for the rights and privileges of all interested parties or adversely affected persons and within a reasonable time; CLI-12-6, 75 NRC 375 n.140 (2012)
Atomic Energy Act, 11e(2), 42 U.S.C. § 2014e(2)
byproduct material under this section is tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content; LBP-12-3, 75 NRC 174 n.1 (2012)
Atomic Energy Act, 182c
notice of combined license applications must be published in the *Federal Register* for 4 consecutive weeks; CLI-12-2, 75 NRC 74 n.46 (2012)
Atomic Energy Act, 185b, 189a, 42 U.S.C. 2235(b), 2239(a)
in addition to contested hearings on combined licenses, where interested members of the public have the right to participate and air their concerns, uncontested safety and environmental issues are considered in a mandatory hearing; CLI-12-11, 75 NRC 527 (2012)
Atomic Energy Act, 189a, 42 U.S.C. § 2239(a)
even in the absence of a contested hearing, NRC must hold an uncontested or mandatory hearing on a combined license application; CLI-12-9, 75 NRC 427 (2012)
NRC has latitude to define who is an "affected person"; LBP-12-3, 75 NRC 189 n.27 (2012)
requirement for a hearing at the construction permit phase of new reactor generation facilities is stated; CLI-12-9, 75 NRC 427 (2012)
significant delays in NRC Staff's review potentially deprive an Indian tribe of its hearing rights; CLI-12-4, 75 NRC 155 (2012)
Atomic Energy Act, 189a(1)(A), 42 U.S.C. § 2239(a)(1)(A)
organizations that seek to establish standing to intervene may do so by demonstrating either organizational standing or representational standing; LBP-12-10, 75 NRC 637 (2012)
Clean Water Act, 404, 33 U.S.C. § 1344
combined license applicants must obtain permits from the U.S. Army Corps of Engineers in order to complete construction activities that may affect wetlands; CLI-12-9, 75 NRC 430 (2012)
in completing the environmental impact statement, the U.S. Army Corps of Engineers' mission is to protect the nation's aquatic resources, including wetlands; CLI-12-9, 75 NRC 472 (2012)
the U.S. Army Corps of Engineers evaluates construction and maintenance activities to determine whether to issue permits; CLI-12-9, 75 NRC 465 n.250 (2012)
Endangered Species Act, 16 U.S.C. § 1531(b) (1976 ed.)
purposes of the act are to provide a means whereby the ecosystems upon which endangered and threatened species depend may be conserved, and to provide a program for the conservation of such species; LBP-12-10, 75 NRC 670 (2012)
Endangered Species Act, 2(c), 16 U.S.C. § 1531(c) (1976 ed.)
all federal departments and agencies shall seek to conserve endangered and threatened species; LBP-12-10, 75 NRC 670 (2012)

LEGAL CITATIONS INDEX

STATUTES

Endangered Species Act, 16 U.S.C. § 1532(2)
"conserve" means to use and the use of all methods and procedures that are necessary to bring any endangered or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary; LBP-12-10, 75 NRC 670 (2012)
Endangered Species Act, 16 U.S.C. §§ 1533
Congress delegated broad administrative and interpretive power to the Secretary of the Interior; LBP-12-10, 75 NRC 640 n.37 (2012)
Endangered Species Act, 7, 16 U.S.C. § 1536
NRC Staff, not the applicant, has the legal duty to engage in consultation under the act; LBP-12-12, 75 NRC 761 (2012)
the U.S. Fish & Wildlife Service and National Marine Fisheries Service perform strictly an advisory function, and the federal agency makes the ultimate decision as to whether its proposed action will satisfy the ESA requirements; LBP-12-10, 75 NRC 641 (2012)
there is no requirement enumerating the contents of a draft environmental impact statement; LBP-12-12, 75 NRC 762 (2012)
Endangered Species Act, 7(a)(2), 16 U.S.C. § 1536(a)(2)
federal agencies must ensure that any action that it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species; LBP-12-10, 75 NRC 639 (2012); LBP-12-11, 75 NRC 735 (2012); LBP-12-12, 75 NRC 761 (2012)
in determining that a federal action is not likely to jeopardize species or modify habitat, the acting agency is to proceed in consultation with and with the assistance of the Secretary of the Interior or Commerce; LBP-12-10, 75 NRC 639 (2012)
whether NRC Staff undertakes formal consultation with the Services in the event that they disagree with a finding by NRC of "no effect" or "not likely adversely to affect" depends upon NRC's own regulations and its interpretation of its duty under the ESA to ensure that any action is not likely to jeopardize listed species or habitat; LBP-12-10, 75 NRC 642 (2012)
Endangered Species Act, 7(c), 16 U.S.C. § 1536(c)
if the Services advise that listed species are present, the acting agency is to prepare a biological assessment to identify any species that is likely to be affected by such action; LBP-12-11, 75 NRC 735-36 (2012)
the acting agency shall request of the U.S. Fish and Wildlife Service and the National Marine Fisheries Service information whether any species that is listed or proposed to be listed may be present in the area of the action; LBP-12-11, 75 NRC 735 (2012)
where an acting agency is engaged in major construction activities, the acting agency is to evaluate, through preparation of a biological assessment, whether the action is likely to adversely affect species or habitat; LBP-12-10, 75 NRC 640 (2012)
Endangered Species Act, 16 U.S.C. § 1536(c)(1)
a biological assessment of listed species shall be completed before any contract for construction is entered into and before construction is begun with respect to such action; LBP-12-12, 75 NRC 762 (2012)
federal agencies shall request information from the Secretary of the Interior whether any species listed or proposed to be listed may be present in the area of the proposed action; LBP-12-12, 75 NRC 761-62 (2012)
if the Secretary of the Interior advises that listed species may be present, the agency shall conduct a biological assessment for the purpose of identifying any species that is likely to be affected by the action; LBP-12-12, 75 NRC 761-62 (2012)
Endangered Species Act, 16 U.S.C. § 1538, 1539(b) (1976 ed.)
virtually all dealings with endangered species, including taking, possession, transportation, and sale, are prohibited, except in extremely narrow circumstances; LBP-12-10, 75 NRC 670 (2012)
Endangered Species Act, 16 U.S.C. §§ 1540(f)
Congress delegated broad administrative and interpretive power to the Secretary of the Interior; LBP-12-10, 75 NRC 640 n.37 (2012)

LEGAL CITATIONS INDEX

STATUTES

Low-Level Radioactive Waste Policy Act, 42 U.S.C. § 2021b(9)(A)(i)-(ii)
low-level radioactive waste is defined as radioactive material that is not high-level radioactive waste, spent nuclear fuel, or byproduct material and is waste that NRC classifies as LLRW; LBP-12-4, 75 NRC 216 n.5 (2012)

Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1801
goal of the act is to preserve commercial and recreational fishery resources through the protection of essential fish habitat; LBP-12-10, 75 NRC 642 (2012)

Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1801(a)(9)
continuing loss of marine, estuarine, and other aquatic habitats warrants increased attention for the conservation and management of fishery resources of the United States; LBP-12-10, 75 NRC 676-77 (2012)

Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801(b)(7)
the purpose of this act is to promote protection of essential fish habitat in the review of projects conducted under federal permits, licenses, or other authorities that affect or have the potential to affect such habitat; LBP-12-10, 75 NRC 676 (2012)

Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1855(b)(1)(D), (b)(2)
a direct consultation obligation is imposed on NRC if NRC determines that approval of a requested license renewal may adversely affect any essential fish habitat; LBP-12-10, 75 NRC 642-43 (2012)

Magnuson-Stevens Fishery Conservation and Management Act, 305(b)(2), 16 U.S.C. § 1855(b)(3)
all federal agencies must consult with the National Marine fisheries Service on any proposed actions that may adversely affect essential fish habitat, and NMFS must implement these requirements and related procedures in its regulations; LBP-12-10, 75 NRC 677 (2012)

Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1855(b)(4)(A)
federal agencies are not required to implement conservation recommendations where that agency does not have the statutory authority to implement those recommendations; LBP-12-10, 75 NRC 677 (2012)

Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. § 1855(d)
the Secretary of the Interior may promulgate such regulations as may be necessary to carry out any other provision of this act; LBP-12-10, 75 NRC 643 n.57 (2012)

Mich. Comp. Laws. § 324.32723
applicant must obtain a water withdrawal permit under the Michigan Natural Resources and Environmental Protection Act; LBP-12-12, 75 NRC 764 (2012)

National Environmental Policy Act, 42 U.S.C. § 4321
NEPA promotes its sweeping commitment to prevent or eliminate damage to the environment and biosphere by focusing government and public attention on the environmental effects of proposed agency action; LBP-12-1, 75 NRC 36 n.48 (2012)

National Environmental Policy Act, 42 U.S.C. § 4332(2)
compliance with the act is ultimately the responsibility of NRC; CLI-12-13, 75 NRC 684 (2012)

National Environmental Policy Act, 102(2)(A), 42 U.S.C. § 4332(2)(A)
agencies are required to use a systematic, interdisciplinary approach that will ensure the integrated use of the natural and social sciences and the environmental design arts in decisionmaking that may impact the environment; CLI-12-2, 75 NRC 116 (2012); CLI-12-9, 75 NRC 473 (2012)

National Environmental Policy Act, 102(2)(C), 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 that describes the action, its effects, and alternatives to the proposed action; LBP-12-5, 75 NRC 236 (2012); LBP-12-8, 75 NRC 549 (2012)
prior to preparing an environmental impact statement, the responsible federal official shall consult with and obtain the comments of any federal agency that has jurisdiction by law or special expertise with respect to any environmental impact involved; LBP-12-10, 75 NRC 644 n.70 (2012)

National Environmental Policy Act, 102(2)(C)(i), 42 U.S.C. § 4332(2)(C)(i)
in the area of impacts of combined licenses and limited work authorizations, NRC Staff, in its review of new and significant information, identified a change in impacts associated with terrestrial ecology; CLI-12-2, 75 NRC 117 (2012)
license renewal applications are subject to an environmental review; CLI-12-5, 75 NRC 304 (2012)

LEGAL CITATIONS INDEX

STATUTES

National Environmental Policy Act, 102(2)(C)(i)-(iii), 42 U.S.C. § 4332(2)(C)(i)-(iii)
license renewal applicant's environmental report must address environmental impacts of the proposed action and compare them to impacts of alternative actions; CLI-12-5, 75 NRC 338 (2012)
National Environmental Policy Act, 102(2)(C)(ii), 42 U.S.C. § 4332(2)(C)(ii)
NRC is required to describe unavoidable adverse environmental impacts; CLI-12-9, 75 NRC 474 (2012)
National Environmental Policy Act, 102(2)(C)(ii), (iii), 42 U.S.C. § 4332(2)(C)(ii), (iii)
environmental reports submitted by license renewal applicants must address the environmental impacts of the proposed action and compare them to impacts of alternative actions; CLI-12-8, 75 NRC 397 (2012)
National Environmental Policy Act, 102(2)(C)(iii), 42 U.S.C. § 4332(2)(C)(iii)
license renewal applications are subject to an environmental review; CLI-12-5, 75 NRC 304 (2012)
where an assessment of alternatives to the proposed action was prepared at the early site permit stage and no new information in the areas of energy alternatives or system design alternatives had been identified at the combined license stage, conclusions made at the ESP stage remain valid; CLI-12-2, 75 NRC 117 (2012)
National Environmental Policy Act, 102(2)(C)(iv), 42 U.S.C. § 4332(2)(C)(iv)
NRC is required to assess the relationship between local short-term uses of the environment and the long-term productivity of the environment; CLI-12-2, 75 NRC 118 (2012); CLI-12-9, 75 NRC 474 (2012)
National Environmental Policy Act, 102(2)(C)(v), 42 U.S.C. § 4332(2)(C)(v)
NRC is required to consider the irreversible and irretrievable commitments of resources associated with the proposed action; CLI-12-2, 75 NRC 118 (2012); CLI-12-9, 75 NRC 474 (2012)
National Environmental Policy Act, 102(2)(E), 42 U.S.C. § 4332(2)(E)
agencies are required to study, develop, and describe appropriate alternatives; CLI-12-9, 75 NRC 473 (2012)
in the area of impacts of combined licenses and limited work authorizations, NRC Staff, in its review of new and significant information, identified a change in impacts associated with terrestrial ecology; CLI-12-2, 75 NRC 117 (2012)
Rivers and Harbors Act of 1899, 10, 33 U.S.C. § 403
combined license applicants must obtain permits from the U.S. Army Corps of Engineers in order to complete construction activities that may affect wetlands; CLI-12-9, 75 NRC 430 (2012)
in completing the environmental impact statement, the U.S. Army Corps of Engineers' mission is to protect the nation's aquatic resources, including wetlands; CLI-12-9, 75 NRC 472 (2012)

LEGAL CITATIONS INDEX
OTHERS

Fed. R. App. P. 18(a)(1)
although NRC has no specific rule governing stays of agency action pending judicial review, federal law requires parties seeking such stays in court to come to the agency first; CLI-12-11, 75 NRC 528 (2012)
Fed. R. Civ. P. 12(d)
courts may treat motions to dismiss for failure to state a claim upon which relief can be granted (under Rule 12(b)(6)) and motions for judgment on the pleadings (under Rule 12(c)) as motions for summary judgment under Rule 56 if matters outside the pleadings are presented to and not excluded by the court; LBP-12-2, 75 NRC 162 (2012)
6 Moore, James Wm., et al., *Moore's Federal Practice* ¶56.22[2], at 2824-25 (2d ed. 1966)
no defense to an insufficient showing by summary disposition proponent is required; LBP-12-4, 75 NRC 219 (2012)
summary judgment movant has the burden to show that he is entitled to judgment under established principles, and if he does not discharge that burden, then he is not entitled to judgment; LBP-12-4, 75 NRC 219 (2012)
that a summary disposition opponent declines to oppose the motion does not mean that movant is entitled to a favorable judgment; LBP-12-4, 75 NRC 219 (2012)

SUBJECT INDEX

ABEYANCE OF APPEAL
when a petition for review is filed with the Commission at the same time as a motion for reconsideration is filed with the board, the Commission will delay considering the petition for review until after the board has ruled; CLI-12-5, 75 NRC 301 (2012)
ABEYANCE OF PROCEEDING
agencies must set and complete proceedings on license applications with due regard for the rights and privileges of all the interested parties or adversely affected persons and within a reasonable time; CLI-12-6, 75 NRC 352 (2012)
ACCIDENTS
nonspeculative showing that increased traffic accidents could be another impact of increased road usage might establish standing; LBP-12-3, 75 NRC 164 (2012)
ACCIDENTS, SEVERE
in response to the Fukushima accident in Japan, NRC is conducting a comprehensive safety review of the requirements and guidance associated with accident mitigation measures; CLI-12-1, 75 NRC 39 (2012)
licensees must develop and implement guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities to address loss of large areas from fires or explosions that arise from a beyond-design-basis event; CLI-12-2, 75 NRC 63 (2012)
risk is small for all plants; LBP-12-8, 75 NRC 539 (2012)
the Commission imposed a license condition requiring licensees to develop and implement strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event, including a simultaneous loss of all AC power and loss of normal access to the normal heat sink; CLI-12-9, 75 NRC 421 (2012)
the Fukushima accident does not significantly alter the overall environmental picture for severe reactor accidents at the site; CLI-12-15, 75 NRC 704 (2012)
See also Severe Accident Mitigation Alternatives Analysis; Severe Accident Mitigation Design Alternatives Analysis
ADJUDICATORY HEARINGS
NRC's hearing process is reserved for genuine, material controversies between knowledgeable litigants; CLI-12-5, 75 NRC 301 (2012); CLI-12-8, 75 NRC 393 (2012)
See also Evidentiary Hearings; Hearing Requests; Hearing Rights; Mandatory Hearings; Notice of Hearing
ADJUDICATORY PROCEEDINGS
NRC generally applies contemporaneous judicial standing concepts in AEA § 189a proceedings; LBP-12-3, 75 NRC 164 (2012)
See also Abeyance of Proceeding; Combined License Proceedings; Delay of Proceeding; License Renewal Proceedings; Materials License Amendment Proceedings; Operating License Proceedings; Operating License Renewal Proceedings; Subpart L Proceedings; Suspension of Proceeding
AESTHETIC IMPACTS
aesthetic harms may amount to an injury in fact sufficient for standing; CLI-12-12, 75 NRC 603 (2012)
light pollution is a matter of concern as a proposed nuclear materials facility undergoes agency licensing review; LBP-12-3, 75 NRC 164 (2012)
NRC must adequately consider impacts to visual and aesthetic resources in its NEPA review; LBP-12-3, 75 NRC 164 (2012)

statement of supporting facts or expert opinion to establish how the project would impair the visual resources, rather than mere speculation, is required for an admissible contention; LBP-12-3, 75 NRC 164 (2012)

AFFIDAVITS

boards are in a better position than the Commission to consider any expert affidavit or affidavits that petitioner submits to support its motion to reopen; CLI-12-14, 75 NRC 692 (2012)

each of the criteria for reopening a record must be separately addressed in an affidavit, with a specific explanation of why it has been met; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012); CLI-12-10, 75 NRC 479 (2012); LBP-12-10, 75 NRC 633 (2012)

evidence in affidavits supporting a motion to reopen must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised; CLI-12-3, 75 NRC 132 (2012); CLI-12-15, 75 NRC 704 (2012)

evidence in affidavits supporting a motion to reopen must meet the admissibility standards, i.e., be relevant, material, and reliable; CLI-12-3, 75 NRC 132 (2012)

motions to reopen must be accompanied by affidavits that set forth the factual and/or technical bases for the movant's claim that the three criteria for reopening have been satisfied; CLI-12-3, 75 NRC 132 (2012); CLI-12-10, 75 NRC 479 (2012); CLI-12-10, 75 NRC 479 (2012); CLI-12-14, 75 NRC 692 (2012); CLI-12-15, 75 NRC 704 (2012); LBP-12-10, 75 NRC 633 (2012)

parties seeking a rule waiver must attach an affidavit that, among other things, states with particularity the special circumstances claimed to justify the waiver or exception requested; CLI-12-6, 75 NRC 352 (2012)

petitioner has some latitude to supplement or cure a standing showing in its reply pleading, but any additional arguments should be supported by either the declaration that accompanied the original hearing request or a supplemental affidavit; LBP-12-3, 75 NRC 164 (2012)

AGING MANAGEMENT

a variety of electrical and instrumentation and control components are excluded from an aging management review for license renewal; CLI-12-5, 75 NRC 301 (2012)

an illustrative list of structures and components that are subject to an aging management review is provided in 10 C.F.R. 54.21(a)(1)(i); CLI-12-5, 75 NRC 301 (2012)

applicants must demonstrate reasonable assurance that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis for the period of extended operation; CLI-12-5, 75 NRC 301 (2012)

assertion by applicant that its aging management plan is consistent with the GALL Report does not immunize it against a challenge to the AMP; CLI-12-5, 75 NRC 301 (2012)

claims in a contention that did not genuinely stem from the specific amendments to the aging management plan or from particular information in the revised GALL Report were untimely under standards for admission of new or amended contentions; CLI-12-10, 75 NRC 479 (2012)

existing regulatory programs can be expected to directly detect the effects of aging on active functions; CLI-12-5, 75 NRC 301 (2012)

license renewal applicants must conduct aging management reviews of any structure, system, or component that performs one of these intended functions if the SSC is passive (performs its intended function(s) without moving parts or without a change in configuration or properties); CLI-12-5, 75 NRC 301 (2012)

license renewal applicants' use of an aging management program identified in the GALL Report constitutes reasonable assurance that it will manage the targeted aging effect during the renewal period; CLI-12-5, 75 NRC 301 (2012); CLI-12-10, 75 NRC 479 (2012)

license renewal safety review and any associated license renewal adjudicatory proceeding focus on the detrimental effects of aging posed by long-term reactor operation; CLI-12-5, 75 NRC 301 (2012)

limited scope of the intended functions of structures, systems, and components subject to aging management review is described in 10 C.F.R. 54.4(b); CLI-12-5, 75 NRC 301 (2012)

structures and components associated only with active functions can be generically excluded from a license renewal aging management review; CLI-12-5, 75 NRC 301 (2012)

sufficiency of an aging management program that meets the GALL Report's recommendations can be challenged if the contention admissibility requirements are otherwise met; CLI-12-10, 75 NRC 479 (2012)

there was no prejudice to intervenor where the board considered licensee's supplement to the application, which contained the updated aging management plan, because intervenor could have sought to amend its contention to respond to the supplement; CLI-12-10, 75 NRC 479 (2012)
transformers perform their intended function through a change in state similar to switchgear, power supplies, battery chargers, and power inverters, which have been excluded from an aging management review; CLI-12-5, 75 NRC 301 (2012)
AGREEMENTS
Great Lakes Compact Agreement binds and imposes certain obligations on its member states, not on other governmental agencies or on utility companies; LBP-12-12, 75 NRC 742 (2012)
ALARA
radiation protection requirements with which licensees must comply, such as procedures and controls to reduce occupational doses and doses to members of the public to levels that are as low as reasonably achievable, are outlined in 10 C.F.R. 20.1101(b); LBP-12-4, 75 NRC 213 (2012)
ALTERNATE CONCENTRATION LIMITS
contention asserting that because no previous ISL/ISR mining operation has been able to restore groundwater to baseline standards, applicant will be required to request that the Commission set an alternate concentration limit for aqueous contaminants is admissible; LBP-12-3, 75 NRC 164 (2012)
AMENDMENT OF CONTENTIONS
amended contentions filed after the initial filing period has expired may be admitted only with leave of the licensing board if they satisfy the three criteria of 10 C.F.R. 2.309(f)(2)(i)-(iii); LBP-12-9, 75 NRC 615 (2012)
amended contentions must satisfy general contention admissibility criteria and either the timeliness standards of section 2.309(f)(2) or the balancing test in section 2.309(c) for nontimely contentions; LBP-12-9, 75 NRC 615 (2012)
filing of amended or new contentions is permitted only with leave of the board and upon a showing that it is based on information not previously available and materially different and the filing is timely; LBP-12-13, 75 NRC 784 (2012)
insofar as applicant contends that NRC's requirements for self-guarantors are not useful or relevant in evaluating the financial condition of numerous similarly situated corporations, applicant may petition NRC to amend its rules at any time; LBP-12-6, 75 NRC 256 (2012)
intervenor may need to amend an admitted environmental contention based on applicant's environmental report, or file a new contention altogether, challenging Staff's draft environmental impact statement; LBP-12-12, 75 NRC 742 (2012)
intervenors may file new or amended contentions in response to the draft environmental impact statement if they can satisfy the test of 10 C.F.R. 2.309(f)(2)(i)-(iii); LBP-12-12, 75 NRC 742 (2012)
new claims cannot be raised for the first time on appeal; CLI-12-1, 75 NRC 39 (2012)
new or amended contentions filed after the initial filing period has expired may be admitted as timely only with leave of the licensing board if the contention meets the timeliness standards of 10 C.F.R. 2.309(f)(2); LBP-12-7, 75 NRC 503 (2012)
new or amended contentions may be filed after the deadline for requests for hearing and petitions to intervene if they satisfy the requirements of 10 C.F.R. 2.309(f)(2); LBP-12-12, 75 NRC 742 (2012)
NRC proceedings would prove unmanageable and unfair to other parties if intervenor could freely change admitted contentions at will as litigation progresses; CLI-12-1, 75 NRC 39 (2012)
NRC rules contain ample provisions through which litigants may seek admission of new or amended contentions; CLI-12-13, 75 NRC 681 (2012)
petitioner may amend NEPA contentions or file new NEPA contentions if there are data or conclusions in the NRC draft or final environmental impact statement, environmental assessment, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's documents; LBP-12-12, 75 NRC 742 (2012)
proposed new or amended contentions shall be deemed timely if filed within 60 days of the date when the document containing the new and material information first becomes available; LBP-12-12, 75 NRC 742 (2012)
should NRC Staff provide a different analysis in its draft environmental impact statement, there will be ample opportunity to either amend or dispose of a contention challenging the environmental report; CLI-12-13, 75 NRC 681 (2012)

significant change in the nature of the purported NEPA imperfection, from one focusing on comprehensive information omission to one centered on a deficient analysis of subsequently supplied information, warrants issue modification by the complaining party because otherwise, absent any new pleading, the other parties would be left to speculate whether the concerns first expressed had been satisfied by the new information; LBP-12-5, 75 NRC 227 (2012)
the standard for admission of new or amended contentions involves a balancing of eight factors; CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)
there was no prejudice to intervenor where the board considered licensee's supplement to the application, which contained the updated aging management plan, because intervenor could have sought to amend its contention to respond to the supplement; CLI-12-10, 75 NRC 479 (2012)
trigger point for timely submission of new or amended contentions is when new information becomes available, and NRC rules require the filing of contentions in a timely manner after such new information becomes available; CLI-12-13, 75 NRC 681 (2012); LBP-12-13, 75 NRC 784 (2012)
when good cause is shown, amendment of contentions and submission of new contentions are allowed; CLI-12-1, 75 NRC 39 (2012)
where a contention alleges omission of particular information or an issue from an application, and the information is later supplied by the applicant or considered by NRC Staff in a draft environmental impact statement, the contention is moot, and intervenors must timely file a new or amended contention to raise specific challenges regarding the new information; LBP-12-5, 75 NRC 227 (2012)
APPEALS
after a petition to review a final order has been filed with the Commission, the board no longer has jurisdiction to consider a motion to reopen and the motion is properly filed with the Commission; CLI-12-14, 75 NRC 692 (2012)
although a party who is not injured by a board's ruling has no right to appeal that ruling, it may file a supporting brief at the appropriate time; CLI-12-6, 75 NRC 352 (2012)
appeal as of right on the question of whether an initial intervention petition should have been wholly denied or, alternatively, was granted improperly are governed by 10 C.F.R. 2.311; CLI-12-7, 75 NRC 379 (2012)
board rulings on hearing requests, petitions to intervene, and access to certain nonpublic information are appealable under 10 C.F.R. 2.311(a); CLI-12-6, 75 NRC 352 (2012)
contentions filed after the initial petition generally are not subject to appeal pursuant to section 2.311; CLI-12-7, 75 NRC 379 (2012)
generally, once there has been an appeal or petition to review a Board order, jurisdiction passes to the Commission; CLI-12-14, 75 NRC 692 (2012)
motion to reply is denied because petitioner should have anticipated the arguments in the Staff's and applicant's answers, which were logical responses to petitioner's suspension motion; CLI-12-6, 75 NRC 352 (2012)
new claims cannot be raised for the first time on appeal; CLI-12-1, 75 NRC 39 (2012)
NRC rules of practice provide for an automatic right to appeal a licensing board decision deciding standing and contention admissibility, on the question whether a petition to intervene and request for hearing should have been granted, or denied in its entirety; CLI-12-8, 75 NRC 393 (2012)
petitioner may act to vindicate its own rights, but it has no standing to assert the rights of others; CLI-12-6, 75 NRC 352 (2012)
petitioner will have an opportunity to challenge the board's contention admissibility decision at the end of the case; CLI-12-13, 75 NRC 681 (2012)
petitioners have a right to reply to petitions for review subject to 10 C.F.R. 2.341; CLI-12-6, 75 NRC 352 (2012)
petitions for review of partial initial decisions and any answers shall conform to the requirements of 10 C.F.R. 2.341(b)(2)-(3); LBP-12-5, 75 NRC 227 (2012)
replies to appeals filed pursuant to 10 C.F.R. 2.311 are not permitted; CLI-12-6, 75 NRC 352 (2012)
section 2.341 applies to appeals of rulings on new contentions filed after initial intervention petitions; CLI-12-7, 75 NRC 379 (2012)
the Commission enforces the 10-day deadline for filing appeals strictly and excuses only in unavoidable and extreme circumstances; LBP-12-12, 75 NRC 742 (2012)

the time for petitioning for review of any of a board's prior interlocutory rulings will run from the date of the Commission's ruling closing the record; CLI-12-14, 75 NRC 692 (2012)
under 10 C.F.R. 2.311, appeal of a ruling on contentions is allowed only if the order wholly denies an intervention petition or a party other than the petitioner alleges that a petition for leave to intervene or a request for hearing should have been wholly denied; CLI-12-7, 75 NRC 379 (2012)
when a petition for review is filed with the Commission at the same time as a motion for reconsideration is filed with the board, the Commission will delay considering the petition for review until after the board has ruled; CLI-12-5, 75 NRC 301 (2012)
See also Briefs, Appellate
APPEALS, INTERLOCUTORY
applicant may file an interlocutory appeal of board orders admitting contentions, but only if the appeal challenges the admissibility of all admitted contentions; CLI-12-12, 75 NRC 603 (2012)
appropriate mechanism to challenge individual contention admissibility determinations following a ruling on an initial petition is a request for interlocutory review; CLI-12-12, 75 NRC 603 (2012)
challenges to board rulings on late-filed contentions normally fall under NRC rules for interlocutory review; CLI-12-7, 75 NRC 379 (2012)
interlocutory review is allowed where the ruling threatens petitioner with immediate and serious irreparable harm, or has a pervasive and unusual effect on the basic structure of the proceeding; CLI-12-12, 75 NRC 603 (2012); CLI-12-13, 75 NRC 681 (2012)
interlocutory review of a board's dismissal of a new contention is granted only upon a showing of extraordinary circumstances; CLI-12-13, 75 NRC 681 (2012)
intervenor normally is not allowed to challenge a board's rejection of contentions where the board has granted a hearing on any contention; CLI-12-12, 75 NRC 603 (2012)
routine contention admissibility decisions do not affect the basic structure of a proceeding in a pervasive or unusual manner; CLI-12-13, 75 NRC 681 (2012)
routine contention admissibility determinations generally are not appropriate for interlocutory review; CLI-12-12, 75 NRC 603 (2012)
the Commission discourages piecemeal appeals; CLI-12-12, 75 NRC 603 (2012)
the Commission has considered whether to exercise pendent jurisdiction of otherwise nonappealable issues, such as where those issues are inextricably intertwined with a related legal question properly before it, or where consideration of the issues together has the potential to resolve the entire litigation; CLI-12-12, 75 NRC 603 (2012)
APPELLATE REVIEW
absent error of law or abuse of discretion, the Commission generally defers to board rulings on contention admissibility; CLI-12-5, 75 NRC 301 (2012)
adjudicatory records, board decisions, and any Commission decisions become effectively part of the environmental review document; CLI-12-1, 75 NRC 39 (2012)
although NRC has no specific rule governing stays of agency action pending judicial review, federal law requires parties seeking such stays in court to come to the agency first; CLI-12-11, 75 NRC 523 (2012)
appeals as of right are allowed on the question of whether an intervention petition should have been wholly denied; CLI-12-12, 75 NRC 603 (2012)
as a consequence of the Commission ruling that the board should have terminated the proceeding once it resolved all contentions, all of the board's earlier interlocutory orders become ripe for review; CLI-12-14, 75 NRC 692 (2012)
at its discretion, the Commission may allow oral argument upon the request of a party made in a petition for review; CLI-12-12, 75 NRC 603 (2012)
because petitioners did not participate in the mandatory hearing, and were not parties to it, they may not challenge the mandatory hearing decision, as such, in court; CLI-12-11, 75 NRC 523 (2012)
board rulings on standing are accorded substantial deference on appeal; CLI-12-12, 75 NRC 603 (2012)
boards are appropriate arbiters of fact-specific questions of contention admissibility, and the Commission will not second-guess their evaluation of factual support, absent an error of law or abuse of discretion; CLI-12-5, 75 NRC 301 (2012)
contentions filed after the initial petition are not subject to appeal pursuant to 10 C.F.R. 2.311; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012)

decisions on the admissibility of contentions will be affirmed where the Commission finds no error of law or abuse of discretion; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012); CLI-12-8, 75 NRC 393 (2012); CLI-12-10, 75 NRC 479 (2012)
discretionary grant of a petition for review gives due weight to the existence of a substantial question with respect to one or more of the considerations under 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-12-6, 75 NRC 352 (2012)
for threshold issues such as contention admissibility, the Commission gives substantial deference to a board's determinations; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012)
in deciding motions seeking a stay of agency action pending judicial review, the Commission looks to the same four-part test that governs stays of licensing board decisions pending Commission review; CLI-12-11, 75 NRC 523 (2012)
litigants are not entitled to challenge a board ruling unless and until that ruling has worked a concrete injury to their personal interests; CLI-12-6, 75 NRC 352 (2012)
only final NRC action is subject to judicial review; CLI-12-11, 75 NRC 523 (2012)
petitions 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-12-3, 75 NRC 132 (2012)
requests to stay effectiveness of future licensing action pending judicial appeal are more appropriately styled motions to reconsider and motions to hold in abeyance; CLI-12-11, 75 NRC 523 (2012)
review of the majority of presiding officer decisions is governed by 10 C.F.R. 2.341(a)(1); CLI-12-6, 75 NRC 352 (2012)
section 2.342 does not apply to requests for stays of Commission decisions pending judicial review; CLI-12-11, 75 NRC 523 (2012)
standard for review of contention admissibility determinations is the same, whether an appeal lies under section 2.311 or 2.341, and the Commission will disturb a licensing board's contention admissibility ruling only if there has been an error of law or an abuse of discretion; CLI-12-7, 75 NRC 379 (2012)
the Commission denies review of a board decision rejecting a challenge to the severe accident mitigation alternatives analysis; CLI-12-1, 75 NRC 39 (2012)
the Commission generally declines to hold oral argument on appeals, absent a specific showing that oral argument will assist it in reaching a decision; CLI-12-12, 75 NRC 603 (2012)
the Commission generally defers to board threshold rulings on contention admissibility, unless it finds an error of law or abuse of discretion; CLI-12-12, 75 NRC 603 (2012); CLI-12-14, 75 NRC 692 (2012); CLI-12-15, 75 NRC 704 (2012)
the Commission may grant a petition for review at its discretion, giving due weight to whether there exists a substantial question regarding the considerations in 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-12-7, 75 NRC 379 (2012); CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)
where a board's decision rests on a weighing of extensive fact-specific evidence presented by technical experts, the Commission generally will defer to the board's factual findings, unless there appears to be a clearly erroneous factual finding or related oversight; CLI-12-1, 75 NRC 39 (2012)

APPLICANTS
combined license applicant's status as a current power reactor licensee generally provides the necessary support for NRC Staff's finding that applicant is technically qualified for a new license; CLI-12-2, 75 NRC 63 (2012)
interlocutory appeal of board orders admitting contentions may be filed only if the appeal challenges the admissibility of all admitted contentions; CLI-12-12, 75 NRC 603 (2012)
licensing boards may not assume that applicants will violate NRC regulations; LBP-12-3, 75 NRC 164 (2012)
NRC Staff, not the applicant, has the legal duty to engage in consultation under the Endangered Species Act; LBP-12-12, 75 NRC 742 (2012)
on safety issues, license applicants have the burden of establishing entitlement to the applied-for license by a preponderance of the evidence; LBP-12-5, 75 NRC 227 (2012)

ASME CODE
applicants must implement the edition and addendum of the ASME Code for Operation and Maintenance of Nuclear Plants incorporated by reference in 10 C.F.R. 50.55a 12 months before fuel loading; CLI-12-2, 75 NRC 63 (2012)

SUBJECT INDEX

basis of NRC Staff's reasonable assurance finding on combined license applicant's squib valve inspection program for which the current version of the ASME code is insufficient is explained; CLI-12-2, 75 NRC 63 (2012)

the Code for Operation and Maintenance of Nuclear Power Plants is incorporated by reference in NRC regulations; CLI-12-9, 75 NRC 421 (2012)

ATOMIC ENERGY ACT

argument that applying heightened late-filing standards to contentions triggered by the NRC Staff's review documents violates a petitioner's AEA hearing rights has been considered and rejected; CLI-12-14, 75 NRC 692 (2012)

mandatory hearings, which are required by section 189a, do not involve public participation, regardless of whether a contested hearing with public participation has occurred; CLI-12-11, 75 NRC 523 (2012)

mitigation measures assessed in the SAMA analysis under the National Environmental Policy Act are supplemental to those already required under NRC safety regulations for reasonable assurance of safe operation and likewise to those NRC may order or require under ongoing regulatory oversight over reactor safety, pursuant to the AEA; CLI-12-15, 75 NRC 704 (2012)

NRC has latitude to define who is an "affected person" within the meaning of AEA § 189a, 42 U.S.C. § 2239(a); LBP-12-3, 75 NRC 164 (2012)

private parties are not guaranteed the right to have NRC Staff studies as a sort of precomplaint discovery tool; CLI-12-14, 75 NRC 692 (2012)

the Commission cannot restrict the opportunity for a hearing so much that it effectively removes from the hearing issues that are material to the licensing decision; CLI-12-14, 75 NRC 692 (2012)

BACKFITTING

an exception to the backfit rule is provided if the Commission determines that 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; CLI-12-9, 75 NRC 421 (2012)

NRC could require modifications to the inservice testing program pursuant to compliance backfit provisions; CLI-12-2, 75 NRC 63 (2012)

the Commission administratively exempted, from the backfit rule, an order to the combined license holder to address spent fuel pool instrumentation requirements not specified in the certified design as enhanced protective measures that represent a substantial increase in the protection of public health and safety; CLI-12-9, 75 NRC 421 (2012)

BENEFIT-COST ANALYSIS

assertion that other severe accident mitigation alternatives might become cost-effective if implemented, without indication of any particular positive or negative environmental impact from any such implementation fails to present an exceptionally grave issue; LBP-12-1, 75 NRC 1 (2012)

because a need-for-power assessment necessarily entails forecasting power demands in light of substantial uncertainty and the duty of providing adequate and reliable service to the public, need-for-power assessments are properly conservative; LBP-12-5, 75 NRC 227 (2012)

given the legal responsibility imposed upon a public utility to provide at all times adequate, reliable service, and the severe consequences that may attend upon a failure to discharge that responsibility, the most that can be required is that need-for-power forecasts be reasonable in the light of what is ascertainable at the time made; LBP-12-5, 75 NRC 227 (2012)

if demand for power turns out to be less than predicted, it cannot be argued that the cost of the unneeded generating capacity may turn up in customers' electric bills because the surplus can be profitably marketed to other systems or the new capacity can replace older, less efficient units; LBP-12-5, 75 NRC 227 (2012)

need-for-power assessment must only be at a level of detail sufficient to reasonably characterize the costs and benefits associated with proposed licensing actions; LBP-12-5, 75 NRC 227 (2012)

need-for-power forecasts need not precisely identify future market conditions and energy demand, or develop detailed analyses of system generating assets, costs of production, capital replacement ratios, and the like in order to establish with certainty that the construction and operation of a nuclear power plant is the most economical alternative for generation of power; LBP-12-5, 75 NRC 227 (2012)

NEPA requires that NRC take a hard look at alternatives, including severe accident mitigation alternatives, and to provide a rational basis for rejecting alternatives that are cost-effective; LBP-12-8, 75 NRC 539 (2012)

quibbling over details of an economic analysis would effectively stand NEPA on its head by asking that the license be rejected not due to environmental costs, but because the economic benefits are not as great as estimated; LBP-12-5, 75 NRC 227 (2012)
severe accident mitigation alternatives analysis for license renewal is a cost-benefit analysis, weighing a particular mitigation measure's estimated degree of risk reduction against its estimated cost of implementation; CLI-12-8, 75 NRC 393 (2012)
severe accident mitigation alternatives analysis is a probability-weighted assessment of the benefits and costs of mitigation alternatives that can be used to reduce the risks of potential severe accidents at nuclear power plants; CLI-12-1, 75 NRC 39 (2012); CLI-12-15, 75 NRC 704 (2012)
to demonstrate that a revised SAMA analysis would produce a materially different result, intervenor should indicate how much the mean consequences of the severe accident scenarios could reasonably be expected to change as well as cost of implementing other SAMAs it believes might become cost-effective; LBP-12-1, 75 NRC 1 (2012)
unless it looks genuinely plausible that inclusion of an additional factor or use of other assumptions and models may change the cost-benefit conclusions for the severe accident mitigation alternative candidates evaluated, no purpose would be served to further refine the SAMA analysis; CLI-12-5, 75 NRC 301 (2012)
when NRC imposes new regulatory requirements that are important safety enhancements but not deemed necessary to ensure adequate protection of public health and safety, NRC often does not require existing licensees to implement them based on considerations such as whether they are cost-beneficial; CLI-12-2, 75 NRC 63 (2012)
whether a severe accident mitigation alternative is worthy of more detailed analysis in an environmental report or supplemental environmental impact statement hinges on whether it may be cost-beneficial to implement; CLI-12-3, 75 NRC 132 (2012)
BIOLOGICAL ASSESSMENT
assessment of listed species shall be completed before any contract for construction is entered into and before construction is begun with respect to such action; LBP-12-12, 75 NRC 742 (2012)
clarification is provided in 50 C.F.R. 402.12 on the requirements with respect to biological assessments; LBP-12-11, 75 NRC 731 (2012)
content of the biological assessment is at the discretion of the federal agency; LBP-12-11, 75 NRC 731 (2012)
formal consultation follows only if a biological assessment shows that the action may affect listed species or critical habitat; LBP-12-10, 75 NRC 633 (2012)
formal consultation includes preparation of a biological opinion by the Service, detailing the likely effects of the action on listed species or habitat as well as mitigation alternatives; LBP-12-10, 75 NRC 633 (2012)
if the acting agency concludes in the biological assessment that the action is not likely to affect listed habitats or species, and the Service concurs, the acting agency need not enter formal consultation; LBP-12-10, 75 NRC 633 (2012)
if the acting agency makes a "likely to affect" determination in the biological assessment, it is required to enter into formal consultation with the appropriate Service; LBP-12-10, 75 NRC 633 (2012)
if the Secretary of the Interior advises that listed species may be present, the agency shall conduct a biological assessment for the purpose of identifying any species that is likely to be affected by the action; LBP-12-12, 75 NRC 742 (2012)
if the Service does not concur with the agency's "not likely to affect" determination, it may request that the acting agency enter into formal consultation; LBP-12-10, 75 NRC 633 (2012)
if the Services advise that listed species are present, the acting agency is to prepare a biological assessment to identify any species that is likely to be affected by such action; LBP-12-11, 75 NRC 731 (2012)
preparation of the biological assessment may be consolidated with interagency cooperation procedures required by other statutes, such as NEPA; LBP-12-11, 75 NRC 731 (2012)
the acting agency submits its completed biological assessment to the appropriate Service and awaits its determination of concurrence or nonconcurrence, which under the Services' regulations is to be returned within 30 days; LBP-12-10, 75 NRC 633 (2012)

to prepare a biological assessment, the acting agency must first request from the Services a list of endangered or threatened species or habitat that may be present in the area of the action, or provide to the Services its own list for their review; LBP-12-10, 75 NRC 633 (2012)
where an acting agency is engaged in major construction activities, the acting agency is to evaluate, through preparation of a biological assessment, whether the action is likely to adversely affect species or habitat; LBP-12-10, 75 NRC 633 (2012)
whether NRC Staff undertakes formal consultation with the Services in the event that they disagree with a finding by the NRC of "no effect" or "not likely adversely to affect" depends upon the NRC's own regulations and its interpretation of its duty under the ESA to ensure that any action is not likely to jeopardize listed species or habitat; LBP-12-10, 75 NRC 633 (2012)
BRIEFS, APPELLATE
although a party who is not injured by a board's ruling has no right to appeal that ruling, it may file a supporting brief at the appropriate time; CLI-12-6, 75 NRC 352 (2012)
arguments made for the first time on appeal will not be considered; CLI-12-3, 75 NRC 132 (2012)
arguments made on appeal must be comprehensive, concise, and self-contained and incorporation of pleadings or arguments by reference is discouraged; CLI-12-3, 75 NRC 132 (2012)
references to affidavits and other exhibits supporting petitioner's claims should include page citations; CLI-12-8, 75 NRC 393 (2012)
the Commission should not be expected to sift unaided through earlier briefs or other documents filed before the board to piece together and discern a party's argument and the grounds for its claims; CLI-12-8, 75 NRC 393 (2012)
BURDEN OF PERSUASION
litigants seeking to reopen a closed record necessarily face a heavy burden; CLI-12-6, 75 NRC 352 (2012); LBP-12-10, 75 NRC 633 (2012)
petitioner bears the burden for setting forth a clear argument for its contention; CLI-12-5, 75 NRC 301 (2012)
petitioner bears the burden to provide facts sufficient to establish standing; LBP-12-3, 75 NRC 164 (2012)
the burden is on the proponent of a contention to show that the Staff's analysis or methodology is unreasonable or insufficient; CLI-12-6, 75 NRC 352 (2012)
to meet its burden to establish standing, petitioner must provide plausible factual allegations that satisfy each element of standing; LBP-12-3, 75 NRC 164 (2012)
BURDEN OF PROOF
applicant for an exemption bears the burden of proof on all issues; LBP-12-6, 75 NRC 256 (2012)
for NEPA contentions, the burden of proof falls on NRC Staff because NRC, not the applicant, bears the ultimate responsibility for complying with NEPA's dictates; LBP-12-5, 75 NRC 227 (2012)
on safety issues, license applicants have the burden of establishing entitlement to the applied-for license by a preponderance of the evidence; LBP-12-5, 75 NRC 227 (2012)
petitioners are not required to demonstrate their asserted injury with certainty at the contention admissibility stage of the proceeding; CLI-12-12, 75 NRC 603 (2012)
proponent of a motion to reopen a closed record necessarily faces a heavy burden; CLI-12-3, 75 NRC 132 (2012)
BYPRODUCT MATERIALS
section 11e(2) byproduct materials are tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content; LBP-12-3, 75 NRC 164 (2012)
the byproduct materials category was created in 1978 by the Uranium Mill Tailings and Reclamation Act to afford NRC regulatory jurisdiction over mill tailings at active and inactive uranium milling sites; LBP-12-3, 75 NRC 164 (2012)
BYPRODUCT MATERIALS LICENSES
grounds for license denial exist if, prior to issuance of a license to possess and use source and byproduct materials for uranium milling, there is commencement of construction by an applicant; LBP-12-3, 75 NRC 164 (2012)

SUBJECT INDEX

CANADA
First Nations in Canada must receive invitations to participate in the environmental impact statement scoping process when there are transboundary environmental impacts from a project; LBP-12-12, 75 NRC 742 (2012)
NEPA regulations do not apply to any environmental effects that NRC's domestic licensing and related regulatory functions may have upon the environment of foreign nations; LBP-12-12, 75 NRC 742 (2012)
CASE MANAGEMENT
neither new procedures nor a separate timetable for raising new issues related to the Fukushima events is warranted; CLI-12-15, 75 NRC 704 (2012)
unfettered ability to file a late contention may significantly undermine the efficiency of a proceeding even if the contention is based on newly discovered information; CLI-12-14, 75 NRC 692 (2012)
CERTIFICATION
See Design Certification
CHEMICAL SPILLS
contentions concerning release of radiological, chemical, and herbicidal materials and storage of spent fuel are Category 1 issues and thus inadmissible in operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012)
COMBINED LICENSE APPLICATION
absent a licensed low-level radioactive waste disposal facility that will accept waste from a combined license applicant's facility, it is reasonably foreseeable that LLRW generated by normal operations will be stored at the site for a longer term than is currently envisioned in that COLA; LBP-12-4, 75 NRC 213 (2012)
applicant may reference an as-yet-uncertified design at its own risk; CLI-12-9, 75 NRC 421 (2012)
applicants must obtain permits from the Army Corps of Engineers in order to complete construction activities that may affect wetlands; CLI-12-9, 75 NRC 421 (2012)
basis of NRC Staff's reasonable assurance finding on combined license applicant's squib valve inspection program for which the current version of the ASME code is insufficient is explained; CLI-12-2, 75 NRC 63 (2012)
COLAs contain information pertaining to how applicant intends, through its design, operational organization, and procedures, to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20, including, but not limited to, LLRW handling and storage; LBP-12-4, 75 NRC 213 (2012)
COLAs may reference a standard design certification and an early site permit; CLI-12-2, 75 NRC 63 (2012)
COLAs must include kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in 10 C.F.R. Part 20; LBP-12-4, 75 NRC 213 (2012)
compliance with design-related information contained in the generic design control document that is approved but not certified (Tier 2 information) is required, but generic changes to and plant-specific departures from Tier 2 are governed by 10 C.F.R. Part 52, App. D, § VIII; CLI-12-2, 75 NRC 63 (2012)
cyber security plans must be submitted for NRC approval; CLI-12-2, 75 NRC 63 (2012)
cyber security plans must take into account site-specific conditions; CLI-12-2, 75 NRC 63 (2012)
emergency plan for the site must be provided; CLI-12-9, 75 NRC 421 (2012)
every COLA must be accompanied by an environmental report, the purpose of which is to aid NRC Staff in its preparation of an environmental impact statement; LBP-12-9, 75 NRC 615 (2012)
level of low-level radioactive waste storage information required by 10 C.F.R. 52.79(a)(3) is tied to applicant's particular plans for compliance through design, operational organization, and procedures; LBP-12-4, 75 NRC 213 (2012)
licensees must develop and implement guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities to address loss of large areas from fires or explosions that arise from a beyond-design-basis event; CLI-12-2, 75 NRC 63 (2012)
notice of COL applications must be published in the *Federal Register* for 4 consecutive weeks; CLI-12-2, 75 NRC 63 (2012)

NRC Staff considers FEMA's findings on emergency plans in making its necessary finding of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency; CLI-12-9, 75 NRC 421 (2012)
NRC Staff evaluated and approved exemption from regulatory requirements for organization and numbering of the combined license application; CLI-12-2, 75 NRC 63 (2012)
NRC Staff evaluated and approved exemption from regulatory requirements for special nuclear material control and accounting program description; CLI-12-2, 75 NRC 63 (2012)
NRC Staff found acceptable combined license applicant's plan to use a single technical support center for existing and proposed units, to be colocated in the basement of the new nuclear operations building, between the protected areas of the three units, which is a departure from the AP1000 DCD; CLI-12-9, 75 NRC 421 (2012)
NRC Staff review included evaluation of exemption criteria; CLI-12-2, 75 NRC 63 (2012)
NRC Staff's steps in the geographic and demographic review in the final safety evaluation report to determine whether the COL applicant has proposed an acceptable site, including acceptable site boundaries, with appropriate consideration of nearby populations and natural and manmade features, are described; CLI-12-9, 75 NRC 421 (2012)
operational procedures to minimize contamination of the facility and environment, facilitate eventual decommissioning, and minimize generation of radioactive waste must be included; CLI-12-2, 75 NRC 63 (2012)
past violations of NRC regulations would indicate a deficiency in an application only if they are directly germane to the licensing action, rather than being of simply historical interest; CLI-12-2, 75 NRC 63 (2012)
quibbling over details of an economic analysis would effectively stand NEPA on its head by asking that the license be rejected not due to environmental costs, but because the economic benefits are not as great as estimated; LBP-12-5, 75 NRC 227 (2012)
scope and specificity of information required under section 52.79(a)(3) is a fact-bound determination that is tied to applicant's particular plans for compliance through, but not necessarily the details of, design, operational organization, and procedures associated with any contingent long-term LLRW facility; LBP-12-4, 75 NRC 213 (2012)
the Commission must determine whether NRC Staff review of a combined license application has been adequate to support the findings listed in 10 C.F.R. 52.97 and 51.107(a) for each of the licenses to be issued and in 10 C.F.R. 50.10 and 51.107(d) with respect to the limited work authorizations; CLI-12-2, 75 NRC 63 (2012)
where the COLA references a certified design, elements of the licensing basis already have been established, and thus NRC would have to establish a regulatory basis for any change to the established design regardless of whether the COLs have issued; CLI-12-9, 75 NRC 421 (2012)
whether offsite low-level radioactive waste storage and disposal facilities will ultimately be available is not material to summary disposition because applicant's FSAR provides an adequate contingency plan for long-term onsite storage of LLRW in the event that offsite storage and disposal facilities are not available; LBP-12-4, 75 NRC 213 (2012)
COMBINED LICENSE PROCEEDINGS
because petitioners did not participate in the mandatory hearing, and were not parties to it, they may not challenge the mandatory hearing decision, as such, in court; CLI-12-11, 75 NRC 523 (2012)
Commission addresses the sufficiency of NRC Staff's review of a combined license application rather than a making a de novo review; CLI-12-2, 75 NRC 63 (2012)
in a mandatory proceeding, the Commission considers safety issues pursuant to Atomic Energy Act § 189a and environmental issues as required by National Environmental Policy Act § 102(2)(A), (C), and (E); CLI-12-2, 75 NRC 63 (2012)
in addition to contested hearings on combined licenses, where interested members of the public have the right to participate and air their concerns, uncontested safety and environmental issues are considered in a mandatory hearing; CLI-12-11, 75 NRC 523 (2012)
intervenors' participation in COL adjudications is limited to their admitted contentions, and they are barred from participating in the uncontested portion of the hearing; CLI-12-11, 75 NRC 523 (2012)

mandatory hearings, which are required by section 189a of the Atomic Energy Act, do not involve public participation, regardless of whether a contested hearing with public participation has occurred; CLI-12-11, 75 NRC 523 (2012)
petitioner fails to demonstrate that the issue of radiation dispersal due to site inundation is material to the findings the NRC must make to support approving a combined license application; LBP-12-7, 75 NRC 503 (2012)
petitions requesting suspension of all combined license decisions regarding pending completion of actions associated with the Fukushima accident are granted in part and denied in part; CLI-12-2, 75 NRC 63 (2012)
purpose of a mandatory hearing is to determine whether NRC Staff's review of the application has been adequate to support the required regulatory findings; CLI-12-11, 75 NRC 523 (2012)
the Commission considers safety issues pursuant to the Atomic Energy Act and environmental issues as required by the National Environmental Policy Act; CLI-12-9, 75 NRC 421 (2012)
the Commission does not review the combined license application de novo, but rather, considers the sufficiency of the Staff's review of that application; CLI-12-9, 75 NRC 421 (2012)
the Commission examines whether the Staff's safety review of the combined license application under 10 C.F.R. 52.97(a)(1)(i)-(v) has been adequate to support its findings; CLI-12-9, 75 NRC 421 (2012)
the Commission imposed license condition requiring licensees to develop and implement strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event, including a simultaneous loss of all AC power and loss of normal access to the normal heat sink; CLI-12-9, 75 NRC 421 (2012)
the Notice of Hearing for an uncontested COL proceeding sets the parameters for the Commission's review; CLI-12-2, 75 NRC 63 (2012)
to reach a finding of reasonable assurance that the public health and safety will be protected, the Commission imposed a license condition relating to the testing program for squib valves; CLI-12-9, 75 NRC 421 (2012)
to satisfy requirements of NEPA, the Commission independently considers the final balance among conflicting factors in the record; CLI-12-9, 75 NRC 421 (2012)
with respect to the environmental impacts of a combined license, the Commission determines whether the requirements of NEPA § 102(2)(A), (C), and (E), and 10 C.F.R. 51.107(a)(1)-(4) have been met; CLI-12-9, 75 NRC 421 (2012)
COMBINED LICENSES
applicant is required to submit a report on its decommissioning funding assurance mechanism after combined licenses are issued and no later than 30 days after NRC publishes notice of intended operation in the *Federal Register*; CLI-12-2, 75 NRC 63 (2012)
applicant's status as a current power reactor licensee generally provides the necessary support for NRC Staff's finding that applicant is technically qualified for a new license; CLI-12-2, 75 NRC 63 (2012)
if an assessment of alternatives to the proposed action was prepared at the early site permit stage and no new information in the areas of energy alternatives or system design alternatives has been identified at the combined license stage, conclusions made at the ESP stage remain valid; CLI-12-2, 75 NRC 63 (2012)
if combined licenses issue without including license conditions, NRC regulations relevant to the finality of decisions could result in some additional administrative requirements to satisfy in imposing new requirements on licensee; CLI-12-9, 75 NRC 421 (2012)
in the area of impacts of combined licenses and limited work authorizations, NRC Staff, in its review of new and significant information, identified a change in impacts associated with terrestrial ecology; CLI-12-2, 75 NRC 63 (2012)
radiation protection requirements with which licensees must comply, such as procedures and controls to reduce occupational doses and doses to members of the public to levels that are as low as reasonably achievable, are outlined in 10 C.F.R. 20.1101(b); LBP-12-4, 75 NRC 213 (2012)
the application included a request for a departure from the wet-bulb noncoincident temperature, which is considered Tier 1 information and part of the certified design and thus a regulatory exemption is required; CLI-12-9, 75 NRC 421 (2012)
the Commission administratively exempted, from the backfit rule, an order to the combined license holder to address spent fuel pool instrumentation requirements not specified in the certified design as enhanced

protective measures that represent a substantial increase in the protection of public health and safety; CLI-12-9, 75 NRC 421 (2012)
to authorize issuance of combined licenses, NRC must determine that applicable regulations have been met, there is reasonable assurance that the new reactors will be constructed and will operate in conformity with NRC regulations, and issuance of the licenses will not be inimical to the public health and safety; CLI-12-2, 75 NRC 63 (2012)
when an environmental impact statement is prepared at the early site permit stage, NRC Staff must prepare a supplemental EIS for the COL focusing on issues related to the impacts of construction and operation for which new and significant information has been identified; CLI-12-2, 75 NRC 63 (2012)
COMPLIANCE
NRC is ultimately responsible for compliance with the National Environmental Policy Act; CLI-12-13, 75 NRC 681 (2012)
satisfying the requirements of other statutes does not in itself relieve a federal agency of its obligations to comply with the procedures set forth in the Endangered Species Act; LBP-12-10, 75 NRC 633 (2012)
See also Procedure Compliance
COMPUTER MODELING
although petitioners are not required to run their own computer models at the contention admissibility stage, a contention challenging a SAMA analysis nonetheless must be tethered to the computer modeling and mathematical aspects of the analysis; CLI-12-15, 75 NRC 704 (2012)
concern about methodology used to calculate groundwater quantity impacts is inadmissible as lacking sufficient factual or expert support and as failing to establish a material factual or legal dispute; LBP-12-3, 75 NRC 164 (2012)
CONFIDENTIAL INFORMATION
appeals of board rulings on hearing requests, petitions to intervene, and access to certain nonpublic information are governed by 10 C.F.R. 2.311(a); CLI-12-6, 75 NRC 352 (2012)
CONSIDERATION OF ALTERNATIVES
agencies are required to study, develop, and describe appropriate alternatives; CLI-12-9, 75 NRC 421 (2012)
agencies need only address reasonably foreseeable impacts, not those that are remote and speculative or inconsequentially small; LBP-12-5, 75 NRC 227 (2012)
an application-specific NEPA review represents a snapshot in time, and although NEPA requires that NRC conduct its environmental review with the best information available at that time, it does not require that NRC wait until inchoate information matures into something that later might affect its review; LBP-12-10, 75 NRC 633 (2012)
applicant is to provide in its environmental report an analysis of alternatives to the proposed action that is sufficiently complete to aid NRC Staff in developing and exploring its own set of alternatives; LBP-12-8, 75 NRC 539 (2012)
applicant is to provide in its environmental report an analysis that considers and balances the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects; LBP-12-8, 75 NRC 539 (2012)
applicant must provide a discussion of the no-action alternative in its environmental report; LBP-12-8, 75 NRC 539 (2012)
applicant's environmental report must address both the impacts of the proposed renewal and alternatives to those impacts; LBP-12-8, 75 NRC 539 (2012)
applicant's environmental report need only discuss those alternatives that will bring about the ends of the proposed action; CLI-12-5, 75 NRC 301 (2012)
because a single wind turbine cannot provide continuous production of electricity at or near full capacity, it does not constitute a source of baseload power; CLI-12-5, 75 NRC 301 (2012)
before implementing any major federal action significantly affecting the quality of the human environment, NRC must prepare an environmental impact statement that describes the action, its effects, and alternatives to the proposed action; LBP-12-10, 75 NRC 633 (2012)
boards are required to consider alternatives as they exist and are likely to exist; CLI-12-5, 75 NRC 301 (2012)

contentions could show a genuine dispute with respect to a technology that, 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; CLI-12-5, 75 NRC 301 (2012)
discussion of the no-action alternation need only include feasible, nonspeculative alternatives; LBP-12-8, 75 NRC 539 (2012)
environmental impact statements must consider the alternative of no action; LBP-12-8, 75 NRC 539 (2012)
environmental reports submitted by license renewal applicants must address the environmental impacts of the proposed action and compare them to impacts of alternative actions; CLI-12-8, 75 NRC 393 (2012)
for an alternative energy source to be considered reasonable for an operating license renewal proceeding, the alternative should be commercially viable and technically capable of producing an equal amount of baseload power now or in the near future, but no later than the expiration date of the current operating license; CLI-12-8, 75 NRC 393 (2012)
for siting alternatives, an agency's duty under NEPA is to study all alternatives that appear reasonable and appropriate for study at the time of drafting the environmental impact statement; CLI-12-5, 75 NRC 301 (2012)
for the no-action alternative, there need not be much discussion in the environmental documents because it is most simply viewed as maintaining the status quo; LBP-12-8, 75 NRC 539 (2012)
if an assessment of alternatives to the proposed action was prepared at the early site permit stage and no new information in the areas of energy alternatives or system design alternatives has been identified at the combined license stage, conclusions made at the ESP stage remain valid; CLI-12-2, 75 NRC 63 (2012)
license renewal applicant's environmental report must address environmental impacts of the proposed action and compare them to impacts of alternative actions; CLI-12-5, 75 NRC 301 (2012)
neither NRC nor applicant need consider any alternative that does not bring about the ends of the proposed action; CLI-12-5, 75 NRC 301 (2012)
NEPA does not mandate substantive results but, rather, imposes procedural restraints on agencies, requiring them to take a hard look at the environmental impacts of a proposed action and reasonable alternatives to that action; LBP-12-5, 75 NRC 227 (2012)
NEPA does not require a worst-case analysis; LBP-12-5, 75 NRC 227 (2012)
NEPA does not require agencies to analyze impacts of alternatives that are speculative, remote, impractical, or not viable; CLI-12-5, 75 NRC 301 (2012)
NEPA requires consideration of reasonable alternatives, not all conceivable ones; CLI-12-5, 75 NRC 301 (2012); CLI-12-8, 75 NRC 393 (2012)
NEPA requires that NRC take a hard look at alternatives, including severe accident mitigation alternatives, and to provide a rational basis for rejecting alternatives that are cost-effective; LBP-12-8, 75 NRC 539 (2012)
NEPA's "hard look" is tempered by a rule of reason; LBP-12-5, 75 NRC 227 (2012)
NRC gives substantial weight to the preferences of the applicant and/or sponsor; CLI-12-5, 75 NRC 301 (2012)
NRC Staff's environmental impact statement need only discuss those alternatives that will bring about the ends of the proposed action; CLI-12-5, 75 NRC 301 (2012)
petitioner has provided adequate support for its claim that there are numerous new severe accident mitigation alternatives candidates that should be evaluated for their significance; LBP-12-8, 75 NRC 539 (2012)
petitioners' challenge to the adequacy of applicant's existing analysis of solar and wind as alternative energy sources is not a contention of omission; CLI-12-8, 75 NRC 393 (2012)
remote and speculative alternatives need not be addressed in an applicant's environmental report; CLI-12-5, 75 NRC 301 (2012)
the extent of the no-action discussion is governed by a rule of reason; LBP-12-8, 75 NRC 539 (2012)
the NEPA alternatives analysis is the heart of the environmental impact statement; CLI-12-9, 75 NRC 421 (2012)
the rule of reason is inherent in NEPA and its implementing regulations; LBP-12-5, 75 NRC 227 (2012)

there is no NEPA requirement to use the best scientific methodology, and NEPA should be construed in the light of reason if it is not to demand virtually infinite study and resources; LBP-12-5, 75 NRC 227 (2012)
to challenge an energy alternatives analysis, 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 a commercially viable alternate technology (or combination of technologies) is available now, or will become so in the near future, to supply baseload power; CLI-12-8, 75 NRC 393 (2012)
to demonstrate the admissibility of a NEPA contention that an applicant failed to consider a viable alternative to its proposed action, petitioner must show that its contention presents a genuine dispute; CLI-12-5, 75 NRC 301 (2012)
under the rule of reason governing NEPA, the concept of alternatives must be bounded by some notion of feasibility; CLI-12-15, 75 NRC 704 (2012)
unless it looks genuinely plausible that inclusion of an additional factor or use of other assumptions and models may change the cost-benefit conclusions for the severe accident mitigation alternative candidates evaluated, no purpose would be served to further refine the SAMA analysis; CLI-12-5, 75 NRC 301 (2012)
when reviewing a discrete license application filed by a private applicant, a federal agency may appropriately accord substantial weight to the preferences of the applicant in siting and design of the project, taking into account the economic goals of the project's sponsor; CLI-12-5, 75 NRC 301 (2012)
when the purpose is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved; CLI-12-5, 75 NRC 301 (2012)
CONSTRUCTION
a biological assessment of listed species shall be completed before any contract for construction is entered into and before construction is begun with respect to such action; LBP-12-12, 75 NRC 742 (2012)
"construction" and "commencement of construction" are defined; LBP-12-3, 75 NRC 164 (2012)
fugitive dust generated onsite at a facility, particularly during construction, can be a concern in the vicinity of a facility; LBP-12-3, 75 NRC 164 (2012)
grounds for license denial exist if, prior to issuance of a license to possess and use source and byproduct materials for uranium milling, there is commencement of construction by an applicant; LBP-12-3, 75 NRC 164 (2012)
"major construction activity" is defined as a construction project, or other undertaking having similar physical impacts, that is a major federal action significantly affecting the quality of the human environment as referred to in NEPA; LBP-12-10, 75 NRC 633 (2012)
where an acting agency is engaged in major construction activities, the acting agency is to evaluate, through preparation of a biological assessment, whether the action is likely to adversely affect species or habitat; LBP-12-10, 75 NRC 633 (2012)
CONSTRUCTION COMPLETION
continued construction was barred pending the filing of an adequate environmental impact statement, notwithstanding the fact that the project was initially approved and construction commenced prior to the effective date of NEPA; LBP-12-1, 75 NRC 1 (2012)
CONSTRUCTION OF MEANING
in assessing whether petitioner has demonstrated its standing, licensing boards are to construe petitions in favor of petitioners; LBP-12-3, 75 NRC 164 (2012)
licensing board, construing the petition in favor of petitioners, based its standing finding on potential harm from traffic-generated dust and light pollution; CLI-12-12, 75 NRC 603 (2012)
See also Definitions
CONSTRUCTION WORKERS
annual 100-millirem limit for members of the public is defined to include radiation exposure to construction workers; CLI-12-2, 75 NRC 63 (2012)
CONSULTATION DUTY
a direct consultation obligation is imposed on NRC if NRC determines that approval of a requested license renewal may adversely affect any essential fish habitat; LBP-12-10, 75 NRC 633 (2012)
agencies are encouraged to incorporate consultation procedures on endangered/threatened species and essential fish habitat into their NEPA review; LBP-12-10, 75 NRC 633 (2012)

SUBJECT INDEX

consultation with appropriate agencies is needed at the time of license renewal to determine whether threatened or endangered species are present and whether they would be adversely affected; LBP-12-10, 75 NRC 633 (2012)
duties of NRC Staff and not an applicant, such as consultation with other federal agencies, could not be raised at the environmental report stage, and therefore such a contention will not be rejected as untimely when filed after the release of the draft environmental impact statement; LBP-12-12, 75 NRC 742 (2012)
even if the National Marine Fisheries Service disagrees with NRC's no-effect determination, it may only request that NRC enter formal consultation, but NRC is not required to consent to the request; LBP-12-10, 75 NRC 633 (2012)
federal agencies shall, in consultation with and with the assistance of the Secretary of the Interior, ensure that any action authorized, funded, or carried out an agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of their habitat; LBP-12-12, 75 NRC 742 (2012)
First Nations in Canada must receive invitations to participate in the environmental impact statement scoping process when there are transboundary environmental impacts from a project; LBP-12-12, 75 NRC 742 (2012)
formal consultation follows only if a biological assessment shows that the action may affect listed species or critical habitat; LBP-12-10, 75 NRC 633 (2012)
formal consultation includes preparation of a biological opinion by the Service, detailing the likely effects of the action on listed species or habitat as well as mitigation alternatives; LBP-12-10, 75 NRC 633 (2012)
if the acting agency concludes in the biological assessment that the action is not likely to affect listed habitats or species, and the Service concurs, the acting agency need not enter formal consultation; LBP-12-10, 75 NRC 633 (2012)
if the acting agency makes a "likely to affect" determination in the biological assessment, it is required to enter into formal consultation with the appropriate Service; LBP-12-10, 75 NRC 633 (2012)
if the Service does not concur with the agency's "not likely to affect" determination, it may request that the acting agency enter into formal consultation; LBP-12-10, 75 NRC 633 (2012)
in determining that a federal action is not likely to jeopardize species or modify habitat, the acting agency is to proceed in consultation with and with the assistance of the Secretary of Interior or Commerce; LBP-12-10, 75 NRC 633 (2012)
"informal consultation" is any communication between the acting agency and one of the Services designed to assist the acting agency in determining whether formal consultation is required; LBP-12-10, 75 NRC 633 (2012)
National Marine Fisheries Service has the authority to consult with other agencies if, for example, only one of the agencies has the authority to implement measures necessary to minimize adverse effects on essential fish habitat and that agency does not act as the lead agency; LBP-12-10, 75 NRC 633 (2012)
neither formal nor informal consultation is required by the Endangered Species Act if an agency determines that its proposed activity will not affect any listed species or critical habitat; LBP-12-10, 75 NRC 633 (2012)
NRC Staff, not the applicant, has the legal duty to engage in consultation under the Endangered Species Act; LBP-12-12, 75 NRC 742 (2012)
prior to preparing an environmental impact statement, the responsible federal official shall consult with and obtain the comments of any federal agency that has jurisdiction by law or special expertise with respect to any environmental impact involved; LBP-12-10, 75 NRC 633 (2012)
the only mandatory trigger for initiating formal consultation is if the acting agency itself determines that its action may affect listed species or critical habitat; LBP-12-10, 75 NRC 633 (2012)
whether NRC Staff undertakes formal consultation with the Services in the event that they disagree with a finding by the NRC of "no effect" or "not likely adversely to affect" depends upon the NRC's own regulations and its interpretation of its duty under the ESA to ensure that any action is not likely to jeopardize listed species or habitat; LBP-12-10, 75 NRC 633 (2012)

SUBJECT INDEX

CONTAINMENT SYSTEMS
licensees must develop and implement guidance and strategies to maintain or restore core cooling, containment, and spent-fuel pool cooling capabilities to address loss of large areas from fires or explosions that arise from a beyond-design-basis event; CLI-12-2, 75 NRC 63 (2012)

CONTENTIONS
although environmental contentions ultimately challenge NRC's compliance with the National Environmental Policy Act, applicant may advocate for a particular challenged position set forth in the environmental impact statement; LBP-12-5, 75 NRC 227 (2012)
an exceptionally grave issue is one that raises a sufficiently grave threat to public safety; LBP-12-1, 75 NRC 1 (2012)
applicants face a continuing possibility of contentions in adjudicatory proceedings based upon omissions or deficiencies in their environmental report because NRC rules require the filing of contentions as early as possible; CLI-12-13, 75 NRC 681 (2012)
for an environmental issue to be "significant" for the purposes of reopening a record, new information must paint a seriously different picture of the environmental landscape; LBP-12-1, 75 NRC 1 (2012)
intervenor has an iron-clad obligation to examine the publicly available documentary material with sufficient care to enable it to uncover any information that could serve as a foundation for a specific contention; LBP-12-13, 75 NRC 784 (2012)
intervenors are expected to file contentions on the basis of applicant's environmental report and not delay their contentions until after NRC Staff issues its environmental analysis; CLI-12-13, 75 NRC 681 (2012); LBP-12-12, 75 NRC 742 (2012)
neither new procedures nor a separate timetable for raising new issues related to the Fukushima events is warranted; CLI-12-15, 75 NRC 704 (2012)
petitioners' challenge to the adequacy of applicant's existing analysis of solar and wind as alternative energy sources is not a contention of omission; CLI-12-8, 75 NRC 393 (2012)
petitioners must raise and reasonably specify at the outset their objections to a license application; CLI-12-1, 75 NRC 39 (2012)
resolution of a mooted contention requires no more than a finding by the presiding officer that the matter has become moot; LBP-12-5, 75 NRC 227 (2012)
See also Amendment of Contentions

CONTENTIONS, ADMISSIBILITY
a licensing hearing does not embrace *anything* new revealed in the safety evaluation report or the NEPA documents; CLI-12-14, 75 NRC 692 (2012)
a minimal showing that material facts are in dispute is sufficient to render a proposed contention admissible; LBP-12-8, 75 NRC 539 (2012)
absent any duty under Part 51 requiring applicant to supplement its environmental report to address subsequent events or information, subsequent events and information do not create a genuine dispute as to the compliance status of the ER; LBP-12-13, 75 NRC 784 (2012)
absent error of law or abuse of discretion, the Commission generally defers to board rulings on contention admissibility; CLI-12-5, 75 NRC 301 (2012)
absent good cause, there must be a compelling showing on the remaining late-filing factors; CLI-12-10, 75 NRC 479 (2012)
all contentions, regardless of when they are filed, must also satisfy the admissibility requirements; LBP-12-1, 75 NRC 1 (2012)
all proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-12-3, 75 NRC 164 (2012)
all properly formulated contentions must focus on the license application in question, challenging either specific portions of or alleged omissions from the application so as to establish that a genuine dispute exists with the applicant on a material issue of law or fact; LBP-12-3, 75 NRC 164 (2012)
although boards do not decide the merits at the contention admissibility stage, materials cited as the basis for a contention are subject to scrutiny to determine whether, on their face, they actually support the facts alleged; LBP-12-12, 75 NRC 742 (2012)

SUBJECT INDEX

although disagreement over proper interpretation of NRC regulations may give rise to an admissible contention, petitioner's proposed interpretation is in direct conflict with the plain meaning of the regulation and its Statement of Considerations; LBP-12-8, 75 NRC 539 (2012)
although intervenors may use discovery to develop a case once contentions are admitted, contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by some alleged fact(s) demonstrating a genuine material dispute with the applicant; CLI-12-5, 75 NRC 301 (2012)
although it might be fatal for standing purposes if an Indian tribe were seeking to have intervenors represent their interests in the proceeding, intervenors' lack of authority to represent them is not a bar to intervenors raising the tribe's contention; LBP-12-12, 75 NRC 742 (2012)
although NRC regulations do not provide a precise definition of "timely," licensing boards have often found a new contention to be timely if it has been filed within 30 days of the availability of information on which the contention is based; LBP-12-11, 75 NRC 731 (2012)
although petitioners are not required to run their own computer models at the contention admissibility stage, a contention challenging a SAMA analysis nonetheless must be tethered to the computer modeling and mathematical aspects of the analysis; CLI-12-15, 75 NRC 704 (2012)
amended contentions filed after the initial filing period has expired may be admitted only with leave of the licensing board if they satisfy the three criteria of 10 C.F.R. 2.309(f)(2)(i)-(iii); LBP-12-9, 75 NRC 615 (2012)
amended contentions must satisfy general contention admissibility criteria and either the timeliness standards of section 2.309(f)(2) or the balancing test in section 2.309(c) for nontimely contentions; LBP-12-9, 75 NRC 615 (2012)
an environmental issue is "significant" for the purposes of reopening a record if it will paint a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; LBP-12-10, 75 NRC 633 (2012)
an information notice merely summarizes information that has long been publicly available and does not provide new information that would constitute good cause for the late filing; CLI-12-10, 75 NRC 479 (2012)
any contention filed within 30 days of the date when new and material information on which it is based first became available is regarded as timely; LBP-12-9, 75 NRC 615 (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-12-3, 75 NRC 164 (2012)
appropriate mechanism to challenge individual contention admissibility determinations following a ruling on an initial petition is a request for interlocutory review; CLI-12-12, 75 NRC 603 (2012)
arguments made for the first time on appeal will not be considered; CLI-12-3, 75 NRC 132 (2012)
assertion by applicant that its aging management plan is consistent with the GALL Report does not immunize it against a challenge to the AMP; CLI-12-5, 75 NRC 301 (2012)
assertion that other severe accident mitigation alternatives might become cost-effective if implemented, without indication of any particular positive or negative environmental impact from any such implementation fails to present an exceptionally grave issue; LBP-12-1, 75 NRC 1 (2012)
bare assertions and speculation, even by an expert, are insufficient to trigger a full adjudicatory proceeding; CLI-12-15, 75 NRC 704 (2012)
bare assertions are insufficient to demonstrate a genuine dispute on a material issue of law or fact under general contention admissibility requirements in section 2.309(f)(1)(vi), let alone a motion to reopen, which sets a higher evidentiary standard; CLI-12-3, 75 NRC 132 (2012)
because petitioner fails to show that the possibility of site inundation is based on new and materially different information added to the environmental report as part of applicant's revised low-level radioactive waste management plan or identify any new and materially different information on which its site-inundation argument is based, this argument is not timely; LBP-12-7, 75 NRC 503 (2012)
because three contentions are already set for hearing in the proceeding, the admission of further contentions would not substantially delay the proceeding; LBP-12-12, 75 NRC 742 (2012)
because two of the previously admitted contentions allege NEPA violations, new NEPA contentions put forward by the intervenors would not unreasonably broaden the issues; LBP-12-12, 75 NRC 742 (2012)

SUBJECT INDEX

boards are appropriate arbiters of fact-specific questions of contention admissibility, and the Commission will not second-guess their evaluation of factual support, absent an error of law or abuse of discretion; CLI-12-5, 75 NRC 301 (2012)
boards are not responsible for providing support for contentions so as to make them admissible; LBP-12-3, 75 NRC 164 (2012)
boards do not adjudicate disputed facts at the contention admissibility stage; LBP-12-8, 75 NRC 539 (2012)
boards in individual licensing proceedings are expected to assess contentions against applicable procedural standards; CLI-12-7, 75 NRC 379 (2012)
boards may appropriately view petitioner's supporting information in a light favorable to petitioner, but failure to provide such information requires that the contention be rejected; LBP-12-3, 75 NRC 164 (2012)
boards should not be expected to sift unaided through documents filed before the board to piece together and discern a party's argument and the grounds for its claims; LBP-12-3, 75 NRC 164 (2012)
boards should not have to guess what aspects of the severe accident mitigation alternatives analysis the petitioner is challenging; LBP-12-1, 75 NRC 1 (2012)
boards should not supply new information not otherwise present in the adjudicatory record in order to cure deficiencies in a petition; CLI-12-12, 75 NRC 603 (2012)
by participating in NRC proceedings, intervenors accept the obligation of uncovering relevant, publicly available information; CLI-12-13, 75 NRC 681 (2012)
by reason of their own standing in a proceeding, intervenors may assert any violation of law that would lead to a redress of their injuries, including their interests in seeing that the NEPA process is properly carried out or in preventing or delaying issuance of the requested combined license; LBP-12-12, 75 NRC 742 (2012)
challenge that applicant's environmental report omits material that petitioner alleges is required to be there is within the scope of the proceeding; LBP-12-8, 75 NRC 539 (2012)
challenge to the inputs and methodology in the SAMA analysis is impermissibly late; CLI-12-10, 75 NRC 479 (2012)
challenges to board rulings on late-filed contentions normally fall under NRC rules for interlocutory review; CLI-12-7, 75 NRC 379 (2012)
challenges to only the draft environmental impact statement apply equally to the final environmental impact statement under the migration tenet; LBP-12-5, 75 NRC 227 (2012)
challenging the environmental report preserves petitioner's right to challenge the environmental impact statement at a later stage of the proceedings; LBP-12-8, 75 NRC 539 (2012)
claim that application fails to adequately present the true extent of historical exploration drilling, borehole abandonment details, R&D testing, changes to groundwater quality, and interconnections of geologic strata contains no alleged facts to support this opinion and thus does not raise a genuine dispute; LBP-12-3, 75 NRC 164 (2012)
claims in a contention that did not genuinely stem from the specific amendments to the aging management plan or from particular information in the revised GALL Report were untimely under standards for admission of new or amended contentions; CLI-12-10, 75 NRC 479 (2012)
claims must be set forth with particularity; CLI-12-1, 75 NRC 39 (2012)
concern about computer modeling methodology used to calculate groundwater quantity impacts is inadmissible as lacking sufficient factual or expert support and as failing to establish a material factual or legal dispute; LBP-12-3, 75 NRC 164 (2012)
concerns that apply generically to all spent fuel pools at all reactors are more appropriately addressed via rulemaking or other appropriate generic activity; CLI-12-6, 75 NRC 352 (2012)
contention asserting that because no previous ISL/ISR mining operation has been able to restore groundwater to baseline standards, applicant will be required to request that the Commission set an alternate concentration limit for aqueous contaminants is admissible; LBP-12-3, 75 NRC 164 (2012)
contention asserting that NEPA requires a groundwater baseline characterization for an in situ recovery site is admissible; LBP-12-3, 75 NRC 164 (2012)
contention asserting that the NRC's environmental review of the license renewal application has not met the requirements of the Endangered Species Act and the Magnuson-Stevens Fishery Conservation and

Management Act fails to satisfy the requirements for reopening the record; LBP-12-10, 75 NRC 633 (2012)
contention challenging applicant's consideration of new and significant information regarding cleanup costs is inadmissible; LBP-12-8, 75 NRC 539 (2012)
contention in a license renewal proceeding based on applicant's failure to consider alleged new and significant information arising from NRC's Fukushima Task Force Report was rejected; LBP-12-8, 75 NRC 539 (2012)
contention rules are intended to prevent admission of ill-defined contentions where petitioners at the outset have not set forth particularized concerns; CLI-12-5, 75 NRC 301 (2012)
contention submitted for the first time after the draft environmental impact statement is issued will be deemed untimely; LBP-12-12, 75 NRC 742 (2012)
contention that merely predicts that at some future date petitioner might petition to intervene in this adjudication fails to identify any dispute with the license application or the DEIS, and thus fails to satisfy the admission requirement; LBP-12-12, 75 NRC 742 (2012)
contention that raises a genuine dispute with the sufficiency of the cumulative impacts analysis, or the lack thereof, in the environmental report is admissible; LBP-12-3, 75 NRC 164 (2012)
contention that the environmental report is deficient in concluding that environmental impacts from proposed deep injection wells will be small because the ER fails to identify the source data of the chemical concentrations for ethylbenzene, heptachlor, tetrachloroethylene, and toluene is admissible; LBP-12-9, 75 NRC 615 (2012)
contentions based on the Fukushima accident must be relevant to the present proceeding and must link the events at Fukushima to the risk of a severe accident at the site that is the subject of the proceeding; CLI-12-13, 75 NRC 681 (2012); LBP-12-1, 75 NRC 1 (2012)
contentions calling for requirements in excess of those imposed by regulations will be rejected as a collateral attack on regulations; CLI-12-5, 75 NRC 301 (2012)
contentions challenging an environmental report may be viewed as a challenge to the NRC Staff's subsequent draft or final environmental impact statement; CLI-12-1, 75 NRC 39 (2012)
contentions concerning release of radiological, chemical, and herbicidal materials and storage of spent fuel are Category 1 issues and thus inadmissible in operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012)
contentions could show a genuine dispute with respect to a technology that, 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; CLI-12-5, 75 NRC 301 (2012)
contentions filed after the deadline for initial intervention petitions also must satisfy the standards for late-filed contentions; CLI-12-15, 75 NRC 704 (2012)
contentions filed after the initial petition are not subject to appeal pursuant to 10 C.F.R. 2.311; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012); CLI-12-7, 75 NRC 379 (2012)
contentions for adjudicatory hearings must raise a genuine dispute with the applicant/licensee on a material issue of law or fact; CLI-12-10, 75 NRC 479 (2012)
contentions must meet all six pleading requirements of 10 C.F.R. 2.309(f)(1)(i)-(vi); LBP-12-8, 75 NRC 539 (2012)
contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by some alleged fact or facts demonstrating a genuine material dispute with the applicant; LBP-12-8, 75 NRC 539 (2012)
contentions submitted after the deadline for initial intervention petitions must satisfy the standards for late-filed contentions; CLI-12-10, 75 NRC 479 (2012)
contentions that fail to satisfy timeliness standards in section 2.309(f)(2) may still be admitted pursuant to a balancing test governing nontimely filings that weighs the factors set forth in 10 C.F.R. 2.309(c); LBP-12-7, 75 NRC 503 (2012); LBP-12-9, 75 NRC 615 (2012)
decisions on the admissibility of contentions will be affirmed where the Commission finds no error of law or abuse of discretion; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012)
delay in filing contentions caused by the schedule of counsel in other matters can support a finding of good cause; LBP-12-12, 75 NRC 742 (2012)
duties of NRC Staff and not an applicant, such as consultation with other federal agencies, could not be raised at the environmental report stage, and therefore such a contention will not be rejected as

untimely when filed after the release of the draft environmental impact statement; LBP-12-12, 75 NRC 742 (2012)
environmental contention regarding cumulative impact on groundwater quantity of the in situ recovery project and the planned expansion satisfies admissibility requirements; LBP-12-3, 75 NRC 164 (2012)
even if petitioner fails to establish good cause for an untimely petition, the other late-filing factors must be examined; LBP-12-12, 75 NRC 742 (2012)
evidence contained in affidavits supporting a motion to reopen must meet the admissibility standards, i.e., be relevant, material, and reliable; CLI-12-3, 75 NRC 132 (2012)
exceptionally grave issues may be considered in the discretion of the presiding officer even if untimely presented; LBP-12-1, 75 NRC 1 (2012)
expert opinion that merely states a conclusion, e.g., the application is "deficient," "inadequate," or "wrong" without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the board of the ability to make the necessary, reflective assessment of the opinion; CLI-12-5, 75 NRC 301 (2012)
failure to challenge the existing severe accident mitigation alternatives analysis would be insufficient to establish a material dispute for the purposes of satisfying the general contention admissibility standards, let alone the reopening standards; CLI-12-6, 75 NRC 352 (2012)
failure to comply with any of the admissibility criteria in section 2.309(f)(1) warrants rejection of a contention; LBP-12-3, 75 NRC 164 (2012); LBP-12-7, 75 NRC 503 (2012); LBP-12-9, 75 NRC 615 (2012)
failure to demonstrate good cause for a late-filed contention requires a compelling showing on the remaining factors; CLI-12-15, 75 NRC 704 (2012)
for a motion to reopen to be granted and a 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 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; LBP-12-11, 75 NRC 731 (2012)
for any contention to be admissible, regardless of when it is filed, it must satisfy each of the six criteria of 10 C.F.R. 2.309(f)(1); LBP-12-10, 75 NRC 633 (2012)
for threshold issues such as contention admissibility, the Commission gives substantial deference to a board's determinations; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012)
Fukushima-related contentions are rejected as premature, and would not have addressed the standards for reopening, contention admissibility, or rule waiver; CLI-12-6, 75 NRC 352 (2012)
generically applicable concerns are not appropriate for resolution in an adjudicatory proceeding, a rulemaking petition being the appropriate mechanism for raising those concerns; CLI-12-6, 75 NRC 352 (2012)
good cause for late filing is the most important of the late-filing factors and is given the most weight; CLI-12-10, 75 NRC 479 (2012); LBP-12-7, 75 NRC 503 (2012); LBP-12-9, 75 NRC 615 (2012); LBP-12-12, 75 NRC 742 (2012)
groundwater quality degradation for cooling ponds in salt marshes is a Category 1 issue and thus inadmissible in operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012)
if a new or amended contention is deemed untimely under section 2.309(f)(2)(iii), it will be evaluated under 10 C.F.R. 2.309(c)(1), which requires a balancing of eight factors to determine whether it is admissible; LBP-12-12, 75 NRC 742 (2012)
if applicant's enhanced monitoring program, which was the topic of a late-filed contention, was insufficient, it must have been insufficient beforehand too; CLI-12-10, 75 NRC 479 (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-12-3, 75 NRC 164 (2012)
in 1989, NRC revised its rules to prevent the admission of poorly defined or supported contentions or those based on little more than speculation; CLI-12-8, 75 NRC 393 (2012)
in addition to satisfying the timeliness standards in 10 C.F.R. 2.309(f)(2) or the balancing test in 10 C.F.R. 2.309(c), a newly proffered contention must satisfy the admissibility criteria of 10 C.F.R. 2.309(f)(1); LBP-12-7, 75 NRC 503 (2012)
in examining contention admissibility, the Commission generally defers to the board unless it finds either an error of law or abuse of discretion; CLI-12-8, 75 NRC 393 (2012)

SUBJECT INDEX

in the absence of good cause for late filing, a party must make an especially strong showing on the other factors to justify admission of a nontimely contention; LBP-12-10, 75 NRC 633 (2012); LBP-12-12, 75 NRC 742 (2012)
interlocutory review of a board's dismissal of a new contention is granted only upon a showing of extraordinary circumstances; CLI-12-13, 75 NRC 681 (2012)
intervenor is not free to change the focus of its admitted contention, at will, as litigation progresses; LBP-12-5, 75 NRC 227 (2012)
intervenor may not delay filing a contention until a document becomes available that collects, summarizes, and places into context previously available facts supporting that contention; LBP-12-1, 75 NRC 1 (2012)
intervenor normally is not allowed to challenge a board's rejection of contentions where the board has granted a hearing on any contention; CLI-12-12, 75 NRC 603 (2012)
intervenors' challenge concerning the DEIS's alleged failure to discuss the Great Lakes Compact's process for regional review of its application for a consumptive water use permit is inadmissible; LBP-12-12, 75 NRC 742 (2012)
intervenors fail to show that, with respect to terrestrial and wetland mitigation plans, there are data or conclusions in the draft environmental impact statement that differ significantly from the data or conclusions in the applicant's documents; LBP-12-12, 75 NRC 742 (2012)
intervenors may file new or amended contentions in response to the draft environmental impact statement if they can satisfy the test of 10 C.F.R. 2.309(f)(2)(i)-(iii); LBP-12-12, 75 NRC 742 (2012)
intervenors seeking a new hearing on a new contention after the board has closed the evidentiary record must move to reopen the evidentiary record and meet a deliberately higher threshold standard than that for an ordinary late-filed contention; CLI-12-15, 75 NRC 704 (2012)
intervention petitioners have an ironclad obligation to review the application thoroughly and to base their challenges on its contents; CLI-12-5, 75 NRC 301 (2012)
level of support required to sustain a motion to reopen is greater than that required for a contention under the general admissibility requirements of 10 C.F.R. 2.309(f)(1); CLI-12-6, 75 NRC 352 (2012); CLI-12-7, 75 NRC 379 (2012)
licensing boards applied existing procedural rules to new contentions and motions to reopen filed in response to the Three Mile Island accident and the September 11, 2001, terrorist attacks; CLI-12-13, 75 NRC 681 (2012)
licensing boards are precluded from admitting contentions alleging that the project may not be consistent with the requirements of another federal, state, or local agency; LBP-12-12, 75 NRC 742 (2012)
licensing boards must specify each basis relied upon for admitting a contention; CLI-12-5, 75 NRC 301 (2012)
mere general references to NRC Staff's requests for additional information do not provide the requisite reasonable specificity to support admission of a contention; CLI-12-5, 75 NRC 301 (2012)
mere notice pleading is insufficient in NRC proceedings; LBP-12-8, 75 NRC 539 (2012)
motions to reopen on issues not previously litigated must satisfy the balancing test of 10 C.F.R. 2.309(c) in addition to the reopening standards; CLI-12-3, 75 NRC 132 (2012)
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; LBP-12-3, 75 NRC 164 (2012)
neither the Commission nor the board should be expected to sift through a lengthy document in search of asserted factual support that petitioner has not specified; CLI-12-5, 75 NRC 301 (2012)
new contentions are considered timely when filed within 30 days of the date that asserted foundational information became available; LBP-12-10, 75 NRC 633 (2012)
new contentions must paint a seriously different picture of the environmental landscape that would require supplementation of an environmental impact statement; LBP-12-10, 75 NRC 633 (2012)
new or amended contentions filed after the initial filing period has expired may be admitted as timely only with leave of the licensing board if it meets the timeliness standards of 10 C.F.R. 2.309(f)(2); LBP-12-7, 75 NRC 503 (2012); LBP-12-12, 75 NRC 742 (2012)
no NRC rule or regulation is subject to attack in any adjudicatory proceeding; LBP-12-8, 75 NRC 539 (2012)

SUBJECT INDEX

NRC deliberately raised contention admissibility standards to relieve the hearing delays that poorly defined or supported contentions had caused in the past; CLI-12-5, 75 NRC 301 (2012); CLI-12-8, 75 NRC 393 (2012)
NRC practice of closing the hearing record after resolution of the last live contention, and of holding new contentions to the higher reopening standard has been upheld by higher courts; CLI-12-14, 75 NRC 692 (2012)
NRC properly reserves its hearing process for genuine, material controversies between knowledgeable litigants; CLI-12-5, 75 NRC 301 (2012); CLI-12-8, 75 NRC 393 (2012)
NRC regulations may not be challenged in an adjudicatory proceeding absent a request for a waiver under section 2.335(b); CLI-12-6, 75 NRC 352 (2012); LBP-12-12, 75 NRC 742 (2012)
NRC revised its rules in 1989 to prevent admission of contentions based on little more than speculation; CLI-12-5, 75 NRC 301 (2012)
NRC rules are 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 in a hearing; CLI-12-15, 75 NRC 704 (2012)
NRC rules contain ample provisions through which litigants may seek admission of new or amended contentions; CLI-12-13, 75 NRC 681 (2012)
NRC rules of practice require that a proposed contention be supported by alleged fact or expert opinion; CLI-12-7, 75 NRC 379 (2012)
once it made a determination of plausible injury from the proposed project, the board was not required to weigh the evidence to determine whether the harm to petitioners was beyond doubt; CLI-12-12, 75 NRC 603 (2012)
petition that attempts to proffer a nontimely contention without addressing the balancing factors in section 2.309(c) may be summarily rejected; LBP-12-7, 75 NRC 503 (2012)
petitioner bears the burden for setting forth clear arguments for its contentions; CLI-12-5, 75 NRC 301 (2012)
petitioner does not demonstrate, with the level of support required under section 2.326(b), that a materially different result would have been likely had the possibility of recriticality over a period longer than 24 hours, or even 4 days, been considered in the SAMA analysis initially; CLI-12-3, 75 NRC 132 (2012)
petitioner does not identify how the Fukushima accident paints a seriously different picture of the environment, given the bounding severe accident scenarios assumed in the GEIS analysis and its consideration of liquid pathways; CLI-12-15, 75 NRC 704 (2012)
petitioner fails to demonstrate that the issue of radiation dispersal due to site inundation is material to the findings the NRC must make to support approving a combined license application; LBP-12-7, 75 NRC 503 (2012)
petitioner has provided adequate support for its claim that there are numerous new severe accident mitigation alternatives candidates that should be evaluated for their significance; LBP-12-8, 75 NRC 539 (2012)
petitioner is obliged to present factual allegations and/or expert opinion necessary to support its contention; LBP-12-3, 75 NRC 164 (2012); LBP-12-8, 75 NRC 539 (2012)
petitioner is required to make reference to specific sources and documents on which it intends to rely; LBP-12-8, 75 NRC 539 (2012)
petitioner may not remediate deficient contentions by introducing, in the reply, documents that were available to it during the time frame for initially filing contentions; LBP-12-7, 75 NRC 503 (2012)
petitioner must challenge the environmental report, which acts as a surrogate for the environmental impact statement during the early stages of a relicensing proceeding; LBP-12-8, 75 NRC 539 (2012)
petitioner must demonstrate that the issue raised in a contention is within the scope of the proceeding and material to the findings NRC must make to support the action involved in the proceeding; CLI-12-15, 75 NRC 704 (2012); LBP-12-3, 75 NRC 164 (2012)
petitioner must file NEPA-related contentions based on applicant's environmental report, but the filing of new or amended contentions is explicitly permitted if there are data or conclusions in the NRC draft or final environmental impact statement that differ significantly from data or conclusions in applicant's documents; LBP-12-13, 75 NRC 784 (2012)
petitioner must make clear why cited references provide a basis; CLI-12-5, 75 NRC 301 (2012)

petitioner must provide sufficient information to show that a genuine dispute exists on a material issue of law or fact; LBP-12-13, 75 NRC 784 (2012)
petitioner must raise a genuine dispute with the license application and must provide underlying factual or legal support; CLI-12-15, 75 NRC 704 (2012)
petitioner must, among other things, provide a concise statement of the alleged facts or expert opinions that support its position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents that support its position; CLI-12-5, 75 NRC 301 (2012)
petitioner need not prove its contentions at the admissibility stage; LBP-12-8, 75 NRC 539 (2012)
petitioner proposing alternative inputs or methodologies for the severe accident mitigation alternatives analysis must present some factual or expert basis for why the proposed changes in the analysis are warranted; CLI-12-8, 75 NRC 393 (2012)
petitioner who files a new contention after the board has already closed the evidentiary record is obliged to address the reopening standards; CLI-12-6, 75 NRC 352 (2012)
petitioner will have an opportunity to challenge the board's contention admissibility decision at the end of the case; CLI-12-13, 75 NRC 681 (2012)
petitioners are not required to demonstrate their asserted injury with certainty at the contention admissibility stage of the proceeding; CLI-12-12, 75 NRC 603 (2012)
petitioner's averment that the proffered environmental contentions will better position the agency to fully review the possible impacts of applicant's proposed project and, based on petitioner's expert's information, may address concerns and mitigate impacts to water, land, and other resources is sufficient to fulfill the redressability requirement for standing; CLI-12-12, 75 NRC 603 (2012)
petitioner's challenge to applicant's use of Three Mile Island data constitutes a genuine dispute on a material issue and is within the scope of the license renewal proceeding because it challenges the adequacy of the environmental report; LBP-12-8, 75 NRC 539 (2012)
petitioners fail to link any of their past criticisms to specific provisions of the environmental report, and the board declines to pore through the attachments to their intervention submission to assemble the basis for such a contention; LBP-12-3, 75 NRC 164 (2012)
petitioners must point to a deficiency in the application, and not merely suggest other ways an analysis could have been done, or other details that could have been included; CLI-12-5, 75 NRC 301 (2012)
petitions that proffer a nontimely contention without addressing the balancing factors in section 2.309(c) may be summarily rejected; LBP-12-9, 75 NRC 615 (2012)
prior to NRC's 1989 rule revision, intervenors were able to trigger hearings after merely copying a contention from another proceeding, even though these admitted intervenors often had negligible knowledge of the issues and no direct case to present; CLI-12-5, 75 NRC 301 (2012); CLI-12-8, 75 NRC 393 (2012)
proponent of a contention, not the licensing board, is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for its admission; CLI-12-5, 75 NRC 301 (2012); CLI-12-13, 75 NRC 681 (2012)
proposed new or amended contentions shall be deemed timely if filed within 60 days of the date when the document containing the new and material information first becomes available; LBP-12-12, 75 NRC 742 (2012)
providing any material or document as the basis of a contention, without setting forth an explanation of its significance, is inadequate to support admission of the contention; LBP-12-12, 75 NRC 742 (2012)
psychological fears or stigma effects are not cognizable NEPA claims; CLI-12-5, 75 NRC 301 (2012)
publication of the draft environmental impact statement does not provide an opportunity to renew previously filed (and rejected) contentions, but rather, petitioner must demonstrate that the DEIS actually contains new data or conclusions; LBP-12-12, 75 NRC 742 (2012)
raising new issues related to the Fukushima events does not warrant new procedures or a separate timetable; CLI-12-6, 75 NRC 352 (2012)
reach of a contention necessarily hinges upon its terms coupled with its stated bases; CLI-12-5, 75 NRC 301 (2012)
references to prior problems involving estimation of decommissioning costs are inadequate to establish a likelihood that the amount of applicant's decommissioning bond will be insufficient; LBP-12-3, 75 NRC 164 (2012)

reopening standards expressly contemplate contentions that raise issues not previously litigated; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012)
reply briefs may not be used to introduce new arguments to reinvigorate thinly supported contentions; CLI-12-5, 75 NRC 301 (2012)
reply briefs may not contain new information that was not raised in either the petition or answers, but arguments that respond to the petition or answers, whether they are offered in rebuttal or in support, are not precluded; LBP-12-8, 75 NRC 539 (2012)
request for hearing and/or petition for leave to intervene will be granted if the board determines that requestor/petitioner has standing and has proposed at least one admissible contention; LBP-12-8, 75 NRC 539 (2012)
requirements for an admissible contention are specified; LBP-12-3, 75 NRC 164 (2012)
routine contention admissibility decisions do not affect the basic structure of a proceeding in a pervasive or unusual manner; CLI-12-13, 75 NRC 681 (2012)
routine contention admissibility determinations generally are not appropriate for interlocutory review; CLI-12-12, 75 NRC 603 (2012)
scope of a contention is limited to the issues of law and fact pleaded with particularity in the contention and any factual and legal material in support thereof; LBP-12-5, 75 NRC 227 (2012)
section 2.341 applies to appeals of rulings on new contentions filed after initial intervention petitions; CLI-12-7, 75 NRC 379 (2012)
severe accident mitigation alternatives are listed as Category 2 issues, and NRC must treat them as such; LBP-12-8, 75 NRC 539 (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 admission of the contention; LBP-12-3, 75 NRC 164 (2012)
site-specific environmental issues are Category 2 issues and thus admissible in operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012)
speculation that NRC would consider other SAMAs than have been previously considered does not demonstrate that the issue raised is material to NRC's decision; LBP-12-1, 75 NRC 1 (2012)
standard for review of contention admissibility determinations is the same, whether an appeal lies under section 2.311 or 2.341, and the Commission will disturb a licensing board's contention admissibility ruling only if there has been an error of law or an abuse of discretion; CLI-12-7, 75 NRC 379 (2012)
standards governing contention admissibility are strict by design; LBP-12-7, 75 NRC 503 (2012)
statement of supporting facts or expert opinion to establish how the project would impair the visual resources, rather than mere speculation, is required for an admissible contention; LBP-12-3, 75 NRC 164 (2012)
sufficiency of an aging management program that meets the GALL Report's recommendations can be challenged if the contention admissibility requirements are otherwise met; CLI-12-10, 75 NRC 479 (2012)
tardy filing of a contention may be excusable only where the facts upon which the amended or new contention is based were previously unavailable; CLI-12-10, 75 NRC 479 (2012)
the board is the agency's expert body on matters of contention admissibility, and the Commission generally defers to its judgment on contention admissibility; CLI-12-14, 75 NRC 692 (2012)
the board properly rejected state's contention that raised concerns similar to those in its rulemaking petition as an impermissible challenge to NRC regulations; CLI-12-6, 75 NRC 352 (2012)
the burden is on the proponent of a contention to show that NRC Staff's analysis or methodology is unreasonable or insufficient; CLI-12-6, 75 NRC 352 (2012)
the Commission declined to establish new procedures or a separate timetable for raising issues related to the Fukushima events; CLI-12-13, 75 NRC 681 (2012)
the Commission generally defers to board rulings on contention admissibility unless it finds an error of law or abuse of discretion; CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)
the late-filing factor given the most weight is whether there is good cause for the failure to file on time; CLI-12-15, 75 NRC 704 (2012)
the migration tenet applies only as long as the DEIS analysis or discussion at issue is essentially *in para materia* with the ER analysis or discussion that is the focus of the contention; LBP-12-12, 75 NRC 742 (2012)

the migration tenet 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; LBP-12-12, 75 NRC 742 (2012)
the standard for admission of new or amended contentions involves a balancing of eight factors; CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)
the standard for admitting a new contention after the record is closed is higher than for an ordinary late-filed contention; CLI-12-10, 75 NRC 479 (2012)
the time for challenging the environmental report passes when NRC Staff releases its draft supplemental environmental impact statement, but contentions challenging the ER can be filed with the initial petition and prior to the time Staff's environmental review documents are completed; LBP-12-11, 75 NRC 731 (2012)
there is no contention-based requirement mandating that to have standing, besides showing that a cognizable injury is associated with a proposed licensing action and that granting the relief sought will address that injury, petitioner also must establish a link between that injury and the issues it wishes to litigate in challenging an application; LBP-12-3, 75 NRC 164 (2012)
there is no legal requirement that an applicant consider population projections to the end of the license term, but petitioner could succeed in raising such a contention if it demonstrated that considering such data would be material to the proceeding; LBP-12-8, 75 NRC 539 (2012)
to accept the argument that a reopening standard may never be applied in situations where a petitioner seeks to add previously unlitigated material would effectively render the regulation meaningless; CLI-12-3, 75 NRC 132 (2012)
to be accepted for hearing, contentions must meet strict admissibility standards; CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)
to challenge an energy alternatives analysis, 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 a commercially viable alternative technology (or combination of technologies) is available now, or will become so in the near future, to supply baseload power; CLI-12-8, 75 NRC 393 (2012)
to demonstrate that a revised SAMA analysis would produce a materially different result, intervenor should indicate how much the mean consequences of the severe accident scenarios could reasonably be expected to change as well as cost of implementing other SAMAs it believes might become cost-effective; LBP-12-1, 75 NRC 1 (2012)
to demonstrate the admissibility of a NEPA contention that an applicant failed to consider a viable alternative to its proposed action, petitioner must show that its contention presents a genuine dispute; CLI-12-5, 75 NRC 301 (2012)
to have a new contention admitted after the contested proceeding has terminated, petitioner must meet three criteria; CLI-12-14, 75 NRC 692 (2012)
to the extent that intervenors challenge all radiological releases from nuclear power plants, the contention presents an impermissible challenge to the NRC's regulations; LBP-12-12, 75 NRC 742 (2012)
trigger point for timely submission of new or amended contentions is when new information becomes available, and NRC rules require the filing of contentions in a timely manner after such new information becomes available; CLI-12-13, 75 NRC 681 (2012); LBP-12-13, 75 NRC 784 (2012)
under current rules, intervenors may use discovery to develop a case once contentions are admitted, but contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by some alleged fact or facts demonstrating a genuine material dispute with the applicant; CLI-12-8, 75 NRC 393 (2012)
under the migration tenet, boards may construe an admitted contention contesting the environmental report as a challenge to the subsequently issued draft or final environmental impact statement without the necessity for intervenors to file a new or amended contention; LBP-12-12, 75 NRC 742 (2012)
unless petitioner sets forth support for a contention pointing to an apparent error or deficiency that may have significantly skewed the environmental conclusions, there is no genuine material dispute with the application; CLI-12-8, 75 NRC 393 (2012)
untimely motion to reopen the proceeding and admit a new contention concerning licensee's impacts on the roseate tern, a federally listed endangered species, is denied; LBP-12-11, 75 NRC 731 (2012)

using reply briefs to provide, for the first time, the necessary threshold support for contentions would effectively bypass and eviscerate NRC rules governing timely filing, contention amendment, and submission of late-filed contentions; LBP-12-7, 75 NRC 503 (2012)
when omissions are cured by the subsequent issuance of licensing-related documents, a contention of omission must be disposed of or modified; LBP-12-5, 75 NRC 227 (2012)
where a contention alleges omission of particular information or an issue from an application, and the information is later supplied by the applicant or considered by NRC Staff in a draft environmental impact statement, the contention is moot, and intervenors must timely file a new or amended contention to raise specific challenges regarding the new information; LBP-12-5, 75 NRC 227 (2012)
where admission of a late-filed contention would cause a material delay in the proceeding weighed against admission of the contention; CLI-12-15, 75 NRC 704 (2012)
where petitioner fails to show good cause for late filing, its demonstration on the other factors must be particularly strong; LBP-12-9, 75 NRC 615 (2012)
where the proceeding remains open during the pendency of a remand, but the record remains closed, any contentions raising genuinely new issues would have to be accompanied by a motion to reopen; CLI-12-3, 75 NRC 132 (2012)
CONTENTIONS, LATE-FILED
a licensing hearing does not embrace *anything* new revealed in the safety evaluation report or the NEPA documents; CLI-12-14, 75 NRC 692 (2012)
absent good cause, there must be a compelling showing on the remaining late-filing factors; CLI-12-10, 75 NRC 479 (2012)
all contentions, regardless of when they are filed, must also satisfy the admissibility requirements; LBP-12-1, 75 NRC 1 (2012)
although NRC regulations do not provide a precise definition of "timely," licensing boards have often found a new contention to be timely if it has been filed within 30 days of the availability of information on which the contention is based; LBP-12-11, 75 NRC 731 (2012)
amended contentions must satisfy general contention admissibility criteria and either the timeliness standards of section 2.309(f)(2) or the balancing test in section 2.309(c) for nontimely contentions; LBP-12-9, 75 NRC 615 (2012)
amendment of contentions and submission of new contentions are allowed when good cause is shown; CLI-12-1, 75 NRC 39 (2012)
an information notice merely summarizes information that has long been publicly available and does not provide new information that would constitute good cause for the late filing; CLI-12-10, 75 NRC 479 (2012)
argument that applying heightened late-filing standards to contentions triggered by the NRC Staff's review documents violates a petitioner's AEA hearing rights has been considered and rejected; CLI-12-14, 75 NRC 692 (2012)
because petitioner fails to show that the possibility of site inundation is based on new and materially different information added to the environmental report as part of applicant's revised low-level radioactive waste management plan or identify any new and materially different information on which its site-inundation argument is based, this argument is nontimely; LBP-12-7, 75 NRC 503 (2012)
because the motion to reopen and contention are based on information that is neither new nor materially different from information that was previously available, the motion and contention are untimely; LBP-12-11, 75 NRC 731 (2012)
because three contentions are already set for hearing in the proceeding, the admission of further contentions would not substantially delay the proceeding; LBP-12-12, 75 NRC 742 (2012)
because two of the previously admitted contentions allege NEPA violations, new NEPA contentions put forward by the intervenors would not unreasonably broaden the issues; LBP-12-12, 75 NRC 742 (2012)
challenges to board rulings on late-filed contentions normally fall under NRC rules for interlocutory review; CLI-12-7, 75 NRC 379 (2012)
contention submitted for the first time after the draft environmental impact statement is issued will be deemed untimely; LBP-12-12, 75 NRC 742 (2012)
contentions submitted after the deadline for initial intervention petitions must satisfy the standards for late-filed contentions; CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)

contentions that fail to satisfy timeliness standards in section 2.309(f)(2) may still be admitted pursuant to a balancing test governing nontimely filings that weighs the factors set forth in 10 C.F.R. 2.309(c); LBP-12-7, 75 NRC 503 (2012); LBP-12-9, 75 NRC 615 (2012)
delay in filing contentions caused by the schedule of counsel in other matters can support a finding of good cause; LBP-12-12, 75 NRC 742 (2012)
denial or conditioning of a license would obviously be a materially different result; CLI-12-14, 75 NRC 692 (2012)
duties of NRC Staff and not an applicant, such as consultation with other federal agencies, could not be raised at the environmental report stage, and therefore such a contention will not be rejected as untimely when filed after the release of the draft environmental impact statement; LBP-12-12, 75 NRC 742 (2012)
even if petitioner fails to establish good cause for an untimely petition, the other late-filing factors must be examined; LBP-12-12, 75 NRC 742 (2012)
exceptionally grave issues may be considered in the discretion of the presiding officer even if untimely presented; LBP-12-1, 75 NRC 1 (2012)
failure to demonstrate good cause for a late-filed contention requires a compelling showing on the remaining factors; CLI-12-15, 75 NRC 704 (2012)
filing of amended or new contentions is permitted only with leave of the board and upon a showing that it is based on information not previously available and materially different and the filing is timely; LBP-12-13, 75 NRC 784 (2012)
for a motion to reopen to be granted and a 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 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; LBP-12-11, 75 NRC 731 (2012)
good cause is the most important of the factors in the 2.309(c) balancing test, and in the absence of good cause, a party must make an especially strong showing on the other factors to justify admission of a nontimely contention; CLI-12-10, 75 NRC 479 (2012); LBP-12-7, 75 NRC 503 (2012); CLI-12-15, 75 NRC 704 (2012); LBP-12-9, 75 NRC 615 (2012); LBP-12-10, 75 NRC 633 (2012); LBP-12-12, 75 NRC 742 (2012)
if a new or amended contention is deemed untimely under section 2.309(f)(2)(iii), it will be evaluated under 10 C.F.R. 2.309(c)(1), which requires a balancing of eight factors to determine whether it is admissible; LBP-12-12, 75 NRC 742 (2012)
if applicant's enhanced monitoring program, which was the topic of a late-filed contention, was insufficient, it must have been insufficient beforehand too; CLI-12-10, 75 NRC 479 (2012)
in addition to satisfying the timeliness standards in 10 C.F.R. 2.309(f)(2) or the balancing test in 10 C.F.R. 2.309(c), a newly proffered contention must satisfy the admissibility criteria of 10 C.F.R. 2.309(f)(1); LBP-12-7, 75 NRC 503 (2012)
intervenor may not delay filing a contention until a document becomes available that collects, summarizes, and places into context previously available facts supporting that contention; LBP-12-1, 75 NRC 1 (2012)
intervenors may file new or amended contentions in response to the draft environmental impact statement if they can satisfy the test of 10 C.F.R. 2.309(f)(2)(i)-(iii); LBP-12-12, 75 NRC 742 (2012)
intervenors seeking a new hearing on a new contention after the board has closed the evidentiary record must move to reopen the evidentiary record and meet a deliberately higher threshold standard than that for an ordinary late-filed contention; CLI-12-15, 75 NRC 704 (2012)
motions to reopen may be granted, even if untimely presented, when the motion presents an exceptionally grave issue; LBP-12-11, 75 NRC 731 (2012)
motions to reopen relating to a contention not previously in controversy among the parties must also satisfy the requirements for nontimely contentions in 10 C.F.R. 2.309(c) and the admissibility requirements of 10 C.F.R. 2.309(f)(1); LBP-12-1, 75 NRC 1 (2012); LBP-12-10, 75 NRC 633 (2012)
new contentions are timely when filed within 30 days of the date that asserted foundational information became available; LBP-12-1, 75 NRC 1 (2012)
new contentions must paint a seriously different picture of the environmental landscape that would require supplementation of an environmental impact statement; LBP-12-10, 75 NRC 633 (2012)

new or amended contentions filed after the initial filing period has expired may be admitted as timely only with leave of the licensing board if it meets the timeliness standards of 10 C.F.R. 2.309(f)(2); LBP-12-7, 75 NRC 503 (2012); LBP-12-12, 75 NRC 742 (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-12-10, 75 NRC 479 (2012)
parties' other professional obligations do not relieve them of their obligations to meet mandatory deadlines; LBP-12-12, 75 NRC 742 (2012)
petition that attempts to proffer a nontimely contention without addressing the balancing factors in section 2.309(c) may be summarily rejected; LBP-12-7, 75 NRC 503 (2012); LBP-12-9, 75 NRC 615 (2012)
petitioner must show that the information upon which the new contention is based was not previously available and is materially different than information previously available; CLI-12-10, 75 NRC 479 (2012)
proposed new or amended contentions shall be deemed timely if filed within 60 days of the date when the document containing the new and material information first becomes available; LBP-12-12, 75 NRC 742 (2012)
tardy filing of a contention may be excusable only where the facts upon which the amended or new contention is based were previously unavailable; CLI-12-10, 75 NRC 479 (2012)
the standard for admission of new or amended contentions involves a balancing of eight factors; CLI-12-10, 75 NRC 479 (2012)
trigger point for the timely submission of new or amended contentions is when new information becomes available, and intervenor has the obligation to raise new contentions based on such information; CLI-12-13, 75 NRC 681 (2012); LBP-12-13, 75 NRC 784 (2012)
unfettered ability to file a late contention may significantly undermine the efficiency of a proceeding even if the contention is based on newly discovered information; CLI-12-14, 75 NRC 692 (2012)
where a motion to reopen is untimely, the section 2.326(a)(1) "exceptionally grave" test supplants the section 2.326(a)(2) "significant safety or environmental issue" test; LBP-12-1, 75 NRC 1 (2012); LBP-12-10, 75 NRC 633 (2012)
where admission of a late-filed contention would cause a material delay in the proceeding weighed against admission of the contention; CLI-12-15, 75 NRC 704 (2012)
where petitioner fails to establish good cause for late filing, its demonstration on the other factors must be particularly strong; LBP-12-7, 75 NRC 503 (2012); LBP-12-9, 75 NRC 615 (2012)
CONTESTED LICENSE APPLICATIONS
once all contentions have been decided, the contested proceeding is terminated; CLI-12-14, 75 NRC 692 (2012)
CONTROL ROOM
applicant must ensure that its control room remains habitable in case of accidental release of hazardous gases; CLI-12-9, 75 NRC 421 (2012)
COOLING POND
groundwater quality degradation for cooling ponds in salt marshes is a Category 1 issue and thus inadmissible in operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012)
COOLING SYSTEMS
licensees must develop and implement guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities to address loss of large areas from fires or explosions that arise from a beyond-design-basis event; CLI-12-2, 75 NRC 63 (2012)
See also Emergency Core Cooling System; Spent Fuel Cooling System
COOLING TOWERS
the COL application included a request for a departure from the wet-bulb noncoincident temperature, which is considered Tier 1 information and part of the certified design and thus a regulatory exemption is required; CLI-12-9, 75 NRC 421 (2012)
COST-BENEFIT ANALYSIS
See Benefit-Cost Analysis
COSTS
contention challenging applicant's consideration of new and significant information regarding cleanup costs is inadmissible; LBP-12-8, 75 NRC 539 (2012)

SUBJECT INDEX

COUNCIL ON ENVIRONMENTAL QUALITY
NRC is directed to use the Council on Environmental Quality regulation 40 C.F.R. 1502.4 in defining the scope of its impact statements; LBP-12-12, 75 NRC 742 (2012)
NRC regulations incorporate CEQ regulations that define the scope of an environmental impact statement to include cumulative impacts; LBP-12-3, 75 NRC 164 (2012)
COUNSEL
delay in filing contentions caused by the schedule of counsel in other matters can support a finding of good cause; LBP-12-12, 75 NRC 742 (2012)
failure of counsel to review the scheduling order does not constitute good cause for failure to meet a filing deadline; LBP-12-12, 75 NRC 742 (2012)
CRITICALITY ANALYSES
petitioner does not demonstrate, with the level of support required under section 2.326(b), that a materially different result would have been likely had the possibility of recriticality over a period longer than 24 hours, or even 4 days, been considered in the SAMA analysis initially; CLI-12-3, 75 NRC 132 (2012)
CUMULATIVE IMPACTS ANALYSIS
contention that raises a genuine dispute with the sufficiency of the cumulative impacts analysis, or the lack thereof, in the environmental report is admissible; LBP-12-3, 75 NRC 164 (2012)
environmental contention regarding cumulative impact on groundwater quantity of the in situ recovery project and the planned expansion satisfies admissibility requirements; LBP-12-3, 75 NRC 164 (2012)
NRC regulations incorporate Council on Environmental Quality regulations that define the scope of an environmental impact statement to include cumulative impacts; LBP-12-3, 75 NRC 164 (2012)
CURRENT LICENSING BASIS
applicants must demonstrate reasonable assurance that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation; CLI-12-5, 75 NRC 301 (2012)
NRC regulations, orders, technical specifications, and license conditions applicable to a specific plant and licensee's written, docketed commitments for ensuring compliance with NRC requirements and the plant-specific design basis make up the CLB; CLI-12-5, 75 NRC 301 (2012)
NRC's ongoing regulatory and oversight processes provide reasonable assurance that each facility complies with its CLB, which can be adjusted by future Commission order or by modification to the facility's operating license outside the renewal proceeding or even in parallel with the ongoing license renewal review; CLI-12-5, 75 NRC 301 (2012); CLI-12-8, 75 NRC 393 (2012)
CYBER SECURITY
plans must be submitted for NRC approval; CLI-12-2, 75 NRC 63 (2012)
plans must take into account site-specific conditions; CLI-12-2, 75 NRC 63 (2012)
written policies, implementing procedures, site-specific analysis, and other supporting technical information developed to implement cyber security plans are subject to periodic inspection by NRC Staff; CLI-12-2, 75 NRC 63 (2012)
DEADLINES
absent compelling circumstances, NRC Staff is expected to accord sufficient priority and devote sufficient resources to meeting its estimated safety and environmental review schedules; CLI-12-4, 75 NRC 154 (2012)
although NRC regulations do not provide a precise definition of "timely," licensing boards have often found a new contention to be timely if it has been filed within 30 days of the availability of information on which the contention is based; LBP-12-9, 75 NRC 615 (2012); LBP-12-11, 75 NRC 731 (2012)
any person whose interests may be affected by the license renewal proceeding, and who wishes to participate as a party, must file a petition for leave to intervene within 60 days of the notice of hearing in accordance with 10 C.F.R. 2.309; LBP-12-8, 75 NRC 539 (2012)
applicant is required to submit a report on its decommissioning funding assurance mechanism after combined licenses are issued and no later than 30 days after NRC publishes notice of intended operation in the *Federal Register*; CLI-12-2, 75 NRC 63 (2012)

SUBJECT INDEX

applicants must implement the edition and addendum of the ASME Code for Operation and Maintenance of Nuclear Plants incorporated by reference in 10 C.F.R. 50.55a 12 months before fuel loading; CLI-12-2, 75 NRC 63 (2012)
claims and identification of privileged materials must occur within the time provided for disclosing withheld materials; LBP-12-3, 75 NRC 164 (2012)
failure of counsel to review the scheduling order does not constitute good cause for failure to meet a filing deadline; LBP-12-12, 75 NRC 742 (2012)
new contentions are timely when filed within 30 days of the date that asserted foundational information became available; LBP-12-1, 75 NRC 1 (2012); LBP-12-10, 75 NRC 633 (2012)
parties' other professional obligations do not relieve them of their obligations to meet mandatory deadlines; LBP-12-12, 75 NRC 742 (2012)
petitioner is generally afforded 7 days to file its reply; LBP-12-3, 75 NRC 164 (2012)
proposed new or amended contentions shall be deemed timely if filed within 60 days of the date when the document containing the new and material information first becomes available; LBP-12-12, 75 NRC 742 (2012)
schedule for Subpart L proceedings, including closing of the record, is described; CLI-12-3, 75 NRC 132 (2012)
summary disposition opponent has 20 days from proponent's filing of its motion to oppose that motion; LBP-12-7, 75 NRC 503 (2012)
the Commission enforces the 10-day deadline for filing appeals strictly and excuses it only in unavoidable and extreme circumstances; LBP-12-12, 75 NRC 742 (2012)
the time for petitioning for review of any of a board's prior interlocutory rulings will run from the date of the Commission's ruling closing the record; CLI-12-14, 75 NRC 692 (2012)
DECISION ON THE MERITS
although boards do not decide the merits at the contention admissibility stage, materials cited as the basis for a contention are subject to scrutiny to determine whether, on their face, they actually support the facts alleged; LBP-12-12, 75 NRC 742 (2012)
once it made a determination of plausible injury from the proposed project, the board was not required to weigh the evidence to determine whether the harm to petitioners was beyond doubt; CLI-12-12, 75 NRC 603 (2012)
DECISIONS
appellate review of the majority of presiding officer decisions is governed by 10 C.F.R. 2.341(a)(1); CLI-12-6, 75 NRC 352 (2012)
See also Licensing Board Decisions; Partial Initial Decisions
DECOMMISSIONING FUNDING
exemption from funding requirements to allow applicant to act as a self-guarantor without satisfying the financial test for self-guarantors must be in the public interest or otherwise satisfy the requirements of 10 C.F.R. 40.14; LBP-12-6, 75 NRC 256 (2012)
financial test for self-guarantee of the funding obligation requires that licensee maintain a bond rating of "A" or better and have a tangible net worth at least 10 times the total current decommissioning cost estimate; LBP-12-6, 75 NRC 256 (2012)
insofar as applicant contends that NRC's requirements for self-guarantors are not useful or relevant in evaluating the financial condition of numerous similarly situated corporations, applicant may petition NRC to amend its rules at any time; LBP-12-6, 75 NRC 256 (2012)
licensee that wishes to be the sole guarantor of its own liabilities must satisfy a stringent test; LBP-12-6, 75 NRC 256 (2012)
licensees have not been permitted to include the value of goodwill to meet the 10:1 tangible net worth requirement; LBP-12-6, 75 NRC 256 (2012)
NRC may grant exemptions from the alternative financial test for self-guarantee of the decommissioning funding obligation that 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-12-6, 75 NRC 256 (2012)
NRC seeks to ensure that decommissioning can be carried out in a safe and timely manner and that lack of funds does not result in delays that may cause potential health and safety problems; LBP-12-6, 75 NRC 256 (2012)

references to prior problems involving estimation of decommissioning costs are inadequate to establish a likelihood that the amount of applicant's decommissioning bond will be insufficient; LBP-12-3, 75 NRC 164 (2012)
request for exemption from requirements of 10 C.F.R. 40.36 to allow applicant to act as a self-guarantor of the funds necessary for eventually decommissioning the facility without satisfying the financial test for self-guarantors is denied; LBP-12-6, 75 NRC 256 (2012)
source materials licensee must demonstrate that sufficient funds will be available to cover the cost of decommissioning its facility; LBP-12-6, 75 NRC 256 (2012)
source materials licensees have numerous options for meeting their decommissioning funding obligations; LBP-12-6, 75 NRC 256 (2012)
to use the self-guarantee mechanism to fulfill its decommissioning funding obligation, a licensee that issues bonds must annually satisfy the financial test set forth in 10 C.F.R. Part 30, Appendix C, § II.B.3; LBP-12-6, 75 NRC 256 (2012)
DECOMMISSIONING FUNDING PLANS
applicant is required to submit a report on its decommissioning funding assurance mechanism after combined licenses are issued and no later than 30 days after NRC publishes notice of intended operation in the *Federal Register*; CLI-12-2, 75 NRC 63 (2012)
DECOMMISSIONING PLANS
combined license applications include operational procedures to minimize contamination of the facility and environment, facilitate eventual decommissioning, and minimize generation of radioactive waste; CLI-12-2, 75 NRC 63 (2012)
DECONTAMINATION
contention challenging applicant's consideration of new and significant information regarding cleanup costs is inadmissible; LBP-12-8, 75 NRC 539 (2012)
DEFINITIONS
a "significant"issue is not shown merely by showing that a plant component performs safety functions; CLI-12-10, 75 NRC 479 (2012)
although NRC regulations do not provide a precise definition of "timely," licensing boards have often found a new contention to be timely if it has been filed within 30 days of the availability of information on which the contention is based; LBP-12-11, 75 NRC 731 (2012)
an "exceptionally grave issue"is one that raises a sufficiently grave threat to public safety; LBP-12-1, 75 NRC 1 (2012); LBP-12-11, 75 NRC 731 (2012)
an environmental issue is "significant" for the purposes of reopening a record if it will paint a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; LBP-12-10, 75 NRC 633 (2012)
"baseload power" generates energy intended to continuously produce electricity at or near full capacity, with high availability; CLI-12-5, 75 NRC 301 (2012)
"connected actions" are those that lack independent utility; LBP-12-12, 75 NRC 742 (2012)
"construction" and "commencement of construction" are defined; LBP-12-3, 75 NRC 164 (2012)
"current licensing basis" is the set of NRC requirements (including regulations, orders, technical specifications, and license conditions) applicable to a specific plant, and includes the licensee's written, docketed commitments for ensuring compliance with applicable NRC requirements and the plant-specific design basis; CLI-12-5, 75 NRC 301 (2012)
emergency planning zones are approximately a 10-mile radius around a reactor unit as adjusted to reflect the road network and land use; CLI-12-9, 75 NRC 421 (2012)
for an environmental issue to be "significant" for the purposes of reopening a record, new information must paint a seriously different picture of the environmental landscape; LBP-12-1, 75 NRC 1 (2012)
"informal consultation" is any communication between the acting agency and one of the Services designed to assist the acting agency in determining whether formal consultation is required; LBP-12-10, 75 NRC 633 (2012)
low-level radioactive waste is defined as radioactive material that is not high-level radioactive waste, spent nuclear fuel, or byproduct material and that NRC classifies as LLRW; LBP-12-4, 75 NRC 213 (2012)

SUBJECT INDEX

"major construction activity" is defined as a construction project, or other undertaking having similar physical impacts, that is a major federal action significantly affecting the quality of the human environment as referred to in NEPA; LBP-12-10, 75 NRC 633 (2012)

section 11e(2) byproduct material is tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content; LBP-12-3, 75 NRC 164 (2012)

segmentation occurs when an action is divided into component parts, each involving action with less significant environmental effects; LBP-12-12, 75 NRC 742 (2012)

severe accident mitigation alternatives analysis for license renewal is a cost-benefit analysis, weighing a particular mitigation measure's estimated degree of risk reduction against its estimated cost of implementation; CLI-12-8, 75 NRC 393 (2012)

severe accident mitigation alternatives analysis is a probability-weighted assessment of the benefits and costs of mitigation alternatives that can be used to reduce the risks of potential severe accidents at nuclear power plants; CLI-12-1, 75 NRC 39 (2012)

"special circumstances" must be unusual if not unique, and NRC must not have previously considered such circumstances, either explicitly or by necessary implication, when it promulgated the relevant regulation in the first place; LBP-12-6, 75 NRC 256 (2012)

"Tier 2*" means the portion of the Tier 2 information, designated as such in the generic design control document, that is subject to the change process in 10 C.F.R. Part 52, App. D, § VIII.B.6; CLI-12-2, 75 NRC 63 (2012)

See also Construction of Meaning

DELAY

schedule of counsel in other matters as cause of delay in filing contentions can support a finding of good cause; LBP-12-12, 75 NRC 742 (2012)

significant delays in NRC Staff's review potentially deprive an Indian tribe of its hearing rights; CLI-12-4, 75 NRC 154 (2012)

DELAY OF PROCEEDING

agencies must set and complete proceedings on license applications with due regard for the rights and privileges of all the interested parties or adversely affected persons and within a reasonable time; CLI-12-6, 75 NRC 352 (2012)

because three contentions are already set for hearing in the proceeding, the admission of further contentions would not substantially delay the proceeding; LBP-12-12, 75 NRC 742 (2012)

where admission of a late-filed contention would cause a material delay in the proceeding weighed against admission of the contention; CLI-12-15, 75 NRC 704 (2012)

DESIGN BASIS

safety features for each nuclear power plant take into account the potential effects of two levels of earthquake motion; DD-12-1, 75 NRC 573 (2012)

DESIGN BASIS EARTHQUAKE

design bases for earthquakes are to be determined through evaluation of the geologic and seismic history of the site and surrounding region; DD-12-1, 75 NRC 573 (2012)

DESIGN BASIS EVENTS

facility design and operation should ensure that radiological consequences of design basis events do not exceed 10 percent of dose limits; LBP-12-7, 75 NRC 503 (2012)

DESIGN CERTIFICATION

combined license applicant may reference an as-yet-uncertified design at its own risk; CLI-12-9, 75 NRC 421 (2012)

combined license applications may reference a standard design certification and an early site permit; CLI-12-2, 75 NRC 63 (2012)

compliance with design-related information contained in the generic design control document that is approved but not certified (Tier 2 information) is required, but generic changes to and plant-specific departures from Tier 2 are governed by 10 C.F.R. Part 52, App. D, § VIII; CLI-12-2, 75 NRC 63 (2012)

licenses may be amended to add appropriate conditions, depending on whether the conditions are within the scope of the certified design; CLI-12-9, 75 NRC 421 (2012)

NRC Staff found acceptable combined license applicant's plan to use a single technical support center for existing and proposed units, to be colocated in the basement of the new nuclear operations building, between the protected areas of the three units, which is a departure from the certified design; CLI-12-9, 75 NRC 421 (2012)
the COL application included a request for a departure from the wet-bulb noncoincident temperature, which is considered Tier 1 information and part of the certified design and thus a regulatory exemption is required; CLI-12-9, 75 NRC 421 (2012)
the Commission administratively exempted from the backfit rule, an order to the combined license holder to address spent fuel pool instrumentation requirements not specified in the certified design as enhanced protective measures that represent a substantial increase in the protection of public health and safety; CLI-12-9, 75 NRC 421 (2012)
where the combined license application references a certified design, elements of the licensing basis already have been established, and thus NRC would have to establish a regulatory basis for any change to the established design regardless of whether the COLs have issued; CLI-12-9, 75 NRC 421 (2012)
DESIGN CONTROL PROGRAMS
compliance with design-related information contained in the generic design control document that is approved but not certified (Tier 2 information) is required, but generic changes to and plant-specific departures from Tier 2 are governed by 10 C.F.R. Part 52, App. D, § VIII; CLI-12-2, 75 NRC 63 (2012)
"Tier 2*" means the portion of the Tier 2 information, designated as such in the generic design control document, that is subject to the change process in 10 C.F.R. Part 52, App. D, §VIII.B.6; CLI-12-2, 75 NRC 63 (2012)
DISCLOSURE
claims and identification of privileged materials must occur within the time provided for disclosing withheld materials; LBP-12-3, 75 NRC 164 (2012)
the board suspended mandatory disclosure obligations until further notice; CLI-12-14, 75 NRC 692 (2012)
DISCOVERY
although intervenors may use discovery to develop a case once contentions are admitted, contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by some alleged fact(s) demonstrating a genuine material dispute with the applicant; CLI-12-5, 75 NRC 301 (2012); CLI-12-8, 75 NRC 393 (2012)
DISCOVERY AGAINST NRC STAFF
AEA does not guarantee all private parties the right to have NRC Staff studies as a sort of precomplaint discovery tool; CLI-12-14, 75 NRC 692 (2012)
DOSE LIMITS
annual 100-millirem limit for members of the public is defined to include radiation exposure to construction workers; CLI-12-2, 75 NRC 63 (2012)
even with the additional conservatisms, concentrations at potential receptor locations resulting from bounding accidental effluent release scenarios remain within applicable regulatory limits; CLI-12-9, 75 NRC 421 (2012)
facility design and operation should ensure that radiological consequences of design basis events do not exceed 10 percent of dose limits; LBP-12-7, 75 NRC 503 (2012)
DOSE, RADIOLOGICAL
NRC-endorsed guidance on SAMA analysis methodology specifies use of the mean annual offsite dose and economic impact; CLI-12-1, 75 NRC 39 (2012)
DRAFT ENVIRONMENTAL IMPACT STATEMENT
challenges to only the DEIS apply equally to the final environmental impact statement under the migration tenet; LBP-12-5, 75 NRC 227 (2012)
contention submitted for the first time after the DEIS is issued will be deemed untimely; LBP-12-12, 75 NRC 742 (2012)
duties of NRC Staff and not an applicant, such as consultation with other federal agencies, could not be raised at the environmental report stage, and therefore such a contention will not be rejected as untimely when filed after the release of the DEIS; LBP-12-12, 75 NRC 742 (2012)

intervenors' challenge concerning the DEIS's alleged failure to discuss the Great Lakes Compact's process for regional review of its application for a consumptive water use permit is inadmissible; LBP-12-12, 75 NRC 742 (2012)
intervenors fail to show that, with respect to terrestrial and wetland mitigation plans, there are data or conclusions in the DEIS that differ significantly from the data or conclusions in applicant's documents; LBP-12-12, 75 NRC 742 (2012)
intervenors may file new or amended contentions in response to the DEIS if they can satisfy the test of 10 C.F.R. 2.309(f)(2)(i)-(iii); LBP-12-12, 75 NRC 742 (2012)
it is applicant's responsibility to include information in the environmental report that NRC Staff needs to prepare the DEIS, including information on alternatives available for reducing or avoiding adverse environmental effects; LBP-12-12, 75 NRC 742 (2012)
NRC Staff's DEIS is required to list required federal permits and approvals and the current status of compliance with those requirements; LBP-12-12, 75 NRC 742 (2012)
petitioner may amend NEPA contentions or file new NEPA contentions if there are data or conclusions in the NRC draft or final EIS, environmental assessment, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's documents; LBP-12-12, 75 NRC 742 (2012); LBP-12-13, 75 NRC 784 (2012)
publication of the DEIS does not provide an opportunity to renew previously filed (and rejected) contentions, but rather, petitioner must demonstrate that the DEIS actually contains new data or conclusions; LBP-12-12, 75 NRC 742 (2012)
the migration tenet applies only as long as the DEIS analysis or discussion at issue is essentially *in para materia* with the environmental report analysis or discussion that is the focus of the contention; LBP-12-12, 75 NRC 742 (2012)
there is no enumeration of the required contents of the DEIS regarding endangered or threatened species; LBP-12-12, 75 NRC 742 (2012)
under the migration tenet, boards may construe an admitted contention contesting the environmental report as a challenge to the subsequently issued draft or final EIS without the necessity for Intervenors to file a new or amended contention; LBP-12-12, 75 NRC 742 (2012)

DUE PROCESS
agencies must set and complete proceedings on license applications with due regard for the rights and privileges of all the interested parties or adversely affected persons and within a reasonable time; CLI-12-6, 75 NRC 352 (2012)

DUST
fugitive dust generated onsite at a facility, particularly during construction, can be a concern in the vicinity of a facility; LBP-12-3, 75 NRC 164 (2012)
health-impact potential of facility traffic-associated dust, if properly pleaded, could provide a basis for standing; LBP-12-3, 75 NRC 164 (2012)
licensing board, construing the petition in favor of petitioners, based its standing finding on potential harm from traffic-generated dust and light pollution; CLI-12-12, 75 NRC 603 (2012)
standing can be based on diminishment of recreational enjoyment of wildlife area due to, among other factors, an increase in dust due to traffic on adjacent highway; CLI-12-12, 75 NRC 603 (2012)

EARLY SITE PERMIT APPLICATION
applicants may propose complete and integrated emergency plans for review and approval in conjunction with their application, but they are not required to do so; CLI-12-2, 75 NRC 63 (2012)

EARLY SITE PERMITS
combined license applications may reference a standard design certification and an early site permit; CLI-12-2, 75 NRC 63 (2012)
if an assessment of alternatives to the proposed action was prepared at the early site permit stage and no new information in the areas of energy alternatives or system design alternatives has been identified at the combined license stage, conclusions made at the ESP stage remain valid; CLI-12-2, 75 NRC 63 (2012)
when an environmental impact statement is prepared at the ESP stage, NRC Staff must prepare a supplemental EIS for the combined license focusing on issues related to the impacts of construction and operation for which new and significant information has been identified; CLI-12-2, 75 NRC 63 (2012)

SUBJECT INDEX

EARTHQUAKES
- before restart, licensee is required to demonstrate to NRC that no functional damage from seismic events has occurred to those features necessary for continued operation without undue risk to the health and safety of the public; DD-12-1, 75 NRC 573 (2012)
- design basis of safety features for each nuclear power plant takes into account the potential effects of two levels of earthquake motion; DD-12-1, 75 NRC 573 (2012)
- inspections of electrical systems and components following an earthquake that resulted in loss of offsite power are described; DD-12-1, 75 NRC 573 (2012)
- licensee assessed the structural integrity and radiation shielding capability of both the TN-32 cask and NUHOMS-HD dry cask storage systems following an earthquake and reviewed the event for reportability; DD-12-1, 75 NRC 573 (2012)
- NRC and licensee inspections to assess the integrity of the North Anna plant following a seismic event that exceeded the operating basis and design basis earthquake are described; DD-12-1, 75 NRC 573 (2012)
- when an earthquake results in ground accelerations greater than those assumed in the design of the nuclear power plant, the plant is required to be shut down and to 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-12-1, 75 NRC 573 (2012)

ECONOMIC EFFECTS
- NRC-endorsed guidance on SAMA analysis methodology specifies use of the mean annual offsite dose and economic impact; CLI-12-1, 75 NRC 39 (2012)
- See also Benefit-Cost Analysis

ECONOMIC INJURY
- a more subjective appraisal of declining property values might be permissible in the context of a licensing action associated with an applicant or facility shown to have engaged in a continuous and pervasive course of illegal conduct; LBP-12-3, 75 NRC 164 (2012)

ECONOMIC ISSUES
- generic, unsubstantiated claims regarding health, safety, and property devaluation impacts are insufficient to establish standing; LBP-12-3, 75 NRC 164 (2012)
- standing claims based on economic impacts are only cognizable in NRC proceedings with regard to NEPA-based concerns; LBP-12-3, 75 NRC 164 (2012)
- See also Financial Assurance

ELECTRICAL DISTRIBUTION SYSTEM
- although NRC does not license construction or operation of a transmission corridor, it has the authority to deny the license for a proposed nuclear plant if, for example, the total environmental costs of the new reactor and connected actions exceed the benefits; LBP-12-12, 75 NRC 742 (2012)
- construction of a transmission line is defined as a preconstruction activity; LBP-12-12, 75 NRC 742 (2012)
- even if the transmission corridor is a preconstruction activity and outside the NRC's regulatory jurisdiction, the construction and maintenance of the transmission corridor likely qualifies as a connected action under governing NRC and Council on Environmental Quality regulations, and therefore must be analyzed in the FEIS; LBP-12-12, 75 NRC 742 (2012)
- to require detailed analysis in the final environmental impact statement, a transmission corridor must be a proposed action rather than one that is merely contemplated; LBP-12-12, 75 NRC 742 (2012)
- transformers perform their intended function through a change in state similar to switchgear, power supplies, battery chargers, and power inverters, which have been excluded from an aging management review; CLI-12-5, 75 NRC 301 (2012)

ELECTRICAL EQUIPMENT
- a variety of electrical and instrumentation and control components are excluded from an aging management review for license renewal; CLI-12-5, 75 NRC 301 (2012)
- inspections of electrical systems and components following an earthquake that resulted in loss of offsite power are described; DD-12-1, 75 NRC 573 (2012)

transformers perform their intended function through a change in state similar to switchgear, power supplies, battery chargers, and power inverters, which have been excluded from an aging management review; CLI-12-5, 75 NRC 301 (2012)
See also Environmental Qualification of Electrical Equipment
EMERGENCY CORE COOLING SYSTEM
the Commission imposed a license condition requiring licensees to develop and implement strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event, including a simultaneous loss of all AC power and loss of normal access to the normal heat sink; CLI-12-9, 75 NRC 421 (2012)
EMERGENCY EXERCISES
every 2 years, licensee stages full-participation emergency exercises, which are evaluated by both FEMA and NRC; CLI-12-9, 75 NRC 421 (2012)
EMERGENCY PLANNING ZONES
EPZs are approximately a 10-mile radius around a reactor unit as adjusted to reflect the road network and land use; CLI-12-9, 75 NRC 421 (2012)
EMERGENCY PLANS
combined license applications must provide an emergency plan for the site; CLI-12-9, 75 NRC 421 (2012)
early site permit applicants may propose complete and integrated emergency plans for review and approval in conjunction with their application, but they are not required to do so; CLI-12-2, 75 NRC 63 (2012)
NRC Staff considers FEMA's findings on emergency plans in making its necessary finding of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency; CLI-12-9, 75 NRC 421 (2012)
ENDANGERED SPECIES
a biological assessment of listed species shall be completed before any contract for construction is entered into and before construction is begun with respect to such action; LBP-12-12, 75 NRC 742 (2012)
agencies are encouraged to incorporate consultation procedures on endangered/threatened species and essential fish habitat into their NEPA review; LBP-12-10, 75 NRC 633 (2012)
clarification is provided in 50 C.F.R. 402.12 on the requirements with respect to biological assessments; LBP-12-11, 75 NRC 731 (2012)
consultation with appropriate agencies is needed at the time of license renewal to determine whether threatened or endangered species are present and whether they would be adversely affected; LBP-12-10, 75 NRC 633 (2012)
content of the biological assessment is at the discretion of the federal agency; LBP-12-11, 75 NRC 731 (2012)
determination of possible effects on an endangered species is ultimately the acting agency's responsibility; LBP-12-10, 75 NRC 633 (2012)
federal agencies shall request information from the Secretary of the Interior whether any species listed or proposed to be listed may be present in the area of the proposed action; LBP-12-12, 75 NRC 742 (2012)
formal consultation includes preparation of a biological opinion by the Service, detailing the likely effects of the action on listed species or habitat as well as mitigation alternatives; LBP-12-10, 75 NRC 633 (2012)
if the acting agency concludes in the biological assessment that the action is not likely to affect listed habitats or species, and the Service concurs, the acting agency need not enter formal consultation; LBP-12-10, 75 NRC 633 (2012)
if the acting agency makes a "likely to affect" determination in the biological assessment, it is required to enter into formal consultation with the appropriate Service; LBP-12-10, 75 NRC 633 (2012)
if the Secretary of the Interior advises that listed species may be present, the agency shall conduct a biological assessment for the purpose of identifying any species that is likely to be affected by the action; LBP-12-12, 75 NRC 742 (2012)
if the Service does not concur with the agency's "not likely to affect" determination, it may request that the acting agency enter into formal consultation; LBP-12-10, 75 NRC 633 (2012)

if the Services advise that listed species are present, the acting agency is to prepare a biological assessment to identify any species that is likely to be affected by such action; LBP-12-11, 75 NRC 731 (2012)
preparation of the biological assessment may be consolidated with interagency cooperation procedures required by other statutes, such as NEPA; LBP-12-11, 75 NRC 731 (2012)
the acting agency shall request information from the U.S. Fish and Wildlife Service and the National Marine Fisheries Service on whether any species that is listed or proposed to be listed may be present in the area of the action; LBP-12-11, 75 NRC 731 (2012)
the acting agency submits its completed biological assessment to the appropriate Service and awaits its determination of concurrence or nonconcurrence, which under the Services' regulations is to be returned within 30 days; LBP-12-10, 75 NRC 633 (2012)
this is a Category 2 issue that requires site-specific analysis in the supplemental environmental impact statement; LBP-12-10, 75 NRC 633 (2012)
to prepare a biological assessment, the acting agency must first request from the Services a list of endangered or threatened species or habitat that may be present in the area of the action, or provide to the Services its own list for their review; LBP-12-10, 75 NRC 633 (2012)
untimely motion to reopen the proceeding and admit a new contention concerning licensee's impacts on the roseate tern, a federally listed endangered species, is denied; LBP-12-11, 75 NRC 731 (2012)
where an acting agency is engaged in major construction activities, the acting agency is to evaluate, through preparation of a biological assessment, whether the action is likely to adversely affect species or habitat; LBP-12-10, 75 NRC 633 (2012)
whether NRC Staff undertakes formal consultation with the Services in the event that they disagree with a finding by the NRC of "no effect" or "not likely adversely to affect" depends upon the NRC's own regulations and its interpretation of its duty under the ESA to ensure that any action is not likely to jeopardize listed species or habitat; LBP-12-10, 75 NRC 633 (2012)
ENDANGERED SPECIES ACT
agencies cannot unilaterally determine that an action will not jeopardize species listed under the act; LBP-12-10, 75 NRC 633 (2012)
candidate species have no legal status and are accorded no protection under the act; LBP-12-10, 75 NRC 633 (2012)
contention asserting that the NRC's environmental review of the license renewal application has not met the requirements of the act fails to satisfy the requirements for reopening the record; LBP-12-10, 75 NRC 633 (2012)
each agency proposing to take an action that might be covered by the act is to review its actions at the earliest possible time to determine whether any listed species or critical habitat may be affected; LBP-12-10, 75 NRC 633 (2012)
even if the National Marine Fisheries Service disagrees with NRC's no-effect determination, it may only request that NRC enter formal consultation, but NRC is not required to consent to the request; LBP-12-10, 75 NRC 633 (2012)
federal agencies must consult with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service to ensure that any action authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any species that has been listed as threatened or endangered, or to destroy or adversely modify critical habitat; LBP-12-11, 75 NRC 731 (2012); LBP-12-12, 75 NRC 742 (2012)
formal consultation follows only if a biological assessment shows that the action may affect listed species or critical habitat; LBP-12-10, 75 NRC 633 (2012)
formal consultation under the act includes preparation of a biological opinion by the Service, detailing the likely effects of the action on listed species or habitat as well as mitigation alternatives; LBP-12-10, 75 NRC 633 (2012)
if an agency determines that a particular action will have no effect on an endangered or threatened species, the consultation requirements are not triggered, and the finding of no effect obviates the need for formal consultation under the act; LBP-12-10, 75 NRC 633 (2012)
in determining that a federal action is not likely to jeopardize species or modify habitat, the acting agency is to proceed in consultation with and with the assistance of the Secretary of Interior or Commerce; LBP-12-10, 75 NRC 633 (2012)

"informal consultation" is any communication between the acting agency and one of the Services designed to assist the acting agency in determining whether formal consultation is required; LBP-12-10, 75 NRC 633 (2012)
license renewal applicants must assess the impact of the proposed action on threatened or endangered species in accordance with the act as part of their environmental report; LBP-12-10, 75 NRC 633 (2012)
neither formal nor informal consultation is required by the act if an agency determines that its proposed activity will not affect any listed species or critical habitat; LBP-12-10, 75 NRC 633 (2012)
NRC must ensure that any action that it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of critical habitat of such species; LBP-12-10, 75 NRC 633 (2012)
NRC Staff, not the applicant, has the legal duty to engage in consultation under the act; LBP-12-12, 75 NRC 742 (2012)
satisfying the requirements of other statutes does not in itself relieve a federal agency of its obligations to comply with the procedures set forth in the ESA; LBP-12-10, 75 NRC 633 (2012)
the only mandatory trigger for initiating formal consultation is if the acting agency itself determines that its action may affect listed species or critical habitat; LBP-12-10, 75 NRC 633 (2012)
the U.S. Fish & Wildlife Service and National Marine Fisheries Service perform strictly an advisory function and the federal agency makes the ultimate decision as to whether its proposed action will satisfy the ESA requirements; LBP-12-10, 75 NRC 633 (2012)
there is no requirement enumerating the required contents of a draft environmental impact statement; LBP-12-12, 75 NRC 742 (2012)
when it enacted the ESA, Congress delegated broad administrative and interpretive power to the Secretary of the Interior; LBP-12-10, 75 NRC 633 (2012)
ENVIRONMENTAL ANALYSIS
agencies are required to use a systematic, interdisciplinary approach that will ensure the integrated use of the natural and social sciences and the environmental design arts in decisionmaking that may impact the environment; CLI-12-9, 75 NRC 421 (2012)
environmental reports need only discuss reasonably foreseeable environmental impacts of a proposed action; LBP-12-7, 75 NRC 503 (2012)
NRC limits the scope of environmental analysis of preconstruction activities to activities falling within the scope of its regulatory authority; CLI-12-9, 75 NRC 421 (2012)
psychological fears or stigma effects are not cognizable NEPA claims; CLI-12-5, 75 NRC 301 (2012)
the Commission declined to conduct a generic NEPA analysis on the effects of Fukushima-related events; CLI-12-7, 75 NRC 379 (2012)
ENVIRONMENTAL ASSESSMENT
petitioner may amend NEPA contentions or file new NEPA contentions if there are data or conclusions in the NRC draft or final environmental impact statement, EA, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's documents; LBP-12-12, 75 NRC 742 (2012)
ENVIRONMENTAL EFFECTS
NEPA regulations do not apply to any environmental effects that NRC's domestic licensing and related regulatory functions may have upon the environment of foreign nations; LBP-12-12, 75 NRC 742 (2012)
ENVIRONMENTAL IMPACT STATEMENT
a licensing hearing does not embrace *anything* new revealed in the safety evaluation report or the NEPA documents; CLI-12-14, 75 NRC 692 (2012)
adjudicatory hearings are not EIS editing sessions; CLI-12-1, 75 NRC 39 (2012); CLI-12-6, 75 NRC 352 (2012)
adjudicatory records, board decisions, and any Commission decisions become effectively part of the environmental review document; CLI-12-1, 75 NRC 39 (2012)
agencies must prepare an EIS before approving any major federal action that will significantly affect the quality of the human environment; LBP-12-5, 75 NRC 227 (2012); LBP-12-8, 75 NRC 539 (2012)
agencies need only address reasonably foreseeable impacts, not those that are remote and speculative or inconsequentially small; LBP-12-5, 75 NRC 227 (2012)

SUBJECT INDEX

although environmental contentions ultimately challenge NRC's compliance with the National Environmental Policy Act, applicant may advocate for a particular challenged position set forth in the environmental impact statement; LBP-12-5, 75 NRC 227 (2012)

although NRC does not license construction or operation of a transmission corridor, it has the authority to deny the license for a proposed nuclear plant if, for example, the total environmental costs of the new reactor and connected actions exceed the benefits; LBP-12-12, 75 NRC 742 (2012)

although NRC must respond to the significant views of other agencies, particularly if they are critical of NRC's analysis, that duty applies at the final EIS stage after the draft EIS has been circulated to interested federal and state agencies for their review and comment; LBP-12-12, 75 NRC 742 (2012)

although there will always be more data that could be gathered, agencies must have some discretion to draw the line and move forward with decisionmaking; LBP-12-5, 75 NRC 227 (2012)

an EIS is required for renewal of an operating license for a nuclear power reactor; LBP-12-1, 75 NRC 1 (2012)

because a need-for-power assessment necessarily entails forecasting power demands in light of substantial uncertainty and the duty of providing adequate and reliable service to the public, need-for-power assessments are properly conservative; LBP-12-5, 75 NRC 227 (2012)

before implementing any major federal action significantly affecting the quality of the human environment, NRC must prepare an EIS that describes the action, its effects, and alternatives to the proposed action; LBP-12-10, 75 NRC 633 (2012)

challenging the environmental report preserves petitioner's right to challenge the EIS at a later stage of the proceedings; LBP-12-8, 75 NRC 539 (2012)

consideration of remote and speculative impacts is not required; LBP-12-5, 75 NRC 227 (2012)

contentions challenging an environmental report may be viewed as a challenge to the NRC Staff's subsequent draft or final environmental impact statement; CLI-12-1, 75 NRC 39 (2012)

continued construction was barred pending the filing of an adequate environmental impact statement, notwithstanding the fact that the project was initially approved and construction commenced prior to the effective date of NEPA; LBP-12-1, 75 NRC 1 (2012)

discussion of the no-action alternative need only include feasible, nonspeculative alternatives; LBP-12-8, 75 NRC 539 (2012)

EISs are not intended to be research documents, reflecting the frontiers of scientific methodology, studies, and data; CLI-12-5, 75 NRC 301 (2012); LBP-12-5, 75 NRC 227 (2012)

every combined license application must be accompanied by an environmental report, the purpose of which is to aid NRC Staff in its preparation of an EIS; LBP-12-9, 75 NRC 615 (2012)

First Nations in Canada must receive invitations to participate in the EIS scoping process when there are transboundary environmental impacts from a project; LBP-12-12, 75 NRC 742 (2012)

for siting alternatives, an agency's duty under NEPA is to study all alternatives that appear reasonable and appropriate for study at the time of drafting the EIS; CLI-12-5, 75 NRC 301 (2012)

for the no-action alternative, there need not be much discussion in the environmental documents because it is most simply viewed as maintaining the status quo; LBP-12-8, 75 NRC 539 (2012)

general statements by an agency about possible effects and some risk do not constitute the hard look required by NEPA absent a justification of why more definitive information could not be provided; LBP-12-5, 75 NRC 227 (2012)

given the legal responsibility imposed upon a public utility to provide at all times adequate, reliable service, and the severe consequences that may attend upon a failure to discharge that responsibility, the most that can be required is that need-for-power forecasts be reasonable in the light of what is ascertainable at the time made; LBP-12-5, 75 NRC 227 (2012)

if demand for power turns out to be less than predicted, it cannot be argued that the cost of the unneeded generating capacity may turn up in customers' electric bills because the surplus can be profitably marketed to other systems or the new capacity can replace older, less efficient units; LBP-12-5, 75 NRC 227 (2012)

if new and significant information on Fukushima events comes to light that requires consideration as part of the ongoing preparation of application-specific NEPA documents, NRC will assess the significance of that information as appropriate; CLI-12-7, 75 NRC 379 (2012)

impacts that are remote and speculative may be excluded from consideration; LBP-12-1, 75 NRC 1 (2012)

in the area of impacts of combined licenses and limited work authorizations, NRC Staff, in its review of new and significant information, identified a change in impacts associated with terrestrial ecology; CLI-12-2, 75 NRC 63 (2012)
issuance of a renewed operating license for a nuclear power reactor is a major federal action under NEPA; LBP-12-8, 75 NRC 539 (2012)
it is not necessary that every alternative device and thought conceivable by the mind of man be considered, but a hard look must be taken at the environmental consequences; LBP-12-1, 75 NRC 1 (2012)
license renewal applicant need not provide an analysis of severe accident mitigation alternatives in its environmental report if NRC Staff has already considered SAMAs for applicant's plant in an EIS or related supplement or in an environmental assessment; LBP-12-8, 75 NRC 539 (2012)
license renewal applications must include an environmental report to assist NRC Staff in preparing its EIS; LBP-12-8, 75 NRC 539 (2012)
National Marine Fisheries Service has the authority to consult with other agencies if, for example, only one of the agencies has the authority to implement measures necessary to minimize adverse effects on essential fish habitat and that agency does not act as the lead agency; LBP-12-10, 75 NRC 633 (2012)
need-for-power assessments must be only at a level of detail sufficient to reasonably characterize the costs and benefits associated with proposed licensing actions; LBP-12-5, 75 NRC 227 (2012)
need-for-power forecasts need not precisely identify future market conditions and energy demand, or develop detailed analyses of system generating assets, costs of production, capital replacement ratios, and the like in order to establish with certainty that the construction and operation of a nuclear power plant is the most economical alternative for generation of power; LBP-12-5, 75 NRC 227 (2012)
neither NRC nor applicant need consider any alternative that does not bring about the ends of the proposed action; CLI-12-5, 75 NRC 301 (2012)
NEPA allows agencies to select their own methodology as long as that methodology is reasonable; CLI-12-6, 75 NRC 352 (2012)
NEPA does not call for certainty or precision, but an estimate of anticipated (not unduly speculative) impacts; LBP-12-9, 75 NRC 615 (2012)
NEPA does not mandate substantive results but, rather, imposes procedural restraints on agencies, requiring them to take a hard look at the environmental impacts of a proposed action and reasonable alternatives to that action; LBP-12-5, 75 NRC 227 (2012)
NEPA does not require a worst-case analysis; LBP-12-5, 75 NRC 227 (2012)
NEPA does not require agencies to analyze impacts of alternatives that are speculative, remote, impractical, or unviable; CLI-12-5, 75 NRC 301 (2012)
NEPA does not require that the agency wait until inchoate information matures into something that later might affect its review; CLI-12-7, 75 NRC 379 (2012)
NEPA only requires reasonable forecasting of need for power; LBP-12-5, 75 NRC 227 (2012)
NEPA requires NRC to reevaluate any prior analysis if it is presented with any new and significant information that would cast doubt on a previous environmental analysis; LBP-12-8, 75 NRC 539 (2012)
NEPA requires that agencies take a hard look at the environmental consequences of an action before proceeding; LBP-12-10, 75 NRC 633 (2012)
NEPA requires that NRC consider reasonably foreseeable environmental impacts of the proposed licensing action, but need not consider remote and speculative impacts, particularly if the impact cannot easily be estimated at the current time, and an appropriate future opportunity will exist for the agency to analyze the impact; LBP-12-3, 75 NRC 164 (2012)
NEPA's "hard look" is tempered by a rule of reason; LBP-12-5, 75 NRC 227 (2012)
NRC gives substantial weight to the preferences of the applicant and/or sponsor; CLI-12-5, 75 NRC 301 (2012)
NRC is directed to use the Council on Environmental Quality regulation 40 C.F.R. 1502.4 in defining the scope of its EIS; LBP-12-12, 75 NRC 742 (2012)
NRC is required to assess the relationship between local short-term uses of the environment and the long-term productivity of the environment; CLI-12-2, 75 NRC 63 (2012); CLI-12-9, 75 NRC 421 (2012)
NRC is required to describe the irreversible and irretrievable commitments of resources associated with the proposed action; CLI-12-9, 75 NRC 421 (2012)

SUBJECT INDEX

NRC is required to describe unavoidable adverse environmental impacts; CLI-12-9, 75 NRC 421 (2012)
NRC must adequately consider impacts to visual and aesthetic resources in its NEPA review; LBP-12-3, 75 NRC 164 (2012)
NRC regulations incorporate Council on Environmental Quality regulations that define the scope of an environmental impact statement to include cumulative impacts; LBP-12-3, 75 NRC 164 (2012)
NRC Staff must consider the alternative of no action; LBP-12-8, 75 NRC 539 (2012)
NRC Staff need consider only those environmental impacts that are reasonably foreseeable, not those that are remote and speculative possibilities; LBP-12-9, 75 NRC 615 (2012)
NRC Staff relies heavily on applicant's environmental report in preparing its EIS; LBP-12-5, 75 NRC 227 (2012)
NRC Staff's EIS need only discuss those alternatives that will bring about the ends of the proposed action; CLI-12-5, 75 NRC 301 (2012)
preparation of the biological assessment may be consolidated with interagency cooperation procedures required by other statutes, such as NEPA; LBP-12-11, 75 NRC 731 (2012)
prior to preparing an EIS, the responsible federal official shall consult with and obtain the comments of any federal agency that has jurisdiction by law or special expertise with respect to any environmental impact involved; LBP-12-10, 75 NRC 633 (2012)
proposals or parts of proposals that are related to each other closely enough to be, in effect, a single course of action shall be evaluated in a single EIS; LBP-12-12, 75 NRC 742 (2012)
quibbling over details of an economic analysis would effectively stand NEPA on its head by asking that the license be rejected not due to environmental costs, but because the economic benefits are not as great as estimated; LBP-12-5, 75 NRC 227 (2012)
scope of an EIS is defined as the range of actions, alternatives, and impacts to be considered in the EIS; LBP-12-12, 75 NRC 742 (2012)
segmentation is to be avoided in order to ensure that interrelated projects, the overall effect of which is environmentally significant, not be fractionalized into smaller, less significant actions; LBP-12-12, 75 NRC 742 (2012)
segmentation occurs when an action is divided into component parts, each involving action with less significant environmental effects; LBP-12-12, 75 NRC 742 (2012)
separate actions are connected if, among other things, they cannot or will not proceed unless other actions are taken previously or simultaneously, or they are interdependent parts of a larger action and depend on the larger action for their justification; LBP-12-12, 75 NRC 742 (2012)
significant health, socioeconomic, and cumulative consequences of the environmental impact of a proposed action must be disclosed; LBP-12-9, 75 NRC 615 (2012)
taking a hard look at possible environmental effects and risk fosters both informed decisionmaking and informed public participation and thus ensures that the agency does not act upon incomplete information, only to regret its decision after it is too late to correct it; LBP-12-5, 75 NRC 227 (2012)
the burden is on the proponent of a contention to show that the Staff's analysis or methodology is unreasonable or insufficient; CLI-12-6, 75 NRC 352 (2012)
the extent of the no-action discussion is governed by a rule of reason; LBP-12-8, 75 NRC 539 (2012)
the NEPA alternatives analysis is the heart of the EIS; CLI-12-9, 75 NRC 421 (2012)
there is no NEPA requirement to use the best scientific methodology, and NEPA should be construed in the light of reason if it is not to demand virtually infinite study and resources; LBP-12-5, 75 NRC 227 (2012)
to require detailed analysis in the final EIS, a transmission corridor must be a proposed action rather than one that is merely contemplated; LBP-12-12, 75 NRC 742 (2012)
when an EIS is prepared at the early site permit stage, NRC Staff must prepare a supplemental EIS for the combined license focusing on issues related to the impacts of construction and operation for which new and significant information has been identified; CLI-12-2, 75 NRC 63 (2012)
when omissions are cured by the subsequent issuance of licensing-related documents, a contention of omission must be disposed of or modified; LBP-12-5, 75 NRC 227 (2012)
when reviewing a discrete license application filed by a private applicant, a federal agency may appropriately accord substantial weight to the preferences of the applicant in siting and design of the project, taking into account the economic goals of the project's sponsor; CLI-12-5, 75 NRC 301 (2012)

SUBJECT INDEX

See also Draft Environmental Impact Statement; Final Environmental Impact Statement; Generic Environmental Impact Statement; Supplemental Environmental Impact Statement

ENVIRONMENTAL ISSUES

although environmental contentions ultimately challenge NRC's compliance with the National Environmental Policy Act, applicant may advocate for a particular challenged position set forth in the environmental impact statement; LBP-12-5, 75 NRC 227 (2012)

an issue is "significant" for the purposes of reopening a record if it will paint a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; LBP-12-1, 75 NRC 1 (2012); LBP-12-10, 75 NRC 633 (2012)

because two of the previously admitted contentions allege NEPA violations, new NEPA contentions put forward by the intervenors would not unreasonably broaden the issues; LBP-12-12, 75 NRC 742 (2012)

Category 2 issues require plant-specific review as part of license renewal; LBP-12-8, 75 NRC 539 (2012)

for NEPA contentions, the burden of proof falls on NRC Staff because NRC, not the applicant, bears the ultimate responsibility for complying with NEPA's dictates; LBP-12-5, 75 NRC 227 (2012)

intervenors are expected to file contentions on the basis of applicant's environmental report and not delay their contentions until after NRC Staff issues its environmental analysis; CLI-12-13, 75 NRC 681 (2012); LBP-12-12, 75 NRC 742 (2012)

significant change in the nature of the purported NEPA imperfection, from one focusing on comprehensive information omission to one centered on a deficient analysis of subsequently supplied information, warrants issue modification by the complaining party because otherwise, absent any new pleading, the other parties would be left to speculate whether the concerns first expressed had been satisfied by the new information; LBP-12-5, 75 NRC 227 (2012)

site-specific environmental issues are Category 2 issues and thus admissible in operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012)

ENVIRONMENTAL QUALIFICATION OF ELECTRICAL EQUIPMENT

a mild environment would at no time be significantly more severe than the environment that would occur during normal plant operation, including anticipated operational occurrences; CLI-12-10, 75 NRC 479 (2012)

electrical equipment important to safety but located in a mild environment does not fall within the scope of 10 C.F.R. 50.49(c); CLI-12-10, 75 NRC 479 (2012)

particular requirements for the environmental qualification of electric components important to safety for nuclear power plants are set forth in 10 C.F.R. 50.49; CLI-12-10, 75 NRC 479 (2012)

ENVIRONMENTAL REPORT

applicant is to provide an analysis of alternatives to the proposed action that is sufficiently complete to aid NRC Staff in developing and exploring its own set of alternatives; LBP-12-8, 75 NRC 539 (2012)

applicant is to provide an analysis that considers and balances the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects; LBP-12-8, 75 NRC 539 (2012)

applicant must address both the impacts of the proposed renewal and alternatives to those impacts; LBP-12-8, 75 NRC 539 (2012)

applicant must discuss the status of its compliance with environmental quality standards and requirements that have been imposed by federal, state, regional, and local agencies having responsibility for environmental protection; LBP-12-12, 75 NRC 742 (2012)

applicant must provide a discussion of the no-action alternative in its ER; LBP-12-8, 75 NRC 539 (2012)

applicant need consider only those environmental impacts that are reasonably foreseeable, not those that are remote and speculative possibilities; LBP-12-7, 75 NRC 503 (2012); LBP-12-9, 75 NRC 615 (2012)

applicants environmental report is to discuss any irreversible and irretrievable commitments of resources that would be involved in the proposed action; LBP-12-3, 75 NRC 164 (2012)

applicant's environmental report need only discuss those alternatives that will bring about the ends of the proposed action; CLI-12-5, 75 NRC 301 (2012)

applicants may submit a supplement to an environmental report at any time; CLI-12-13, 75 NRC 681 (2012); LBP-12-13, 75 NRC 784 (2012)

applicants still face a continuing possibility of contentions in adjudicatory proceedings based upon omissions or deficiencies in their environmental report because NRC rules require the filing of contentions as early as possible; CLI-12-13, 75 NRC 681 (2012)

because petitioner fails to show that the possibility of site inundation is based on new and materially different information added to the ER as part of applicant's revised low-level radioactive waste management plan or identify any new and materially different information on which its site-inundation argument is based, this argument is untimely; LBP-12-7, 75 NRC 503 (2012)
Category 1 issues are those resolved generically by the generic environmental impact statement and need not be addressed as part of license renewal; LBP-12-8, 75 NRC 539 (2012)
challenge that applicant's environmental report omits material that petitioner alleges is required to be there is within the scope of the proceeding; LBP-12-8, 75 NRC 539 (2012)
challenging the ER preserves petitioner's right to challenge the environmental impact statement at a later stage of the proceedings; LBP-12-8, 75 NRC 539 (2012)
Commission decision to decline review of a referred question does not constitute an endorsement of the board's views on the question of an applicant's duty to supplement its environmental report; CLI-12-13, 75 NRC 681 (2012)
contention that raises a genuine dispute with the sufficiency of the cumulative impacts analysis, or the lack thereof, in the ER is admissible; LBP-12-3, 75 NRC 164 (2012)
contention that the ER is deficient in concluding that environmental impacts from proposed deep injection wells will be small because the ER fails to identify the source data of the chemical concentrations for ethylbenzene, heptachlor, tetrachloroethylene, and toluene is admissible; LBP-12-9, 75 NRC 615 (2012)
contentions challenging an ER may be viewed as a challenge to the NRC Staff's subsequent draft or final environmental impact statement; CLI-12-1, 75 NRC 39 (2012)
discussion of the no-action alternative need only include feasible, nonspeculative alternatives; LBP-12-8, 75 NRC 539 (2012)
environmental impacts must be discussed in proportion to their significance; LBP-12-9, 75 NRC 615 (2012)
every combined license application must be accompanied by an ER, the purpose of which is to aid NRC Staff in its preparation of an environmental impact statement; LBP-12-9, 75 NRC 615 (2012)
every ER prepared for the construction permit stage, the early site permit stage, or the combined license stage of a light-water-cooled nuclear power reactor must contain a statement concerning transportation of fuel and radioactive wastes to and from the reactor; LBP-12-12, 75 NRC 742 (2012)
for the no-action alternative, there need not be much discussion in the environmental documents because it is most simply viewed as maintaining the status quo; LBP-12-8, 75 NRC 539 (2012)
if an ER is compliant as of its date of issuance, then subsequent events and information are not material to the compliance status of the ER; LBP-12-13, 75 NRC 784 (2012)
if applicant was required to update its ER every time NRC issued a request for additional information, there would need to be dozens, if not hundreds, of such updates; LBP-12-13, 75 NRC 784 (2012)
intervenors must file their NEPA contentions based on the ER; LBP-12-12, 75 NRC 742 (2012)
issues that a license renewal applicant must address in its ER, as well as those that it need not address, are listed in 10 C.F.R. 51.53(c)(3); LBP-12-8, 75 NRC 539 (2012)
it is applicant's responsibility to include information in the ER that NRC Staff needs to prepare the draft environmental impact statement, including information on alternatives available for reducing or avoiding adverse environmental effects; LBP-12-12, 75 NRC 742 (2012)
license renewal applicant is required to consider any new and significant information that might alter previous environmental conclusions; LBP-12-8, 75 NRC 539 (2012)
license renewal applicant need not provide an analysis of severe accident mitigation alternatives in its ER if NRC Staff has already considered SAMAs for applicant's plant in an environmental impact statement or related supplement or in an environmental assessment; LBP-12-8, 75 NRC 539 (2012)
license renewal applicant's ER must address environmental impacts of the proposed action and compare them to impacts of alternative actions; CLI-12-5, 75 NRC 301 (2012); CLI-12-8, 75 NRC 393 (2012)
license renewal applicants must assess the impact of the proposed action on threatened or endangered species in accordance with the Endangered Species Act as part of their ER; LBP-12-10, 75 NRC 633 (2012)
license renewal applicants must submit an ER to aid the Staff in its preparation of a supplemental environmental impact statement; CLI-12-13, 75 NRC 681 (2012); LBP-12-8, 75 NRC 539 (2012)
neither NEPA nor 10 C.F.R. Part 51 requires an applicant to update an originally compliant ER to reflect new information derived from subsequent events; LBP-12-13, 75 NRC 784 (2012)

neither NRC nor applicant need consider any alternative that does not bring about the ends of the proposed action; CLI-12-5, 75 NRC 301 (2012)
NRC Staff relies heavily on applicant's ER in preparing its environmental impact statement; LBP-12-5, 75 NRC 227 (2012)
petitioner must challenge the ER, which acts as a surrogate for the environmental impact statement during the early stages of a relicensing proceeding; LBP-12-8, 75 NRC 539 (2012)
petitioner must file NEPA-related contentions based on applicant's environmental report, but the filing of new or amended contentions is explicitly permitted if there are data or conclusions in the NRC draft or final environmental impact statement that differ significantly from data or conclusions in applicant's documents; LBP-12-13, 75 NRC 784 (2012)
petitioner's challenge to applicant's use of Three Mile Island data constitutes a genuine dispute on a material issue and is within the scope of the license renewal proceeding because it challenges the adequacy of the environmental report; LBP-12-8, 75 NRC 539 (2012)
petitioners fail to link any of their past criticisms to specific provisions of the environmental report, and the board declines to pore through the attachments to their intervention submission to assemble the basis for such a contention; LBP-12-3, 75 NRC 164 (2012)
remote and speculative alternatives need not be addressed in applicant's ER; CLI-12-5, 75 NRC 301 (2012)
sufficient data should be provided to aid the Commission in its development of an independent analysis; CLI-12-13, 75 NRC 681 (2012); LBP-12-9, 75 NRC 615 (2012)
the extent of the no-action discussion is governed by a rule of reason; LBP-12-8, 75 NRC 539 (2012)
the migration tenet applies only as long as the DEIS analysis or discussion at issue is essentially *in para materia* with the ER analysis or discussion that is the focus of the contention; LBP-12-12, 75 NRC 742 (2012)
the requirement for license renewal applicants to consider severe accident mitigation alternatives stems from 10 C.F.R. 51.53(c)(3)(ii)(L); CLI-12-10, 75 NRC 479 (2012)
the time for challenging the ER passes when NRC Staff releases its draft supplemental environmental impact statement, but contentions challenging the ER can be filed with the initial petition and prior to the time Staff's environmental review documents are completed; LBP-12-11, 75 NRC 731 (2012)
under the migration tenet, boards may construe an admitted contention contesting the ER as a challenge to the subsequently issued draft or final environmental impact statement without the necessity for Intervenors to file a new or amended contention; LBP-12-12, 75 NRC 742 (2012)
whether a severe accident mitigation alternative is worthy of more detailed analysis in an ER or supplemental environmental impact statement hinges on whether it may be cost-beneficial to implement; CLI-12-3, 75 NRC 132 (2012)
ENVIRONMENTAL REVIEW
agencies are encouraged to incorporate consultation procedures on endangered/threatened species and essential fish habitat into their NEPA review; LBP-12-10, 75 NRC 633 (2012)
an application-specific NEPA review represents a snapshot in time, and although NEPA requires that NRC conduct its environmental review with the best information available at that time, it does not require that NRC wait until inchoate information matures into something that later might affect its review; LBP-12-10, 75 NRC 633 (2012)
contention asserting that the NRC's environmental review of the license renewal application has not met the requirements of the Endangered Species Act and the Magnuson-Stevens Fishery Conservation and Management Act fails to satisfy the requirements for reopening the record; LBP-12-10, 75 NRC 633 (2012)
license renewal applications are subject to an environmental review; CLI-12-5, 75 NRC 301 (2012)
NEPA does not require that the agency wait until inchoate information matures into something that later might affect its review; CLI-12-6, 75 NRC 352 (2012); CLI-12-7, 75 NRC 379 (2012)
NEPA obligates NRC Staff to undertake a full and independent evaluation of the environmental impacts of applicant's proposed action; LBP-12-9, 75 NRC 615 (2012)
NEPA requires that NRC conduct its environmental review with the best information available at that time; CLI-12-6, 75 NRC 352 (2012); CLI-12-7, 75 NRC 379 (2012); CLI-12-15, 75 NRC 704 (2012); LBP-12-8, 75 NRC 539 (2012)

NRC is not required to wait until inchoate information matures into something that might affect its review; CLI-12-15, 75 NRC 704 (2012)
NRC Staff must make a recommendation on the environmental acceptability of the license renewal action, and the Commission shall determine whether the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable; CLI-12-8, 75 NRC 393 (2012)
NRC Staff's environmental review was conducted in cooperation with the U.S. Army Corps of Engineers, with NRC acting as lead agency and ACE as cooperating agency under a memorandum of understanding because applicants also needed permits from ACE to complete construction activities that may affect wetlands; CLI-12-9, 75 NRC 421 (2012)
Part 51 process for environmental review associated with license renewal, focusing upon the potential impacts of an additional 20 years of plant operation, is described; CLI-12-5, 75 NRC 301 (2012)
the review method chosen by NRC in creating its models with the best information available when it began its analysis and then checking the assumptions of those models as new information becomes available is a reasonable means of balancing competing considerations, particularly given the many months required to conduct full modeling with new data; CLI-12-7, 75 NRC 379 (2012)
when preparation of the essential fish habitat assessment is consolidated with other environmental review procedures, the National Marine Fisheries Service is to have timely notification of actions that may adversely affect EFH, and whenever possible, at least 60 days' notice prior to a final decision on an action; LBP-12-10, 75 NRC 633 (2012)
with respect to the environmental impacts of a combined license, the Commission determines whether the requirements of NEPA § 102(2)(A), (C), and (E), and 10 C.F.R. 51.107(a)(1)-(4) have been met; CLI-12-9, 75 NRC 421 (2012)

EVIDENCE
affidavits supporting a motion to reopen must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised; CLI-12-6, 75 NRC 352 (2012)
affidavits supporting a motion to reopen must meet the admissibility standards of 10 C.F.R. 2.337; CLI-12-6, 75 NRC 352 (2012)
although the quality of evidence presented for reopening must be at least of a level sufficient to withstand a motion for summary disposition, more is required; CLI-12-10, 75 NRC 479 (2012)
support for a motion to reopen must be sufficiently compelling to suggest a likelihood of materially affecting the ultimate results in the proceeding; CLI-12-10, 75 NRC 479 (2012)

EVIDENTIARY HEARINGS
adjudicatory hearings are not environmental impact statement editing sessions; CLI-12-1, 75 NRC 39 (2012)

EXCEPTIONS
an exception for situations where parties seek to add previously unlitigated material would effectively render the reopening regulation meaningless; CLI-12-10, 75 NRC 479 (2012)
an exception to the backfit rule is provided if the Commission determines that regulatory action is necessary to ensure that the facility provides adequate protection of the health and safety of the public and is in accord with the common defense and security; CLI-12-9, 75 NRC 421 (2012)

EXEMPTIONS
applicant for an exemption bears the burden of proof on all issues; LBP-12-6, 75 NRC 256 (2012)
applicant may act as a self-guarantor without satisfying the financial test for self-guarantors if it is in the public interest or otherwise satisfies the requirements of 10 C.F.R. 40.14; LBP-12-6, 75 NRC 256 (2012)
demonstration that application of a regulation is not necessary to achieve its underlying purpose is listed as a special circumstance warranting an exemption; CLI-12-9, 75 NRC 421 (2012); LBP-12-6, 75 NRC 256 (2012)
licensing boards are not free to reexamine fundamental policy judgments that are reflected in NRC regulations by creating exceptions to them in situations that will frequently recur; LBP-12-6, 75 NRC 256 (2012)
licensing boards have authority to adjudicate exemption issues, but NRC Staff serves as an initial reviewer of exemption requests; LBP-12-6, 75 NRC 256 (2012)

licensing boards will not consider exemption requests that were not first made to NRC Staff; LBP-12-6, 75 NRC 256 (2012)
NRC may grant exemptions from the alternative financial test for self-guarantee of the decommissioning funding obligation that 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-12-6, 75 NRC 256 (2012)
NRC regulations do not merely establish a standard that applicant is entitled to invoke for its benefit, but that may then be disregarded whenever applicant wants to argue its case on an individual, fact-specific basis; LBP-12-6, 75 NRC 256 (2012)
NRC Staff evaluated and approved exemption from regulatory requirements for organization and numbering of the combined license application; CLI-12-2, 75 NRC 63 (2012)
NRC Staff evaluated and approved exemption from regulatory requirements for special nuclear material control and accounting program description; CLI-12-2, 75 NRC 63 (2012)
NRC Staff review included evaluation of exemption criteria; CLI-12-2, 75 NRC 63 (2012)
request for exemption from requirements of 10 C.F.R. 40.36 to allow applicant to act as a self-guarantor of the funds necessary for eventually decommissioning facility without satisfying the financial test for self-guarantors is denied; LBP-12-6, 75 NRC 256 (2012)
the COL application included a request for a departure from the wet-bulb noncoincident temperature, which is considered Tier 1 information and part of the certified design and thus a regulatory exemption is required; CLI-12-9, 75 NRC 421 (2012)
the Commission administratively exempted from the backfit rule, an order to the combined license holder to address spent fuel pool instrumentation requirements not specified in the certified design as enhanced protective measures that represent a substantial increase in the protection of public health and safety; CLI-12-9, 75 NRC 421 (2012)
where there is present any circumstance that was not considered by NRC when it promulgated the pertinent regulation in the first place, exemption may be appropriate; LBP-12-6, 75 NRC 256 (2012)
FEDERAL EMERGENCY MANAGEMENT AGENCY
every 2 years, licensee stages full-participation emergency exercises, which are evaluated by both FEMA and NRC; CLI-12-9, 75 NRC 421 (2012)
NRC Staff considers FEMA's findings on emergency plans in making its necessary finding of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency; CLI-12-9, 75 NRC 421 (2012)
FINAL ENVIRONMENTAL IMPACT STATEMENT
adjudicatory records and board decisions and any Commission appellate decisions become, in effect, part of the FEIS; LBP-12-5, 75 NRC 227 (2012)
agencies need not supplement an EIS every time new information comes to light after the EIS is finalized; CLI-12-7, 75 NRC 379 (2012)
although NEPA does not direct any particular substantive result, all environmental consequences of the proposed action, including connected actions, must be fully evaluated in the FEIS; LBP-12-12, 75 NRC 742 (2012)
challenges to only the draft environmental impact statement apply equally to the FEIS under the migration tenet; LBP-12-5, 75 NRC 227 (2012)
duty to supplement the FEIS is mandatory, is not avoidable through findings of compliance with the agency's safety regulations, and is waivable only where the consequences are remote and highly improbable; CLI-12-11, 75 NRC 523 (2012)
even if the transmission corridor is a preconstruction activity and outside the NRC's regulatory jurisdiction, the construction and maintenance of the transmission corridor likely qualifies as a connected action under governing NRC and Council on Environmental Quality regulations, and therefore must be analyzed in the FEIS; LBP-12-12, 75 NRC 742 (2012)
for new information to be sufficiently significant to merit the preparation of a supplemental FEIS, the information must paint a seriously different picture of the environmental landscape; CLI-12-11, 75 NRC 523 (2012)
NRC need not supplement an environmental impact statement with information in an area of research that is still developing; CLI-12-6, 75 NRC 352 (2012)

NRC Staff may supplemented an FEIS if, before a proposed action is taken, new and significant information comes to light that bears on the proposed action or its impacts; CLI-12-6, 75 NRC 352 (2012)
under the migration tenet, boards may construe an admitted contention contesting the environmental report as a challenge to the subsequently issued draft or final EIS without the necessity for Intervenors to file a new or amended contention; LBP-12-12, 75 NRC 742 (2012)
FINAL SAFETY ANALYSIS REPORT
applicant must identify particular plans pertaining to design, operational organization, and procedures that demonstrate how it intends to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20 including, but not limited to, LLRW handling and storage; LBP-12-4, 75 NRC 213 (2012)
updating of FSARs is necessary so that NRC is aware of changes that are made that do not require prior NRC approval; CLI-12-2, 75 NRC 63 (2012)
whether offsite low-level radioactive waste storage and disposal facilities will ultimately be available is not material to summary disposition because applicant's FSAR provides an adequate contingency plan for long-term onsite storage of LLRW in the event that offsite storage and disposal facilities are not available; LBP-12-4, 75 NRC 213 (2012)
FINAL SAFETY EVALUATION REPORT
NRC Staff's steps in the geographic and demographic review in the FSER to determine whether the COL applicant has proposed an acceptable site, including acceptable site boundaries, with appropriate consideration of nearby populations and natural and manmade features, are described; CLI-12-9, 75 NRC 421 (2012)
FINALITY
after a record has closed, finality attaches to the hearing process, and after that point, only timely, significant issues will be considered; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012)
if combined licenses issue without including license conditions, NRC regulations relevant to the finality of decisions could result in some additional administrative requirements to satisfy in imposing new requirements on licensee; CLI-12-9, 75 NRC 421 (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-12-10, 75 NRC 479 (2012)
only final NRC action is subject to judicial review; CLI-12-11, 75 NRC 523 (2012)
partial initial decisions constitute a final decision of the Commission 40 days from the date of issuance or the first agency business day following that date if it is a Saturday, Sunday, or federal holiday unless a petition for review is filed in accordance with section 2.1212; LBP-12-5, 75 NRC 227 (2012)
FINANCIAL ASSURANCE
applicant is required to submit a report on its decommissioning funding assurance mechanism after combined licenses are issued and no later than 30 days after NRC publishes notice of intended operation in the *Federal Register*; CLI-12-2, 75 NRC 63 (2012)
financial test for self-guarantee of the decommissioning funding obligation requires that licensee maintain a bond rating of "A" or better and have a tangible net worth at least 10 times the total current decommissioning cost estimate; LBP-12-6, 75 NRC 256 (2012)
licensee that wishes to be the sole guarantor of its own liabilities must satisfy a stringent test; LBP-12-6, 75 NRC 256 (2012)
source materials licensee must demonstrate that sufficient funds will be available to cover the cost of decommissioning its facility; LBP-12-6, 75 NRC 256 (2012)
source materials licensees have numerous options for meeting their decommissioning funding obligations; LBP-12-6, 75 NRC 256 (2012)
to use the self-guarantee mechanism to fulfill its decommissioning funding obligation, a licensee that issues bonds must annually satisfy the financial test set forth in 10 C.F.R. Part 30, Appendix C, § II.B.3; LBP-12-6, 75 NRC 256 (2012)
FIRES
licensees must develop and implement guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities to address loss of large areas from fires or explosions that arise from a beyond-design-basis event; CLI-12-2, 75 NRC 63 (2012)

SUBJECT INDEX

FLOODS
because petitioner fails to show that the possibility of site inundation is based on new and materially different information added to the environmental report as part of applicant's revised low-level radioactive waste management plan or identify any new and materially different information on which its site-inundation argument is based, this argument is not timely; LBP-12-7, 75 NRC 503 (2012)
petitioner fails to demonstrate that the issue of radiation dispersal due to site inundation is material to the findings NRC must make to support approving a combined license application; LBP-12-7, 75 NRC 503 (2012)
FUKUSHIMA ACCIDENT
accident-related contentions are rejected as premature, and would not have addressed the standards for reopening, contention admissibility, or rule waiver; CLI-12-6, 75 NRC 352 (2012)
any evaluation of the Fukushima events will include consideration of lessons learned that may apply to spent fuel pools; LBP-12-1, 75 NRC 1 (2012)
any rule or policy changes NRC may make as a result of its post-Fukushima review may be made irrespective of whether a license renewal application is pending, or whether final action on an application has been taken; CLI-12-6, 75 NRC 352 (2012)
because NRC does not know today the full implications of the Fukushima events for U.S. facilities, any generic NEPA duty, if one is appropriate at all, does not accrue now; LBP-12-8, 75 NRC 539 (2012)
contention in a license renewal proceeding based on applicant's failure to consider alleged new and significant information arising from NRC's Fukushima Task Force Report was rejected; LBP-12-8, 75 NRC 539 (2012)
contention was inadmissible because petitioner offered nothing to link the outcome of the Fukushima events to either the nuclear power plant or the license renewal application and thus failed to show any dispute with the application; CLI-12-13, 75 NRC 681 (2012)
contentions based on the Fukushima accident must be relevant to the present proceeding and must link the events at Fukushima to the risk of a severe accident at the site that is the subject of the proceeding; LBP-12-1, 75 NRC 1 (2012)
continuing licensing processes in accordance with current regulations pending completion of long-term analyses of the accident would cause no imminent risk to public health and safety because current regulations provide for incorporating new requirements into existing licenses as they are shown to be necessary; CLI-12-9, 75 NRC 421 (2012)
depending on NRC Staff's resolution of Fukushima-related rulemaking petitions, Staff could seek Commission permission to suspend one or more of the generic determinations in the license renewal environmental rules and include a new analysis in pending, plant-specific environmental impact statements; LBP-12-1, 75 NRC 1 (2012)
events at Fukushima, and the ensuing NRC response, are not, at this point, to be considered new and significant information under NEPA; LBP-12-8, 75 NRC 539 (2012)
events of Fukushima do not present a sufficiently grave threat to public safety that reactor licensing proceedings should be suspended; LBP-12-1, 75 NRC 1 (2012)
for license renewal safety review, it is not clear at this point whether any enhancements or changes considered by the Fukushima Task Force will bear on license renewal regulations, which are focused more narrowly on the proper management of aging; CLI-12-10, 75 NRC 479 (2012)
if new and significant information on Fukushima events comes to light that requires consideration as part of the ongoing preparation of application-specific NEPA documents, NRC will assess the significance of that information as appropriate; CLI-12-7, 75 NRC 379 (2012)
in response to the Fukushima accident in Japan, NRC is conducting a comprehensive safety review of the requirements and guidance associated with accident mitigation measures; CLI-12-1, 75 NRC 39 (2012)
motions and petitions related to the Fukushima events are denied as premature; CLI-12-2, 75 NRC 63 (2012); CLI-12-7, 75 NRC 379 (2012)
neither new procedures nor a separate timetable for raising new issues related to the Fukushima events are warranted; CLI-12-3, 75 NRC 132 (2012); CLI-12-13, 75 NRC 681 (2012); CLI-12-15, 75 NRC 704 (2012)
NRC continues to comprehensively assess the accident, including carefully reviewing all recommendations outlined by NRC's Task Force studying the accident; CLI-12-10, 75 NRC 479 (2012)

SUBJECT INDEX

NRC has in place well-established regulatory processes by which to impose any new requirements or other enhancements that may be needed; CLI-12-2, 75 NRC 63 (2012); CLI-12-6, 75 NRC 352 (2012)
NRC Staff verification of Fukushima-related license conditions should be a straightforward matter of applying a defined set of requirements; CLI-12-2, 75 NRC 63 (2012)
NRC will address any new information presenting a seriously different picture of the environmental impact of a proposed project than previously assessed; CLI-12-10, 75 NRC 479 (2012)
ongoing regulatory and oversight processes provide reasonable assurance that each plant continues to comply with its current licensing basis, which can be adjusted by future Commission order or by modification to the facility's operating license outside the renewal proceeding; CLI-12-3, 75 NRC 132 (2012); CLI-12-5, 75 NRC 301 (2012)
petitioner does not identify how the Fukushima accident paints a seriously different picture of the environment, given the bounding severe accident scenarios assumed in the GEIS analysis and its consideration of liquid pathways; CLI-12-15, 75 NRC 704 (2012)
petitioners' request for a safety analysis relative to Fukushima-related concerns was granted to the extent that the requested analyses had already been undertaken; CLI-12-9, 75 NRC 421 (2012)
petitioners' requests to suspend various licensing proceedings, pending completion of long-term analyses of the Fukushima events and the issuance of any resulting regulatory changes were denied; CLI-12-2, 75 NRC 63 (2012); CLI-12-9, 75 NRC 421 (2012)
raising new issues related to the Fukushima events does not warrant new procedures or a separate timetable; CLI-12-6, 75 NRC 352 (2012)
request for analysis of whether Fukushima events constitute new and significant information under NEPA is premature; LBP-12-1, 75 NRC 1 (2012)
request to suspend proceedings because of Fukushima accident is denied; CLI-12-14, 75 NRC 692 (2012)
suspension of license renewal proceedings in light of the Fukushima accident is unnecessary because current regulatory and oversight processes provide reasonable assurance that each plant continues to comply with its current licensing basis, which can be adjusted by future Commission order or by modification to the facility's operating license outside the renewal proceeding; CLI-12-6, 75 NRC 352 (2012)
the accident does not significantly alter the overall environmental picture for severe reactor accidents at the site; CLI-12-15, 75 NRC 704 (2012)
the Commission declined to conduct a generic NEPA analysis on the effects of Fukushima-related events; CLI-12-7, 75 NRC 379 (2012)
the Commission declined to suspend any adjudications or final licensing decisions, finding no imminent risk to public health and safety or to common defense and security because of the accident; CLI-12-5, 75 NRC 301 (2012); CLI-12-11, 75 NRC 523 (2012)
there is no imminent safety reason to halt new reactor licensing because there is sufficient time to implement new Fukushima-related requirements before operation; CLI-12-2, 75 NRC 63 (2012)
GENERIC ENVIRONMENTAL IMPACT STATEMENT
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 generic environmental impact statement; LBP-12-8, 75 NRC 539 (2012)
Category 1 issues are those resolved generically by the GEIS and need not be addressed as part of license renewal; LBP-12-8, 75 NRC 539 (2012)
depending on NRC Staff's resolution of Fukushima-related rulemaking petitions, NRC Staff could seek Commission permission to suspend one or more of the generic determinations in the license renewal environmental rules and include a new analysis in pending, plant-specific environmental impact statements; LBP-12-1, 75 NRC 1 (2012)
for each license renewal application, NRC Staff must prepare a plant-specific supplement to the GEIS that adopts applicable generic impact findings from the GEIS and analyzes site-specific impacts; LBP-12-8, 75 NRC 539 (2012); LBP-12-10, 75 NRC 633 (2012)
GENERIC ISSUES
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 generic environmental impact statement; LBP-12-8, 75 NRC 539 (2012)

because NRC does not know today the full implications of the Fukushima events for U.S. facilities, any generic NEPA duty, if one is appropriate at all, does not accrue now; LBP-12-8, 75 NRC 539 (2012)
Category 1 issues are those resolved generically by the generic environmental impact statement and need not be addressed as part of license renewal; LBP-12-8, 75 NRC 539 (2012)
concerns that apply to all spent fuel pools at all reactors are more appropriately addressed via rulemaking or other appropriate generic activity; CLI-12-6, 75 NRC 352 (2012)
generic, unsubstantiated claims regarding health, safety, and property devaluation impacts are insufficient to establish standing; LBP-12-3, 75 NRC 164 (2012)
generically applicable concerns are not appropriate for resolution in an adjudicatory proceeding, a rulemaking petition being the appropriate mechanism for raising those concerns; CLI-12-6, 75 NRC 352 (2012)
structures and components associated only with active functions can be generically excluded from a license renewal aging management review; CLI-12-5, 75 NRC 301 (2012)
GROUNDWATER CONTAMINATION
as distance increases from the in situ recovery facility, petitioner with an upgradient water source must expect to provide the board with some analysis as to how any contamination will affect any wells alleged to be impacted by the facility; LBP-12-3, 75 NRC 164 (2012)
claim that application fails to adequately present the true extent of historical exploration drilling, borehole abandonment details, R&D testing, changes to groundwater water quality, and interconnections of geologic strata contains no alleged facts to support this opinion and thus does not raise a genuine dispute; LBP-12-3, 75 NRC 164 (2012)
concern about computer modeling methodology used to calculate groundwater quantity impacts is inadmissible as lacking sufficient factual or expert support and as failing to establish a material factual or legal dispute; LBP-12-3, 75 NRC 164 (2012)
contention asserting that because no previous ISL/ISR mining operation has been able to restore groundwater to baseline standards, applicant will be required to request that the Commission set an alternate concentration limit for aqueous contaminants is admissible; LBP-12-3, 75 NRC 164 (2012)
contention asserting that NEPA requires a groundwater baseline characterization for an in situ recovery site is admissible; LBP-12-3, 75 NRC 164 (2012)
contention that the environmental report is deficient in concluding that environmental impacts from proposed deep injection wells will be small because the ER fails to identify the source data of the chemical concentrations for ethylbenzene, heptachlor, tetrachloroethylene, and toluene is admissible; LBP-12-9, 75 NRC 615 (2012)
environmental contention regarding cumulative impact on groundwater quantity of the in situ recovery project and the planned expansion satisfies admissibility requirements; LBP-12-3, 75 NRC 164 (2012)
for petitioners claiming to be using water from the same aquifer as for the uranium ore source, regardless of distance from the facility in question, licensing boards have found that a plausible pathway connecting the proposed mining operation to their water source has been shown so as to establish petitioners' standing; LBP-12-3, 75 NRC 164 (2012)
groundwater quality degradation for cooling ponds in salt marshes is a Category 1 issue and thus inadmissible in operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012)
petitioner whose property is upgradient but nonetheless located in close proximity to a proposed in situ recovery facility may be able to establish its plausible pathway with a less particularized showing; LBP-12-3, 75 NRC 164 (2012)
petitioners considerably upgradient of a mining area must provide scientific or technical support for how contaminated material from an in situ recovery site might plausibly enter their drinking water to fulfill the causation element necessary to establish their standing; LBP-12-3, 75 NRC 164 (2012)
when an ore zone and petitioner's water source exist in separate aquifers, the injury/causation question is whether there is an interconnection between these aquifers; LBP-12-3, 75 NRC 164 (2012)
HEALTH AND SAFETY
an exceptionally grave issue is one that raises a sufficiently grave threat to public safety; LBP-12-1, 75 NRC 1 (2012)
generic, unsubstantiated claims regarding health, safety, and property devaluation impacts are insufficient to establish standing; LBP-12-3, 75 NRC 164 (2012)

SUBJECT INDEX

HEALTH EFFECTS
health-impact potential of facility traffic-associated dust, if properly pleaded, could provide a basis for standing; LBP-12-3, 75 NRC 164 (2012)
HEARING REQUESTS
appeals of board rulings on hearing requests, petitions to intervene, and access to certain nonpublic information are governed by 10 C.F.R. 2.311(a); CLI-12-6, 75 NRC 352 (2012)
request for hearing and/or petition for leave to intervene will be granted if the board determines that requestor/petitioner has standing and has proposed at least one admissible contention; LBP-12-8, 75 NRC 539 (2012)
requests for hearing and petitions for leave to intervene must set forth with particularity the contentions sought to be raised and must satisfy all six requirements of 10 C.F.R. 2.309(f)(1); CLI-12-5, 75 NRC 301 (2012); CLI-12-8, 75 NRC 393 (2012)
HEARING RIGHTS
argument that applying heightened late-filing standards to contentions triggered by the NRC Staff's review documents violates a petitioner's AEA hearing rights has been considered and rejected; CLI-12-14, 75 NRC 692 (2012)
NRC has latitude to define who is an "affected person" within the meaning of Atomic Energy Act § 189a, 42 U.S.C. § 2239(a); LBP-12-3, 75 NRC 164 (2012)
significant delays in NRC Staff's review potentially deprive an Indian tribe of its hearing rights; CLI-12-4, 75 NRC 154 (2012)
the Commission cannot restrict the opportunity for a hearing so much that it effectively removes from the hearing, issues that are material to the licensing decision; CLI-12-14, 75 NRC 692 (2012)
IN SITU LEACH MINING
as distance increases from the in situ recovery facility, petitioner with an upgradient water source must expect to provide the board with some analysis as to how any contamination will affect any wells alleged to be impacted by the facility; LBP-12-3, 75 NRC 164 (2012)
contention asserting that because no previous ISL/ISR mining operation has been able to restore groundwater to baseline standards, applicant will be required to request that NRC set an alternate concentration limit for aqueous contaminants is admissible; LBP-12-3, 75 NRC 164 (2012)
contention asserting that NEPA requires a groundwater baseline characterization for an in situ recovery site is admissible; LBP-12-3, 75 NRC 164 (2012)
environmental contention regarding cumulative impact on groundwater quantity of the in situ recovery project and the planned expansion satisfies admissibility requirements; LBP-12-3, 75 NRC 164 (2012)
for petitioners claiming to be using water from the same aquifer as for the uranium ore source, regardless of distance from the facility in question, licensing boards have found that a plausible pathway connecting the proposed mining operation to their water source has been shown so as to establish petitioners' standing; LBP-12-3, 75 NRC 164 (2012)
NRC could consider adopting, at least for the initial construction/operation authorization of in situ recovery facilities, a standing regime by which persons living or having substantial contacts within a 50-mile radius of the facility are afforded standing; LBP-12-3, 75 NRC 164 (2012)
petitioner whose property is upgradient but nonetheless located in close proximity to a proposed in situ recovery facility may be able to establish its plausible pathway with a less particularized showing; LBP-12-3, 75 NRC 164 (2012)
petitioners considerably upgradient of a mining area must provide scientific or technical support for how contaminated material from an in situ recovery site might plausibly enter their drinking water to fulfill the causation element necessary to establish their standing; LBP-12-3, 75 NRC 164 (2012)
standing was found for petitioner fishing a river 60 miles downstream from a proposed in situ recovery facility expansion alleged to allow drainage into the river from operations; LBP-12-3, 75 NRC 164 (2012)
surface water contamination has played a significant role in standing determinations in in situ recovery cases; LBP-12-3, 75 NRC 164 (2012)
the in situ recovery process, which is also referred to as the in situ leach process, is described; LBP-12-3, 75 NRC 164 (2012)
when an ore zone and petitioner's water source exist in separate aquifers, the injury/causation question is whether there is an interconnection between those aquifers; LBP-12-3, 75 NRC 164 (2012)

when petitioners considerably upgradient of the mining area fail to explain how contaminated material from the in situ recovery site might plausibly enter their drinking water, they fail to demonstrate that they fulfill the causation element necessary to establish their standing; LBP-12-3, 75 NRC 164 (2012)
INCORPORATION BY REFERENCE
briefs on appeal must be comprehensive, concise, and self-contained and incorporation of pleadings or arguments by reference is discouraged; CLI-12-3, 75 NRC 132 (2012)
the ASME Code for Operation and Maintenance of Nuclear Power Plants is incorporated by reference; CLI-12-9, 75 NRC 421 (2012)
INJURY IN FACT
aesthetic harms may amount to an injury in fact sufficient for standing; CLI-12-12, 75 NRC 603 (2012)
although a party who is not injured by a board's ruling has no right to appeal that ruling, it may file a supporting brief at the appropriate time; CLI-12-6, 75 NRC 352 (2012)
litigants are not entitled to challenge a board ruling unless and until that ruling has worked a concrete injury to his personal interests; CLI-12-6, 75 NRC 352 (2012)
potential harm necessary to demonstrate standing in NRC proceedings need not relate to physical or bodily injury; CLI-12-12, 75 NRC 603 (2012)
standing can be based on diminishment of recreational enjoyment of wildlife area due to, among other factors, an increase in dust due to traffic on adjacent highway; CLI-12-12, 75 NRC 603 (2012)
INSPECTION
basis of NRC Staff's reasonable assurance finding on combined license applicant's squib valve inspection program for which the current version of the ASME code is insufficient is explained; CLI-12-2, 75 NRC 63 (2012)
See also NRC Inspection
INSTRUMENTATION
the Commission administratively exempted from the backfit rule, an order to the combined license holder to address spent fuel pool instrumentation requirements not specified in the certified design as enhanced protective measures that represent a substantial increase in the protection of public health and safety; CLI-12-9, 75 NRC 421 (2012)
INTERESTED STATE PARTICIPATION
a brief stay of the close of a licensing proceeding was ordered to allow a state the opportunity to request status as an interested governmental entity; CLI-12-6, 75 NRC 352 (2012)
INTERVENORS
by participating in NRC proceedings, intervenors accept the obligation of uncovering relevant, publicly available information; CLI-12-13, 75 NRC 681 (2012)
INTERVENTION
petitioners have an ironclad obligation to review the application thoroughly and to base their challenges on its contents; CLI-12-5, 75 NRC 301 (2012)
INTERVENTION PETITIONS
any person whose interests may be affected by the license renewal proceeding, and who wishes to participate as a party, must file a petition for leave to intervene within 60 days of the notice of hearing in accordance with 10 C.F.R. 2.309; LBP-12-8, 75 NRC 539 (2012)
hearing requests or intervention petitions must set forth with particularity the contentions sought to be raised, meeting six pleading standards; CLI-12-5, 75 NRC 301 (2012)
petitioner has some latitude to supplement or cure a standing showing in its reply pleading, but any additional arguments should be supported by either the declaration that accompanied the original hearing request or a supplemental affidavit; LBP-12-3, 75 NRC 164 (2012)
petitioners must include their name, address, and telephone contact information, nature of their right under the AEA to be made a party, nature of their interest in the proceeding, and possible effect of any decision or order that might be issued on their interest; LBP-12-3, 75 NRC 164 (2012)
request for hearing and/or petition for leave to intervene will be granted if the board determines that requestor/petitioner has standing and has proposed at least one admissible contention; LBP-12-8, 75 NRC 539 (2012)
requests for hearing and petitions for leave to intervene must set forth with particularity the contentions sought to be raised and must satisfy all six requirements of 10 C.F.R. 2.309(f)(1); CLI-12-8, 75 NRC 393 (2012)

SUBJECT INDEX

INTERVENTION RULINGS
absent error of law or abuse of discretion, the Commission generally defers to board rulings on contention admissibility; CLI-12-5, 75 NRC 301 (2012); CLI-12-8, 75 NRC 393 (2012)
appeal as of right on the question of whether an initial intervention petition should have been wholly denied or, alternatively, was granted improperly are governed by 10 C.F.R. 2.311; CLI-12-7, 75 NRC 379 (2012); CLI-12-12, 75 NRC 603 (2012)
appeals of board rulings on hearing requests, petitions to intervene, and access to certain nonpublic information are governed by 10 C.F.R. 2.311(a); CLI-12-6, 75 NRC 352 (2012)
applicant may file an interlocutory appeal of board orders admitting contentions, but only if the appeal challenges the admissibility of all admitted contentions; CLI-12-12, 75 NRC 603 (2012)
board rulings on standing are accorded substantial deference on appeal; CLI-12-12, 75 NRC 603 (2012)
boards do not adjudicate disputed facts at contention admissibility stage; LBP-12-8, 75 NRC 539 (2012)
boards should not supply new information not otherwise present in the adjudicatory record in order to cure deficiencies in a petition; CLI-12-12, 75 NRC 603 (2012)
if petitioner's factual claims in support of its standing are contested, untenable, conjectural, or conclusory, a board need not uncritically accept such assertions, but may weigh those informational claims and exercise its judgment about whether standing has been satisfied; LBP-12-3, 75 NRC 164 (2012)
in assessing whether petitioner has demonstrated its standing, licensing boards are to construe petitions in favor of petitioners; LBP-12-3, 75 NRC 164 (2012)
interlocutory review of a board's dismissal of a new contention is granted only upon a showing of extraordinary circumstances; CLI-12-13, 75 NRC 681 (2012)
intervenor normally is not allowed to challenge a board's rejection of contentions where the board has granted a hearing on any contention; CLI-12-12, 75 NRC 603 (2012)
licensing boards must specify each basis relied upon for admitting a contention; CLI-12-5, 75 NRC 301 (2012)
NRC rules of practice provide for an automatic right to appeal a licensing board decision deciding standing and contention admissibility, on the question whether a petition to intervene and request for hearing should have been granted, or denied in its entirety; CLI-12-8, 75 NRC 393 (2012)
the Commission generally defers to board threshold rulings on contention admissibility, unless it finds an error of law or abuse of discretion; CLI-12-12, 75 NRC 603 (2012); CLI-12-14, 75 NRC 692 (2012); CLI-12-15, 75 NRC 704 (2012)
under 10 C.F.R. 2.311, appeal of a ruling on contentions is allowed only if the order wholly denies an intervention petition or a party other than the petitioner alleges that a petition for leave to intervene or a request for hearing should have been wholly denied; CLI-12-7, 75 NRC 379 (2012)
IRREPARABLE INJURY
if motions for stay of effectiveness demonstrate neither irreparable injury nor that reversal of the licensing board is a virtual certainty, then the remaining factors need not be considered; CLI-12-11, 75 NRC 523 (2012)
parties seeking a stay must show that they face imminent, irreparable harm that is both certain and great; CLI-12-11, 75 NRC 523 (2012)
the most important of the stay criteria is irreparable injury; CLI-12-11, 75 NRC 523 (2012)
to qualify as irreparable harm justifying a stay, the asserted harm must be related to the underlying claim; CLI-12-11, 75 NRC 523 (2012)
without a showing of irreparable injury, petitioners seeking a stay of effectiveness must make an overwhelming showing of likely success on the merits; CLI-12-11, 75 NRC 523 (2012)
LICENSE AMENDMENTS
licenses may be amended to add appropriate conditions, depending on whether the conditions are within the scope of the certified design; CLI-12-9, 75 NRC 421 (2012)
See also Materials License Amendment Applications; Materials License Amendment Proceedings; Materials License Amendments
LICENSE APPLICATIONS
although environmental contentions ultimately challenge NRC's compliance with the National Environmental Policy Act, applicant may advocate for a particular challenged position set forth in the environmental impact statement; LBP-12-5, 75 NRC 227 (2012)

SUBJECT INDEX

See also Combined License Application; License Renewal Applications; Materials License Amendment Applications

LICENSE CONDITIONS

even if licensee chooses to satisfy a license condition by incorporating the condition into its inservice testing program, it still must comply with 10 C.F.R. 50.55a(f)(4) throughout the life of the plant; CLI-12-9, 75 NRC 421 (2012)

if combined licenses issue without including license conditions, NRC regulations relevant to the finality of decisions could result in some additional administrative requirements to be satisfied in imposing new requirements on licensee; CLI-12-9, 75 NRC 421 (2012)

licenses may be amended to add appropriate conditions, depending on whether the conditions are within the scope of the certified design; CLI-12-9, 75 NRC 421 (2012)

licensing board imposes a license condition directing implementation of a surveillance program for explosively actuated valves prior to fuel load; CLI-12-2, 75 NRC 63 (2012)

NRC Staff verification of Fukushima-related license conditions should be a straightforward matter of applying a defined set of requirements; CLI-12-2, 75 NRC 63 (2012)

the Commission imposed a license condition requiring licensees to develop and implement strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event, including a simultaneous loss of all AC power and loss of normal access to the normal heat sink; CLI-12-9, 75 NRC 421 (2012)

to reach a finding of reasonable assurance that the public health and safety will be protected, the Commission imposed a license condition relating to a testing program for squib valves; CLI-12-9, 75 NRC 421 (2012)

where the combined license application references a certified design, elements of the licensing basis already have been established, and thus NRC would have to establish a regulatory basis for any change to the established design regardless of whether the COLs have issued; CLI-12-9, 75 NRC 421 (2012)

LICENSE EXPIRATION

specific licenses expire on the date stated in the license unless licensee has filed a request for renewal not less than 30 days prior to that date, and a license in timely renewal expires on the day on which NRC makes a final determination to deny the request, or, if the determination states an expiration date, then the stated expiration date; CLI-12-4, 75 NRC 154 (2012)

LICENSE RENEWAL

See Materials License Renewal; Operating License Renewal

LICENSE RENEWAL APPLICATIONS

there was no prejudice to intervenor where the board considered licensee's supplement to the application, which contained the updated aging management plan, because intervenor could have sought to amend its contention to respond to the supplement; CLI-12-10, 75 NRC 479 (2012)

LICENSE RENEWAL PROCEEDINGS

a brief stay of the close of a licensing proceeding was ordered to allow a state the opportunity to request status as an interested governmental entity; CLI-12-6, 75 NRC 352 (2012)

See also Operating License Renewal Proceedings

LICENSEE CHARACTER

a more subjective appraisal of declining property values might be permissible in the context of a licensing action associated with an applicant or facility shown to have engaged in a continuous and pervasive course of illegal conduct; LBP-12-3, 75 NRC 164 (2012)

LICENSEES

See Materials Licensees

LICENSING BOARD DECISIONS

adjudicatory records and board decisions and any Commission appellate decisions become, in effect, part of final environmental impact statements; CLI-12-1, 75 NRC 39 (2012); LBP-12-5, 75 NRC 227 (2012)

LICENSING BOARDS, AUTHORITY

boards are not free to reexamine fundamental policy judgments that are reflected in Commission regulations by creating exceptions to them in situations that will frequently recur; LBP-12-6, 75 NRC 256 (2012)

boards cannot grant summary disposition unless movant discharges its burden of demonstrating that it is entitled to a decision as a matter of law; LBP-12-4, 75 NRC 213 (2012)

boards have authority to adjudicate exemption issues, but NRC Staff serves as an initial reviewer of exemption requests; LBP-12-6, 75 NRC 256 (2012)
boards lack authority to supervise NRC Staff's review; CLI-12-4, 75 NRC 154 (2012)
boards should not supply new information not otherwise present in the adjudicatory record in order to cure deficiencies in a petition; CLI-12-12, 75 NRC 603 (2012)
boards will not consider exemption requests that were not made to the NRC Staff in the first instance; LBP-12-6, 75 NRC 256 (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-12-3, 75 NRC 164 (2012)
it is the role of the Commission to review licensing board decisions, and not the role of licensing boards to review and to reconsider the wisdom of the Commission's regulations; LBP-12-6, 75 NRC 256 (2012)
LICENSING BOARDS, JURISDICTION
after a petition to review a final order has been filed with the Commission, the board no longer has jurisdiction to consider a motion to reopen and the motion is properly filed with the Commission; CLI-12-14, 75 NRC 692 (2012)
generally, once there has been an appeal or petition to review a Board order, jurisdiction passes to the Commission; CLI-12-14, 75 NRC 692 (2012)
it is not the province of NRC and thus the board to enforce another agency's regulations; LBP-12-12, 75 NRC 742 (2012)
section 2.318(a) does not purport to provide an exhaustive list of every situation where board jurisdiction lapses; CLI-12-14, 75 NRC 692 (2012)
when the period within which the Commission may direct that the record be certified to it for final decision expires, when the Commission renders a final decision, or when the presiding officer withdraws from the case, board jurisdiction terminates; CLI-12-14, 75 NRC 692 (2012)
LICENSING PROCEEDINGS
as long as license review is ongoing, the licensing proceeding is still in existence; CLI-12-14, 75 NRC 692 (2012)
rulemaking petitioner who is not a party to a licensing proceeding has no right under NRC rules to request a stay of that proceeding; CLI-12-6, 75 NRC 352 (2012)
See also Combined License Proceedings; License Renewal Proceedings; Materials License Amendment Proceedings; Operating License Proceedings
LIGHTING
licensing board, construing the petition in favor of petitioners, based its standing finding on potential harm from traffic-generated dust and light pollution; CLI-12-12, 75 NRC 603 (2012)
light pollution is a matter of concern as a proposed nuclear materials facility undergoes agency licensing review; LBP-12-3, 75 NRC 164 (2012)
LIMITED WORK AUTHORIZATION
in the area of impacts of combined licenses and limited work authorizations, NRC Staff, in its review of new and significant information, identified a change in impacts associated with terrestrial ecology; CLI-12-2, 75 NRC 63 (2012)
the Commission must determine whether NRC Staff review of a combined license application has been adequate to support the findings listed in 10 C.F.R. 52.97 and 51.107(a) for each of the licenses to be issued and in 10 C.F.R. 50.10 and 51.107(d) with respect to the limited work authorizations; CLI-12-2, 75 NRC 63 (2012)
LOSS OF LARGE AREAS
licensees must develop and implement guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities to address loss of large areas from fires or explosions that arise from a beyond-design-basis event; CLI-12-2, 75 NRC 63 (2012)
MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT
a direct consultation obligation is imposed on NRC if NRC determines that approval of a requested license renewal may adversely affect any essential fish habitat; LBP-12-10, 75 NRC 633 (2012)
consultation duty on essential fish habitats applies to license renewals; LBP-12-10, 75 NRC 633 (2012)

contention asserting that NRC's environmental review of the license renewal application has not met the requirements of the act fails to satisfy the requirements for reopening the record; LBP-12-10, 75 NRC 633 (2012)
essential fish habitat assessment must describe the action, its potential effects on EFH, and proposed mitigation activities, if any; LBP-12-10, 75 NRC 633 (2012)
for any federal action that may adversely affect essential fish habitats, federal agencies must provide the National Marine Fisheries Service with a written assessment of the effects of that action; LBP-12-10, 75 NRC 633 (2012)
goal of the act is to preserve commercial and recreational fishery resources through the protection of essential fish habitat; LBP-12-10, 75 NRC 633 (2012)
National Marine Fisheries Service will not recommend that state or federal agencies take actions beyond their statutory authority; LBP-12-10, 75 NRC 633 (2012)
the Secretary of the Interior may promulgate such regulations as may be necessary to carry out any other provision of this act; LBP-12-10, 75 NRC 633 (2012)
MANAGEMENT CHARACTER AND COMPETENCE
a more subjective appraisal of declining property values might be permissible in the context of a licensing action associated with an applicant or facility shown to have engaged in a continuous and pervasive course of illegal conduct; LBP-12-3, 75 NRC 164 (2012)
licensing boards may not assume that applicants will violate NRC regulations; LBP-12-3, 75 NRC 164 (2012)
past violations of NRC regulations would indicate a deficiency in an application only if they are directly germane to the licensing action, rather than being of simply historical interest; CLI-12-2, 75 NRC 63 (2012)
MANDATORY HEARINGS
because petitioners did not participate in the mandatory hearing, and were not parties to it, they may not challenge the mandatory hearing decision, as such, in court; CLI-12-11, 75 NRC 523 (2012)
Commission addresses the sufficiency of NRC Staff's review of a combined license application rather than a making a de novo review; CLI-12-2, 75 NRC 63 (2012); CLI-12-9, 75 NRC 421 (2012)
in a combined license proceeding, the Commission considers safety issues pursuant to Atomic Energy Act § 189a and environmental issues as required by National Environmental Policy Act § 102(2)(A), (C), and (E); CLI-12-2, 75 NRC 63 (2012); CLI-12-9, 75 NRC 421 (2012)
in addition to contested hearings on combined licenses, where interested members of the public have the right to participate and air their concerns, uncontested safety and environmental issues are considered in a mandatory hearing; CLI-12-11, 75 NRC 523 (2012)
mandatory hearings, which are required by section 189a of the Atomic Energy Act, do not involve public participation, regardless of whether a contested hearing with public participation has occurred; CLI-12-11, 75 NRC 523 (2012)
purpose of a mandatory hearing is to determine whether NRC Staff's review of the application has been adequate to support the required regulatory findings; CLI-12-11, 75 NRC 523 (2012)
the Commission examines whether the Staff's safety review of the combined license application under 10 C.F.R. 52.97(a)(1)(i)-(v) has been adequate to support its findings; CLI-12-9, 75 NRC 421 (2012)
the Commission must determine whether NRC Staff review of a combined license application has been adequate to support the findings listed in 10 C.F.R. 52.97 and 51.107(a) for each of the licenses to be issued and in 10 C.F.R. 50.10 and 51.107(d) with respect to the limited work authorizations; CLI-12-2, 75 NRC 63 (2012)
the Notice of Hearing for an uncontested combined license proceeding sets the parameters for the Commission's review; CLI-12-2, 75 NRC 63 (2012)
to satisfy requirements of NEPA for a combined license, the Commission independently considers the final balance among conflicting factors in the record; CLI-12-9, 75 NRC 421 (2012)
with respect to the environmental impacts of a combined license, the Commission determines whether the requirements of NEPA § 102(2)(A), (C), and (E), and 10 C.F.R. 51.107(a)(1)-(4) have been met; CLI-12-9, 75 NRC 421 (2012)
MATERIAL CONTROL AND ACCOUNTING
NRC Staff evaluated and approved exemption from regulatory requirements for special nuclear material control and accounting program description; CLI-12-2, 75 NRC 63 (2012)

SUBJECT INDEX

MATERIALITY
contentions must demonstrate that the issue raised is material to the findings NRC must make for the licensing action at issue; CLI-12-15, 75 NRC 704 (2012); LBP-12-13, 75 NRC 784 (2012)
petitioner fails to demonstrate that the issue of radiation dispersal due to site inundation is material to the findings the NRC must make to support approval of a combined license application; LBP-12-7, 75 NRC 503 (2012)
petitioner must demonstrate that the issue raised in a contention is within the scope of the proceeding and material to the findings NRC must make to support the action involved in the proceeding; LBP-12-3, 75 NRC 164 (2012)
speculation that NRC would consider other SAMAs than have been previously considered does not demonstrate that the issue raised is material to NRC's decision; LBP-12-1, 75 NRC 1 (2012)
MATERIALS LICENSE AMENDMENT APPLICATIONS
applicants environmental report is to discuss any irreversible and irretrievable commitments of resources that would be involved in the proposed action; LBP-12-3, 75 NRC 164 (2012)
MATERIALS LICENSE AMENDMENT PROCEEDINGS
if proximity-based standing cannot be demonstrated, then standing must be established according to traditional principles of redressability, injury, and causation; LBP-12-3, 75 NRC 164 (2012)
in lieu of the injury and causation showings for standing, petitioner has been able to establish promixity-plus by showing that the proposed licensing action involves a significant source of radiation that has an obvious potential for offsite consequences; LBP-12-3, 75 NRC 164 (2012)
NRC could consider adopting, at least for the initial construction/operation authorization of in situ recovery facilities, a standing regime by which persons living or having substantial contacts within a 50-mile radius of the facility are afforded standing; LBP-12-3, 75 NRC 164 (2012)
whether a petitioner could be affected by a materials licensing action must be determined on a case-by-case basis, taking into account petitioner's distance from the source, nature of the licensed activity, and significance of the radioactive source; LBP-12-3, 75 NRC 164 (2012)
MATERIALS LICENSE AMENDMENTS
source materials licensee must demonstrate that sufficient funds will be available to cover the cost of decommissioning its facility; LBP-12-6, 75 NRC 256 (2012)
MATERIALS LICENSE RENEWAL
if NRC Staff grants a renewed license before a hearing takes place, intervenor may seek a stay of Staff's action; CLI-12-4, 75 NRC 154 (2012)
specific licenses expire on the date stated in the license unless licensee has filed a request for renewal not less than 30 days prior to that date, and a license in timely renewal expires on the day on which NRC makes a final determination to deny the request, or, if the determination states an expiration date, then on the stated expiration date; CLI-12-4, 75 NRC 154 (2012)
MATERIALS LICENSEES
grounds for license denial exist if, prior to issuance of a license to possess and use source and byproduct materials for uranium milling, there is commencement of construction by an applicant; LBP-12-3, 75 NRC 164 (2012)
source materials licensees have numerous options for meeting their decommissioning funding obligations; LBP-12-6, 75 NRC 256 (2012)
MATERIALS LICENSES
See Byproduct Materials Licenses; Source Materials Licenses
MEMORANDUM OF UNDERSTANDING
NRC Staff's environmental review was conducted in cooperation with the U.S. Army Corps of Engineers, with NRC acting as lead agency and ACE as cooperating agency under a memorandum of understanding because applicants also needed permits from ACE to complete construction activities that may affect wetlands; CLI-12-9, 75 NRC 421 (2012)
MIGRATION TENET
boards may construe an admitted contention contesting the environmental report as a challenge to the subsequently issued draft or final environmental impact statement without the necessity for Intervenors to file a new or amended contention; LBP-12-12, 75 NRC 742 (2012)
challenges to only the draft environmental impact statement apply equally to the final environmental impact statement; LBP-12-5, 75 NRC 227 (2012)

SUBJECT INDEX

challenging the environmental report preserves petitioner's right to challenge the environmental impact statement at a later stage of the proceedings; LBP-12-8, 75 NRC 539 (2012)

the migration tenet applies only as long as the DEIS analysis or discussion at issue is essentially *in para materia* with the ER analysis or discussion that is the focus of the contention; LBP-12-12, 75 NRC 742 (2012)

the migration tenet 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; LBP-12-12, 75 NRC 742 (2012)

MONITORING

if applicant's enhanced monitoring program, which was the topic of a late-filed contention, was insufficient, it must have been insufficient beforehand too; CLI-12-10, 75 NRC 479 (2012)

MOOTNESS

resolution of a mooted contention requires no more than a finding by the presiding officer that the matter has become moot; LBP-12-5, 75 NRC 227 (2012)

where a contention alleges omission of particular information or an issue from an application, and the information is later supplied by the applicant or considered by NRC Staff in a draft environmental impact statement, the contention is moot, and intervenors must timely file a new or amended contention to raise specific challenges regarding the new information; LBP-12-5, 75 NRC 227 (2012)

MOTIONS FOR RECONSIDERATION

requests to stay effectiveness of future licensing action pending judicial appeal are more appropriately styled motions to reconsider and motions to hold in abeyance; CLI-12-11, 75 NRC 523 (2012)

when a petition for review is filed with the Commission at the same time as a motion for reconsideration is filed with the board, the Commission will delay considering the petition for review until after the board has ruled; CLI-12-5, 75 NRC 301 (2012)

MOTIONS TO DISMISS

courts may treat motions to dismiss for failure to state a claim upon which relief can be granted and motions for judgment on the pleadings as motions for summary judgment under Rule 56 if matters outside the pleadings are presented to and not excluded by the court; LBP-12-2, 75 NRC 159 (2012)

MOTIONS TO REOPEN

a reply affidavit that did not accompany the motion to reopen will not be considered in determining whether petitioners have satisfied 10 C.F.R. 2.326(b); LBP-12-10, 75 NRC 633 (2012)

affidavits accompanying the motion must set forth the factual and/or technical bases for the movant's claim that the criteria of paragraph (a) of this section have been satisfied; LBP-12-10, 75 NRC 633 (2012)

affidavits setting forth factual and/or technical bases for the reopening criteria must address each criterion separately and provide a specific explanation of why it has been met; CLI-12-10, 75 NRC 479 (2012)

affidavits supporting a motion to reopen must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raise; CLI-12-6, 75 NRC 352 (2012)

after a petition to review a final order has been filed with the Commission, the board no longer has jurisdiction to consider a motion to reopen and the motion is properly filed with the Commission; CLI-12-14, 75 NRC 692 (2012)

after a record has closed, finality attaches to the hearing process, and after that point, only timely, significant issues will be considered; CLI-12-3, 75 NRC 132 (2012)

although the quality of evidence presented for reopening must be at least of a level sufficient to withstand a motion for summary disposition, more is required; CLI-12-10, 75 NRC 479 (2012)

an exceptionally grave issue is one that raises a sufficiently grave threat to public safety; LBP-12-1, 75 NRC 1 (2012); LBP-12-11, 75 NRC 731 (2012)

bare assertions are insufficient to demonstrate a genuine dispute on a material issue of law or fact under general contention admissibility requirements in section 2.309(f)(1)(vi), let alone a motion to reopen, which sets a higher evidentiary standard; CLI-12-3, 75 NRC 132 (2012)

because petitioner' claim of likelihood of success on the merits is conclusory, with no attempt to show how they would be likely to prevail, the motion to reopen falls far short of meeting the requirements of section 2.326(a)(3); LBP-12-10, 75 NRC 633 (2012)

because the motion to reopen and contention are based on information that is neither new nor materially different from information that was previously available, the motion and contention are untimely; LBP-12-11, 75 NRC 731 (2012)
boards are in a better position than the Commission to consider any expert affidavit or affidavits that petitioner submits to support its motion to reopen; CLI-12-14, 75 NRC 692 (2012)
boards should not have to hunt for information that the agency's procedural rules require be explicitly identified and fully explained; CLI-12-3, 75 NRC 132 (2012); LBP-12-10, 75 NRC 633 (2012)
challenge to the inputs and methodology in the SAMA analysis is impermissibly late; CLI-12-10, 75 NRC 479 (2012)
contention asserting that the NRC's environmental review of the license renewal application has not met the requirements of the Endangered Species Act and the Magnuson-Stevens Fishery Conservation and Management Act fails to satisfy the requirements for reopening the record; LBP-12-10, 75 NRC 633 (2012)
denial or conditioning of a license would obviously be a materially different result; CLI-12-14, 75 NRC 692 (2012)
each of the criteria for reopening a record must be separately addressed in an affidavit, with a specific explanation of why it has been met; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012)
evidence contained in affidavits supporting a motion to reopen must meet the admissibility standards, i.e., be relevant, material, and reliable; CLI-12-3, 75 NRC 132 (2012)
evidence contained in affidavits supporting a motion to reopen must meet the admissibility standards of 10 C.F.R. 2.337; CLI-12-6, 75 NRC 352 (2012)
evidence in affidavits supporting a motion to reopen must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised; CLI-12-3, 75 NRC 132 (2012)
exceptionally grave issues may be considered in the discretion of the presiding officer even if untimely presented; LBP-12-1, 75 NRC 1 (2012)
for a motion to reopen to be granted and a 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 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; LBP-12-11, 75 NRC 731 (2012)
for an environmental issue to be "significant" for the purposes of reopening a record, new information must paint a seriously different picture of the environmental landscape; LBP-12-1, 75 NRC 1 (2012)
Fukushima-related motions have been denied as premature; CLI-12-2, 75 NRC 63 (2012); CLI-12-7, 75 NRC 379 (2012)
in affidavits supporting motions to reopen, each of the criteria must be separately addressed, with a specific explanation of why it has been met; LBP-12-10, 75 NRC 633 (2012)
intervenors seeking a new hearing on a new contention after the board has closed the evidentiary record must move to reopen the evidentiary record and meet a deliberately higher threshold standard than that for an ordinary late-filed contention; CLI-12-15, 75 NRC 704 (2012)
intervenors seeking to have new evidence admitted after a licensing board has closed the evidentiary record must demonstrate sufficient grounds for reopening the record; CLI-12-10, 75 NRC 479 (2012)
issues not previously litigated must satisfy the balancing test of 10 C.F.R. 2.309(c) in addition to the reopening standards; CLI-12-3, 75 NRC 132 (2012)
level of support required to sustain a motion to reopen is greater than that required for a contention under the general admissibility requirements of 10 C.F.R. 2.309(f)(1); CLI-12-6, 75 NRC 352 (2012); CLI-12-7, 75 NRC 379 (2012)
litigants seeking to reopen a record must comply fully with section 2.326(b); LBP-12-10, 75 NRC 633 (2012)
motions could be rejected solely on the basis of the appellants' failure to address the reopening standards in the supporting affidavit; LBP-12-10, 75 NRC 633 (2012)
motions must be accompanied by affidavits that set forth the factual and/or technical bases for the movant's claim that the three criteria for reopening have been satisfied; CLI-12-3, 75 NRC 132 (2012)
motions must be supported by an affidavit written by an individual with knowledge of the facts alleged, and the affidavit must explain why each of the criteria has been met; CLI-12-15, 75 NRC 704 (2012)

motions must be timely (or, if untimely, raise an exceptionally grave matter), address a significant safety or environmental issue, and demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially; CLI-12-6, 75 NRC 352 (2012); CLI-12-15, 75 NRC 704 (2012); LBP-12-1, 75 NRC 1 (2012)
motions relating to a contention not previously in controversy among the parties must also satisfy the requirements for nontimely contentions in 10 C.F.R. 2.309(c) and the admissibility requirements of 10 C.F.R. 2.309(f)(1); LBP-12-10, 75 NRC 633 (2012)
motions that relate to a contention not previously in controversy among the parties must also satisfy the requirements for nontimely contentions in 10 C.F.R. 2.309(c); LBP-12-1, 75 NRC 1 (2012)
motions to reopen may be granted, even if untimely presented, when the motion presents an exceptionally grave issue; LBP-12-11, 75 NRC 731 (2012)
motions to reopen must be accompanied by a supporting affidavit; CLI-12-14, 75 NRC 692 (2012)
movant has the burden to present information in a manner that complies with section 2.326(b); LBP-12-10, 75 NRC 633 (2012)
movant must demonstrate that a materially different result would be likely had the newly proffered evidence been considered initially; CLI-12-10, 75 NRC 479 (2012)
new contentions must paint a seriously different picture of the environmental landscape that would require supplementation of an environmental impact statement; LBP-12-10, 75 NRC 633 (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-12-10, 75 NRC 479 (2012)
once a proceeding has closed, the mechanism to raise a new issue no longer would be a contention accompanied by a motion to reopen, but rather a request for action under 10 C.F.R. 2.206 or a petition for rulemaking under 10 C.F.R. 2.802; CLI-12-3, 75 NRC 132 (2012)
proponent must show that the motion is timely, addresses a significant safety or environmental issue, and a materially different result would be or would have been likely had the newly proffered evidence been considered initially; CLI-12-3, 75 NRC 132 (2012)
proponent necessarily faces a heavy burden; CLI-12-3, 75 NRC 132 (2012)
reopening standards expressly contemplate contentions that raise issues not previously litigated; CLI-12-3, 75 NRC 132 (2012)
reopening will only be allowed where proponent presents material, probative evidence that either could not have been discovered before or could have been discovered but is so grave that, in the judgment of the presiding officer, it must be considered anyway; CLI-12-10, 75 NRC 479 (2012)
support required for a motion to reopen is greater than that required for a contention under the general admissibility requirements of 10 C.F.R. 2.309(f)(1); CLI-12-3, 75 NRC 132 (2012)
supporting evidence must be sufficiently compelling to suggest a likelihood of materially affecting the ultimate results in the proceeding; CLI-12-10, 75 NRC 479 (2012)
the "materially different result" requirement of section 2.326(a)(3) is analyzed using the Commission's test of whether it has been shown that a motion for summary disposition could be defeated; LBP-12-1, 75 NRC 1 (2012)
the proper inquiry under 10 C.F.R. 2.326(a)(3) goes to the likelihood that a different result will be reached if the information is considered; CLI-12-10, 75 NRC 479 (2012)
the Secretary of the Commission refers motions to reopen to the Atomic Safety and Licensing Board Panel pursuant to her authority; CLI-12-14, 75 NRC 692 (2012)
the standard for admitting a new contention after the record is closed is higher than for an ordinary late-filed contention; CLI-12-10, 75 NRC 479 (2012)
to accept the argument that a reopening standard may never be applied in situations where a petitioner seeks to add previously unlitigated material would effectively render the regulation meaningless; CLI-12-3, 75 NRC 132 (2012)
to have a new contention admitted after the contested proceeding has terminated, petitioner must meet three criteria; CLI-12-14, 75 NRC 692 (2012)
untimely motion to reopen the proceeding and admit a new contention concerning licensee's impacts on the roseate tern, a federally listed endangered species, is denied; LBP-12-11, 75 NRC 731 (2012)

where a motion to reopen is untimely, the section 2.326(a)(1) "exceptionally grave" test supplants the section 2.326(a)(2) "significant safety or environmental issue" test; LBP-12-1, 75 NRC 1 (2012); LBP-12-10, 75 NRC 633 (2012)
where the proceeding remained open during the pendency of a remand, but the record remained closed, any contentions raising genuinely new issues would have to be accompanied by a motion to reopen; CLI-12-3, 75 NRC 132 (2012)
See also Reopening a Record
NATIONAL ENVIRONMENTAL POLICY ACT
a worst-case analysis is not required; LBP-12-5, 75 NRC 227 (2012)
agencies are encouraged to incorporate consultation procedures on endangered/threatened species and essential fish habitat into their NEPA review; LBP-12-10, 75 NRC 633 (2012)
agencies are not required to analyze impacts of alternatives that are speculative, remote, impractical, or unviable; CLI-12-5, 75 NRC 301 (2012)
agencies are not required to wait until inchoate information matures into something that later might affect its review; CLI-12-7, 75 NRC 379 (2012)
agencies are required to study, develop, and describe appropriate alternatives; CLI-12-9, 75 NRC 421 (2012)
agencies are required to take a hard look at the environmental consequences of an action before proceeding; LBP-12-10, 75 NRC 633 (2012)
agencies are required to use a systematic, interdisciplinary approach that will ensure the integrated use of the natural and social sciences and the environmental design arts in decisionmaking that may impact the environment; CLI-12-9, 75 NRC 421 (2012)
agencies may select their own methodology as long as that methodology is reasonable; CLI-12-6, 75 NRC 352 (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-12-5, 75 NRC 227 (2012); LBP-12-8, 75 NRC 539 (2012)
agencies need only address reasonably foreseeable impacts, not those that are remote and speculative or inconsequentially small; LBP-12-5, 75 NRC 227 (2012)
although NEPA does not direct any particular substantive result, all environmental consequences of the proposed action, including connected actions, must be fully evaluated in the FEIS; LBP-12-12, 75 NRC 742 (2012)
although there will always be more data that could be gathered, agencies must have some discretion to draw the line and move forward with decisionmaking; LBP-12-5, 75 NRC 227 (2012)
an application-specific NEPA review represents a snapshot in time, and although NEPA requires that NRC conduct its environmental review with the best information available at that time, it does not require that NRC wait until inchoate information matures into something that later might affect its review; LBP-12-10, 75 NRC 633 (2012)
because NRC does not know today the full implications of the Fukushima events for U.S. facilities, any generic NEPA duty, if one is appropriate at all, does not accrue now; LBP-12-8, 75 NRC 539 (2012)
before implementing any major federal action significantly affecting the quality of the human environment, NRC must prepare an environmental impact statement that describes the action, its effects, and alternatives to the proposed action; LBP-12-10, 75 NRC 633 (2012)
boards are required to consider alternatives as they exist and are likely to exist; CLI-12-5, 75 NRC 301 (2012)
careful consideration of severe accident mitigation design alternatives is required under NEPA, and NRC's failure to consider them is a violation of NEPA; LBP-12-8, 75 NRC 539 (2012)
certainty or precision is not required in environmental documents, but rather an estimate of anticipated (not unduly speculative) impacts; LBP-12-9, 75 NRC 615 (2012)
compliance with the act is ultimately the responsibility of NRC; CLI-12-13, 75 NRC 681 (2012)
consideration of reasonable alternatives is required for operating license renewal; CLI-12-8, 75 NRC 393 (2012)
consideration of remote and speculative impacts in an environmental impact statement is not required; LBP-12-5, 75 NRC 227 (2012)

SUBJECT INDEX

contention asserting that NEPA requires a groundwater baseline characterization for an in situ recovery site is admissible; LBP-12-3, 75 NRC 164 (2012)
duty to supplement the final environmental impact statement is mandatory, is not avoidable through findings of compliance with the agency's safety regulations, and is waivable only where the consequences are remote and highly improbable; CLI-12-11, 75 NRC 523 (2012)
environmental documents need consider only those environmental impacts that are reasonably foreseeable, not those that are remote and speculative possibilities; LBP-12-9, 75 NRC 615 (2012)
environmental impact statements are not intended to be a research documents, reflecting the frontiers of scientific methodology, studies, and data; CLI-12-5, 75 NRC 301 (2012); LBP-12-5, 75 NRC 227 (2012)
environmental reports need only discuss reasonably foreseeable environmental impacts of a proposed action; LBP-12-7, 75 NRC 503 (2012)
events at Fukushima, and the ensuing NRC response, are not, at this point, to be considered new and significant information under NEPA; LBP-12-8, 75 NRC 539 (2012)
federal agencies have a continuing obligation to supplement an existing environmental impact statement if the proposed action has not been taken, in response to significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; CLI-12-7, 75 NRC 379 (2012)
for an alternative energy source to be considered reasonable for an operating license renewal proceeding, the alternative should be commercially viable and technically capable of producing an equal amount of baseload power now or in the near future, but no later than the expiration date of the current operating license; CLI-12-8, 75 NRC 393 (2012)
for environmental contentions, the burden of proof falls on NRC Staff because NRC, not the applicant, bears the ultimate responsibility for complying with NEPA's dictates; LBP-12-5, 75 NRC 227 (2012)
for new information to be sufficiently significant to merit the preparation of a supplemental final environmental impact statement, the information must paint a seriously different picture of the environmental landscape; CLI-12-11, 75 NRC 523 (2012)
for siting alternatives, an agency's duty under NEPA is to study all alternatives that appear reasonable and appropriate for study at the time of drafting the environmental impact statement; CLI-12-5, 75 NRC 301 (2012)
general statements by an agency about possible effects and some risk do not constitute the hard look required by NEPA absent a justification of why more definitive information could not be provided; LBP-12-5, 75 NRC 227 (2012)
if new and significant information on Fukushima events comes to light that requires consideration as part of the ongoing preparation of application-specific NEPA documents, NRC will assess the significance of that information as appropriate; CLI-12-7, 75 NRC 379 (2012)
impacts that are remote and speculative may be excluded from consideration; LBP-12-1, 75 NRC 1 (2012)
issuance of a renewed operating license for a nuclear power reactor is a major federal action under NEPA; LBP-12-8, 75 NRC 539 (2012)
it is not necessary that every alternative device and thought conceivable by the mind of man be considered, but a hard look must be taken at the environmental consequences; LBP-12-1, 75 NRC 1 (2012)
license renewal applicant's environmental report must address environmental impacts of the proposed action and compare them to impacts of alternative actions; CLI-12-5, 75 NRC 301 (2012)
"major construction activity" is defined as a construction project, or other undertaking having similar physical impacts, that is a major federal action significantly affecting the quality of the human environment as referred to in NEPA; LBP-12-10, 75 NRC 633 (2012)
mitigation measures assessed in the SAMA analysis under NEPA are supplemental to those already required under NRC safety regulations for reasonable assurance of safe operation and likewise to those NRC may order or require under ongoing regulatory oversight over reactor safety, pursuant to the Atomic Energy Act; CLI-12-15, 75 NRC 704 (2012)
neither NRC nor applicant need consider any alternative that does not bring about the ends of the proposed action; CLI-12-5, 75 NRC 301 (2012)

NEPA does not mandate substantive results but, rather, imposes procedural restraints on agencies, requiring them to take a hard look at the environmental impacts of a proposed action and reasonable alternatives to that action; LBP-12-5, 75 NRC 227 (2012)
NEPA has a dual purpose of ensuring that federal officials fully take into account the environmental consequences of a federal action before reaching major decisions, and informing the public, Congress, and other agencies of those consequence; LBP-12-1, 75 NRC 1 (2012)
NEPA is not intended to encompass every possible impact, and does not encompass potential losses due to individuals' perception of a risk; CLI-12-15, 75 NRC 704 (2012)
NEPA requires consideration of reasonable alternatives, not all conceivable ones; CLI-12-5, 75 NRC 301 (2012)
NEPA's "hard look" is tempered by a rule of reason; LBP-12-5, 75 NRC 227 (2012)
NRC is neither required nor authorized to order implementation of mitigation measures analyzed in an environmental analysis; CLI-12-10, 75 NRC 479 (2012)
NRC is not required to wait until inchoate information matures into something that might affect its review; CLI-12-15, 75 NRC 704 (2012)
NRC is required to assess the relationship between local short-term uses of the environment and the long-term productivity of the environment; CLI-12-2, 75 NRC 63 (2012); CLI-12-9, 75 NRC 421 (2012)
NRC is required to describe the irreversible and irretrievable commitments of resources associated with the proposed action; CLI-12-9, 75 NRC 421 (2012)
NRC is required to describe unavoidable adverse environmental impacts; CLI-12-9, 75 NRC 421 (2012)
NRC is required to take a hard look at alternatives, including severe accident mitigation alternatives, and to provide a rational basis for rejecting alternatives that are cost-effective; LBP-12-8, 75 NRC 539 (2012)
NRC must adequately consider impacts to visual and aesthetic resources in its NEPA review; LBP-12-3, 75 NRC 164 (2012)
NRC must conduct its environmental review with the best information available at that time; CLI-12-6, 75 NRC 352 (2012); CLI-12-7, 75 NRC 379 (2012)
NRC must consider reasonably foreseeable environmental impacts of the proposed licensing action, but need not consider remote and speculative impacts, particularly if the impact cannot easily be estimated at the current time, and an appropriate future opportunity will exist for the agency to analyze the impact; LBP-12-3, 75 NRC 164 (2012)
NRC must use a systematic, interdisciplinary approach that will ensure the integrated use of the natural and social sciences and the environmental design arts in decisionmaking that may impact the environment; CLI-12-2, 75 NRC 63 (2012)
NRC Staff is obliged to undertake a full and independent evaluation of the environmental impacts of applicant's proposed action; LBP-12-9, 75 NRC 615 (2012)
NRC Staff is required to conduct its environmental review with the best information available when the review is undertaken; CLI-12-15, 75 NRC 704 (2012); LBP-12-8, 75 NRC 539 (2012)
NRC Staff is required to reevaluate any prior analysis if it is presented with any new and significant information that would cast doubt on a previous environmental analysis; LBP-12-8, 75 NRC 539 (2012)
NRC Staff's environmental impact statement need only discuss those alternatives that will bring about the ends of the proposed action; CLI-12-5, 75 NRC 301 (2012)
NRC will supplement an EIS if there are substantial changes in the proposed action relevant to environmental concerns or new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; CLI-12-7, 75 NRC 379 (2012)
only reasonable forecasting of need for power is required in an environmental impact statement; LBP-12-5, 75 NRC 227 (2012)
preparation of the biological assessment may be consolidated with interagency cooperation procedures required by other statutes, such as NEPA; LBP-12-11, 75 NRC 731 (2012)
psychological fears or stigma effects are not cognizable NEPA claims; CLI-12-5, 75 NRC 301 (2012)
quibbling over details of an economic analysis would effectively stand NEPA on its head by asking that the license be rejected not due to environmental costs, but because the economic benefits are not as great as estimated; LBP-12-5, 75 NRC 227 (2012)

request for analysis of whether Fukushima events constitute new and significant information under NEPA is premature; LBP-12-1, 75 NRC 1 (2012)
severe accident mitigation alternatives analyses need not reflect the most conservative, or worst-case, analysis; CLI-12-10, 75 NRC 479 (2012)
severe accident mitigation alternatives analysis is neither a worst-case nor a best-case impacts analysis; CLI-12-1, 75 NRC 39 (2012)
standing claims based on economic impacts are only cognizable in NRC proceedings with regard to NEPA-based concerns; LBP-12-3, 75 NRC 164 (2012)
taking a hard look at possible environmental effects and risk fosters both informed decisionmaking and informed public participation and thus ensures that the agency does not act upon incomplete information, only to regret its decision after it is too late to correct it; LBP-12-5, 75 NRC 227 (2012)
the act is intended to require federal agencies to consider the environmental consequences of their actions and to foster informed public participation in the decision making process; LBP-12-12, 75 NRC 742 (2012)
the act itself does not mandate particular results, but simply prescribes the necessary process; LBP-12-12, 75 NRC 742 (2012)
the alternatives analysis is the heart of the environmental impact statement; CLI-12-9, 75 NRC 421 (2012)
the Commission declined to conduct a generic NEPA analysis on the effects of Fukushima-related events; CLI-12-7, 75 NRC 379 (2012)
the rule of reason is inherent in NEPA and its implementing regulations; LBP-12-5, 75 NRC 227 (2012)
there is no requirement to use the best scientific methodology, and NEPA should be construed in the light of reason if it is not to demand virtually infinite study and resources; LBP-12-5, 75 NRC 227 (2012)
to constitute a basis for supplementing an EIS, the new information must present a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; CLI-12-7, 75 NRC 379 (2012)
to require worst-case analyses can easily lead to limitless NEPA analyses because it is always possible to introduce yet another variable to a hypothetical scenario to conjure up a worse worst case; CLI-12-1, 75 NRC 39 (2012)
to satisfy requirements of NEPA for a combined license, the Commission independently considers the final balance among conflicting factors in the record; CLI-12-9, 75 NRC 421 (2012)
under the rule of reason governing NEPA, the concept of alternatives must be bounded by some notion of feasibility; CLI-12-15, 75 NRC 704 (2012)
when the purpose is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved; CLI-12-5, 75 NRC 301 (2012)
NATIVE AMERICANS
although it might be fatal for standing purposes if an Indian tribe were seeking to have intervenors represent their interests in the proceeding, intervenors' lack of authority to represent them is not a bar to intervenors raising the tribe's contention; LBP-12-12, 75 NRC 742 (2012)
First Nations in Canada must receive invitations to participate in the environmental impact statement scoping process when there are transboundary environmental impacts from a project; LBP-12-12, 75 NRC 742 (2012)
NEED FOR POWER
assessments must be only at a level of detail sufficient to reasonably characterize the costs and benefits associated with proposed licensing actions; LBP-12-5, 75 NRC 227 (2012)
because the assessment necessarily entails forecasting power demands in light of substantial uncertainty and the duty of providing adequate and reliable service to the public, need-for-power assessments are properly conservative; LBP-12-5, 75 NRC 227 (2012)
forecasts need not precisely identify future market conditions and energy demand, or develop detailed analyses of system generating assets, costs of production, capital replacement ratios, and the like in order to establish with certainty that the construction and operation of a nuclear power plant is the most economical alternative for generation of power; LBP-12-5, 75 NRC 227 (2012)
given the legal responsibility imposed upon a public utility to provide at all times adequate, reliable service, and the severe consequences that may attend upon a failure to discharge that responsibility, the

most that can be required is that need-for-power forecasts be reasonable in the light of what is ascertainable at the time made; LBP-12-5, 75 NRC 227 (2012)
if demand for power turns out to be less than predicted, it cannot be argued that the cost of the unneeded generating capacity may turn up in customers' electric bills because the surplus can be profitably marketed to other systems or the new capacity can replace older, less efficient units; LBP-12-5, 75 NRC 227 (2012)
NEPA only requires reasonable forecasting; LBP-12-5, 75 NRC 227 (2012)
NO-ACTION ALTERNATIVE
applicant must provide a discussion of the no-action alternative in its environmental report; LBP-12-8, 75 NRC 539 (2012)
discussion of the no-action alternative need only include feasible, nonspeculative alternatives; LBP-12-8, 75 NRC 539 (2012)
environmental impact statements must consider the alternative of no action; LBP-12-8, 75 NRC 539 (2012)
the extent of the no-action discussion is governed by a rule of reason; LBP-12-8, 75 NRC 539 (2012)
there need not be much discussion in the environmental documents because it is most simply viewed as maintaining the status quo; LBP-12-8, 75 NRC 539 (2012)
NONPARTIES
petitioner may act to vindicate its own rights, but it has no standing to assert the rights of others; CLI-12-6, 75 NRC 352 (2012)
rulemaking petitioner who is not a party to a licensing proceeding has no right under NRC rules to request a stay of that proceeding; CLI-12-6, 75 NRC 352 (2012)
NOTICE
an information notice merely summarizes information that has long been publicly available and does not provide new information that would constitute good cause for the late filing; CLI-12-10, 75 NRC 479 (2012)
NOTICE OF HEARING
all proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-12-3, 75 NRC 164 (2012)
for an uncontested combined license proceeding, the Notice of Hearing sets the parameters for the Commission's review; CLI-12-2, 75 NRC 63 (2012)
notice of combined license applications must be published in the *Federal Register* for 4 consecutive weeks; CLI-12-2, 75 NRC 63 (2012)
NOTIFICATION
when preparation of the essential fish habitat assessment is consolidated with other environmental review procedures, the National Marine Fisheries Service is to have timely notification of actions that may adversely affect EFH, and whenever possible, at least 60 days' notice prior to a final decision on an action; LBP-12-10, 75 NRC 633 (2012)
NRC GUIDANCE DOCUMENTS
assertion by applicant that its aging management plan is consistent with the GALL Report does not immunize it against a challenge to the AMP; CLI-12-5, 75 NRC 301 (2012)
if NRC concludes that an aging management program is consistent with the GALL Report, then it accepts applicant's commitment to implement that AMP, finding the commitment itself to be an adequate demonstration of reasonable assurance under section 54.29(a); CLI-12-5, 75 NRC 301 (2012); CLI-12-10, 75 NRC 479 (2012)
NRC is not bound by guidance documents, which do not carry the force of regulations and do not impose legal requirements on licensees; CLI-12-5, 75 NRC 301 (2012)
NRC-endorsed guidance on severe accident mitigation alternatives analysis methodology specifies use of the mean annual offsite dose and economic impact; CLI-12-1, 75 NRC 39 (2012)
sufficiency of an aging management program that meets the GALL Report's recommendations can be challenged if the contention admissibility requirements are otherwise met; CLI-12-10, 75 NRC 479 (2012)
the GALL Report and the Standard Review Plan are guidance documents, and therefore not binding, but they do carry special weight; CLI-12-5, 75 NRC 301 (2012)

SUBJECT INDEX

NRC INSPECTION
actions taken to assess the integrity of the North Anna plant following a seismic event that exceeded the operating basis and design basis earthquake are described; DD-12-1, 75 NRC 573 (2012)
written policies, implementing procedures, site-specific analysis, and other supporting technical information developed to implement cyber security plans are subject to periodic inspection by NRC Staff; CLI-12-2, 75 NRC 63 (2012)
NRC STAFF
every 2 years, licensee stages full-participation emergency exercises, which are evaluated by both FEMA and NRC; CLI-12-9, 75 NRC 421 (2012)
for NEPA contentions, the burden of proof falls on NRC Staff because NRC, not the applicant, bears the ultimate responsibility for complying with NEPA's dictates; LBP-12-5, 75 NRC 227 (2012)
NRC STAFF REVIEW
absent compelling circumstances, Staff is expected to accord sufficient priority and devote sufficient resources to meeting its estimated safety and environmental review schedules; CLI-12-4, 75 NRC 154 (2012)
agencies are encouraged to incorporate consultation procedures on endangered/threatened species and essential fish habitat into their NEPA review; LBP-12-10, 75 NRC 633 (2012)
although NRC must respond to the significant views of other agencies, particularly if they are critical of NRC's analysis, that duty applies at the final environmental impact statement stage after the draft EIS has been circulated to interested federal and state agencies for their review and comment; LBP-12-12, 75 NRC 742 (2012)
basis of Staff's reasonable assurance finding on combined license applicant's squib valve inspection program for which the current version of the ASME code is insufficient is explained; CLI-12-2, 75 NRC 63 (2012)
careful consideration of severe accident mitigation design alternatives is required under NEPA, and NRC's failure to consider them is a violation of NEPA; LBP-12-8, 75 NRC 539 (2012)
Commission addresses the sufficiency of Staff's review of a combined license application rather than a making a de novo review; CLI-12-2, 75 NRC 63 (2012)
compliance with the National Environmental Policy Act is ultimately the responsibility of the NRC; CLI-12-13, 75 NRC 681 (2012)
contention asserting that the NRC's environmental review of the license renewal application has not met the requirements of the Endangered Species Act and the Magnuson-Stevens Fishery Conservation and Management Act fails to satisfy the requirements for reopening the record; LBP-12-10, 75 NRC 633 (2012)
determination of possible effects on an endangered species is ultimately the acting agency's responsibility; LBP-12-10, 75 NRC 633 (2012)
environmental impact statements must consider the alternative of no action; LBP-12-8, 75 NRC 539 (2012)
for each license renewal application, NRC Staff must prepare a plant-specific supplement to the generic environmental impact statement that adopts applicable generic impact findings from the GEIS and analyzes site-specific impacts; LBP-12-8, 75 NRC 539 (2012)
for power plant license renewals, NRC Staff prepares a supplement to its generic environmental impact statement; LBP-12-10, 75 NRC 633 (2012)
in the area of impacts of combined licenses and limited work authorizations, Staff, in its review of new and significant information, identified a change in impacts associated with terrestrial ecology; CLI-12-2, 75 NRC 63 (2012)
licensing boards have authority to adjudicate exemption issues, but Staff serves as an initial reviewer of exemption requests; LBP-12-6, 75 NRC 256 (2012)
licensing boards lack authority to supervise the Staff's review; CLI-12-4, 75 NRC 154 (2012)
NEPA does not require that the agency wait until inchoate information matures into something that later might affect its review; CLI-12-6, 75 NRC 352 (2012); CLI-12-7, 75 NRC 379 (2012)
NEPA obligates NRC Staff to undertake a full and independent evaluation of the environmental impacts of applicant's proposed action; LBP-12-9, 75 NRC 615 (2012)

NEPA requires that NRC conduct its environmental review with the best information available at that time; CLI-12-6, 75 NRC 352 (2012); CLI-12-7, 75 NRC 379 (2012); CLI-12-15, 75 NRC 704 (2012); LBP-12-8, 75 NRC 539 (2012)
NRC is not required to wait until inchoate information matures into something that might affect its review; CLI-12-15, 75 NRC 704 (2012)
NRC Staff's responsibilities, parallel to the adjudicatory process, include seeking additional information from applicant after docketing of a pending license application; LBP-12-9, 75 NRC 615 (2012)
purpose of a mandatory hearing is to determine whether NRC Staff's review of the application has been adequate to support the required regulatory findings; CLI-12-11, 75 NRC 523 (2012)
significant delays in Staff's review potentially deprive an Indian tribe of its hearing rights; CLI-12-4, 75 NRC 154 (2012)
Staff considers FEMA's findings on emergency plans in making its necessary finding of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency; CLI-12-9, 75 NRC 421 (2012)
Staff evaluated and approved exemption from regulatory requirements for special nuclear material control and accounting program description; CLI-12-2, 75 NRC 63 (2012)
Staff must make a recommendation of the environmental acceptability of the license renewal action, and the Commission shall determine whether the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable; CLI-12-8, 75 NRC 393 (2012)
Staff relies heavily on applicant's environmental report in preparing its environmental impact statement; LBP-12-5, 75 NRC 227 (2012)
Staff's environmental review was conducted in cooperation with the U.S. Army Corps of Engineers, with NRC acting as lead agency and ACE as cooperating agency under a memorandum of understanding, because applicants also needed permits from ACE to complete construction activities that may affect wetlands; CLI-12-9, 75 NRC 421 (2012)
Staff's steps in the geographic and demographic review in the final safety evaluation report to determine whether the COL applicant has proposed an acceptable site, including acceptable site boundaries, with appropriate consideration of nearby populations and natural and manmade features, are described; CLI-12-9, 75 NRC 421 (2012)
the Commission examines whether Staff's safety review of the combined license application under 10 C.F.R. 52.97(a)(1)(i)-(v) has been adequate to support its findings; CLI-12-9, 75 NRC 421 (2012)
the Commission must determine whether NRC Staff review of a combined license application has been adequate to support the findings listed in 10 C.F.R. 52.97 and 51.107(a) for each of the licenses to be issued and in 10 C.F.R. 50.10 and 51.107(d) with respect to the limited work authorizations; CLI-12-2, 75 NRC 63 (2012)
the review method chosen by NRC in creating its models with the best information available when it began its analysis and then checking the assumptions of those models as new information becomes available is a reasonable means of balancing competing considerations, particularly given the many months required to conduct full modeling with new data; CLI-12-7, 75 NRC 379 (2012)
with respect to the environmental impacts of a combined license, the Commission determines whether the requirements of NEPA § 102(2)(A), (C), and (E), and 10 C.F.R. 51.107(a)(1)-(4) have been met; CLI-12-9, 75 NRC 421 (2012)
NUCLEAR REGULATORY COMMISSION, AUTHORITY
agencies cannot unilaterally determine that an action will not jeopardize species listed under the Endangered Species Act; LBP-12-10, 75 NRC 633 (2012)
agencies have discretion on the manner in which they determine whether information is new or significant to warrant supplementation of an environmental impact statement, including the application of its procedural rules; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012)
although NRC does not license construction or operation of a transmission corridor, it has the authority to deny the license for a proposed nuclear plant if, for example, the total environmental costs of the new reactor and connected actions exceed the benefits; LBP-12-12, 75 NRC 742 (2012)
at its discretion, the Commission may allow oral argument upon the request of a party made in a petition for review; CLI-12-12, 75 NRC 603 (2012)

it is the role of the Commission to review licensing board decisions, and not the role of licensing boards to review and to reconsider the wisdom of the Commission's regulations; LBP-12-6, 75 NRC 256 (2012)
NEPA neither requires nor authorizes NRC to order implementation of mitigation measures analyzed in an environmental analysis; CLI-12-10, 75 NRC 479 (2012)
NRC has latitude to define who is an "affected person" within the meaning of Atomic Energy Act § 189a, 42 U.S.C. § 2239(a); LBP-12-3, 75 NRC 164 (2012)
NRC rules enable it to supplement an EIS if, before a proposed action is taken, new and significant information comes to light that bears on the proposed action or its impacts; CLI-12-7, 75 NRC 379 (2012)
the Commission exercises its discretion to review a board decision that raises a potentially recurring procedural issue of some importance; CLI-12-14, 75 NRC 692 (2012)
NUCLEAR REGULATORY COMMISSION, JURISDICTION
after a petition to review a final order has been filed with the Commission, the board no longer has jurisdiction to consider a motion to reopen and the motion is properly filed with the Commission; CLI-12-14, 75 NRC 692 (2012)
although NRC has no specific rule governing stays of agency action pending judicial review, federal law requires parties seeking such stays in court to come to the agency first; CLI-12-11, 75 NRC 523 (2012)
even if the transmission corridor is a preconstruction activity and outside the NRC's regulatory jurisdiction, the construction and maintenance of the transmission corridor likely qualifies as a connected action under governing NRC and Council on Environmental Quality regulations, and therefore must be analyzed in the FEIS; LBP-12-12, 75 NRC 742 (2012)
generally, once there has been an appeal or petition to review a board order, jurisdiction passes to the Commission; CLI-12-14, 75 NRC 692 (2012)
it is not the province of NRC and thus the board to enforce another agency's regulations; LBP-12-12, 75 NRC 742 (2012)
the byproduct material category was created in 1978 by the Uranium Mill Tailings and Reclamation Act to afford NRC regulatory jurisdiction over mill tailings at active and inactive uranium milling sites; LBP-12-3, 75 NRC 164 (2012)
the Commission has considered whether to exercise pendent jurisdiction of otherwise nonappealable issues, such as where those issues are inextricably intertwined with a related legal question properly before it, or where consideration of the issues together has the potential to resolve the entire litigation; CLI-12-12, 75 NRC 603 (2012)
where the agency has no ability to prevent a certain effect due to its limited statutory authority over the relevant actions, the agency cannot be considered a legally relevant cause of the effect; LBP-12-12, 75 NRC 742 (2012)
OFFSITE POWER
for purposes of the license renewal rule, NRC Staff has determined that the plant system portion of the offsite power system that is used to connect the plant to the offsite power source should be included within the scope of the station blackout rule; CLI-12-5, 75 NRC 301 (2012)
inspections of electrical systems and components following an earthquake that resulted in loss of offsite power are described; DD-12-1, 75 NRC 573 (2012)
OPERATING BASIS EARTHQUAKE
when an earthquake results in ground accelerations greater than those assumed in the design of the nuclear power plant, the plant is required to be shut down and to 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-12-1, 75 NRC 573 (2012)
OPERATING LICENSE PROCEEDINGS
claims in a contention that did not genuinely stem from the specific amendments to the aging management plan or from particular information in the revised GALL Report were untimely under standards for admission of new or amended contentions; CLI-12-10, 75 NRC 479 (2012)
OPERATING LICENSE RENEWAL
a direct consultation obligation is imposed on NRC if NRC determines that approval of a requested license renewal may adversely affect any essential fish habitat; LBP-12-10, 75 NRC 633 (2012)

SUBJECT INDEX

a NEPA mitigation alternatives analysis need not reflect the most conservative, or worst-case, analysis; CLI-12-10, 75 NRC 479 (2012)
a variety of electrical and instrumentation and control components are excluded from an aging management review for license renewal; CLI-12-5, 75 NRC 301 (2012)
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 generic environmental impact statement; LBP-12-8, 75 NRC 539 (2012)
although potential severe accident mitigation alternatives must be considered for license renewal, no site-specific severe accident impacts analysis needs to be done; CLI-12-15, 75 NRC 704 (2012)
an environmental impact statement is required for license renewal of a power reactor; LBP-12-1, 75 NRC 1 (2012)
an illustrative list of structures and components that are subject to an aging management review is provided in 10 C.F.R. 54.21(a)(1)(i); CLI-12-5, 75 NRC 301 (2012)
applicant need not provide an analysis of severe accident mitigation alternatives in its environmental report if NRC Staff has already considered SAMAs for applicant's plant in an environmental impact statement or related supplement or in an environmental assessment; LBP-12-8, 75 NRC 539 (2012)
applicant's environmental report is required to consider any new and significant information that might alter previous environmental conclusions; LBP-12-8, 75 NRC 539 (2012)
applicant's environmental report must address environmental impacts of the proposed action and compare them to impacts of alternative actions; CLI-12-5, 75 NRC 301 (2012); LBP-12-8, 75 NRC 539 (2012)
applicants must assess the impact of the proposed action on threatened or endangered species in accordance with the Endangered Species Act as part of their environmental report; LBP-12-10, 75 NRC 633 (2012)
applicants must conduct aging management reviews of any structure, system, or component that performs one of these intended functions if the SSC is passive (performs its intended function(s) without moving parts or without a change in configuration or properties); CLI-12-5, 75 NRC 301 (2012)
applicants must demonstrate reasonable assurance that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis for the period of extended operation; CLI-12-5, 75 NRC 301 (2012)
applicants must provide a severe accident mitigation alternatives analysis if NRC Staff has not yet previously considered SAMAs for the applicant's plant in an environmental impact statement or related supplement, or in an environmental assessment; CLI-12-5, 75 NRC 301 (2012)
applicants' use of an aging management program identified in the GALL Report constitutes reasonable assurance that it will manage the targeted aging effect during the renewal period; CLI-12-10, 75 NRC 479 (2012)
applications are subject to an environmental review; CLI-12-5, 75 NRC 301 (2012)
applications must include an environmental report to assist NRC Staff in preparing its environmental impact statement; CLI-12-13, 75 NRC 681 (2012); LBP-12-8, 75 NRC 539 (2012)
Category 1 issues are those resolved generically by the generic environmental impact statement and need not be addressed as part of license renewal; LBP-12-8, 75 NRC 539 (2012)
Category 2 issues require plant-specific review; LBP-12-8, 75 NRC 539 (2012)
consultation with appropriate agencies is needed at the time of license renewal to determine whether threatened or endangered species are present and whether they would be adversely affected; LBP-12-10, 75 NRC 633 (2012)
depending on NRC Staff's resolution of Fukushima-related rulemaking petitions, Staff could seek Commission permission to suspend one or more of the generic determinations in the license renewal environmental rules and include a new analysis in pending, plant-specific environmental impact statements; LBP-12-1, 75 NRC 1 (2012)
endangered/threatened species is a Category 2 issue that requires site-specific analysis in the supplemental environmental impact statement; LBP-12-10, 75 NRC 633 (2012)
environmental reports submitted by license renewal applicants must address the environmental impacts of the proposed action and compare them to impacts of alternative actions; CLI-12-8, 75 NRC 393 (2012)
essential fish habitat assessment must describe the action, its potential effects on EFH, and proposed mitigation activities, if any; LBP-12-10, 75 NRC 633 (2012)

existing regulatory programs can be expected to directly detect the effects of aging on active functions; CLI-12-5, 75 NRC 301 (2012)
focus of license renewal safety review is described in 10 C.F.R. 54.4(a); CLI-12-5, 75 NRC 301 (2012)
for an alternative energy source to be considered reasonable for an operating license renewal proceeding, the alternative should be commercially viable and technically capable of producing an equal amount of baseload power now or in the near future, but no later than the expiration date of the current operating license; CLI-12-8, 75 NRC 393 (2012)
for license renewal safety review, it is not clear at this point whether any enhancements or changes considered by the Fukushima Task Force will bear on license renewal regulations, which are focused more narrowly on the proper management of aging; CLI-12-10, 75 NRC 479 (2012)
for purposes of the license renewal rule, NRC Staff has determined that the plant system portion of the offsite power system that is used to connect the plant to the offsite power source should be included within the scope of the station blackout rule; CLI-12-5, 75 NRC 301 (2012)
if NRC concludes that an aging management program is consistent with the GALL Report, then it accepts applicant's commitment to implement that AMP, finding the commitment itself to be an adequate demonstration of reasonable assurance under section 54.29(a); CLI-12-5, 75 NRC 301 (2012)
issuance of a renewed operating license for a nuclear power reactor is a major federal action under NEPA; LBP-12-8, 75 NRC 539 (2012)
issues that applicant must address in its environmental report, as well as those that it need not address, are listed in 10 C.F.R. 51.53(c)(3); LBP-12-8, 75 NRC 539 (2012)
limited scope of the intended functions of structures, systems, and components subject to aging management review is described in 10 C.F.R. 54.4(b); CLI-12-5, 75 NRC 301 (2012)
NEPA requires consideration of reasonable alternatives; CLI-12-8, 75 NRC 393 (2012)
NEPA requires NRC to reevaluate any prior analysis if it is presented with any new and significant information that would cast doubt on a previous environmental analysis; LBP-12-8, 75 NRC 539 (2012)
NRC Staff must make a recommendation of the environmental acceptability of the license renewal action, and the Commission shall determine whether or not the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable; CLI-12-8, 75 NRC 393 (2012)
NRC Staff must prepare a plant-specific supplement to the generic environmental impact statement that adopts applicable generic impact findings from the GEIS and analyzes site-specific impacts; LBP-12-8, 75 NRC 539 (2012)
NRC Staff prepares a supplement to its generic environmental impact statement; LBP-12-10, 75 NRC 633 (2012)
NRC's ongoing regulatory and oversight processes provide reasonable assurance that each facility complies with its current licensing basis, which can be adjusted by future Commission order or by modification to the facility's operating license outside the renewal proceeding or even in parallel with the ongoing license renewal review; CLI-12-5, 75 NRC 301 (2012)
Part 51 process for environmental review associated with license renewal, focusing upon the potential impacts of an additional 20 years of plant operation, is described; CLI-12-5, 75 NRC 301 (2012)
particular requirements for the environmental qualification of electric components important to safety for nuclear power plants are set forth in 10 C.F.R. 50.49; CLI-12-10, 75 NRC 479 (2012)
severe accident mitigation alternatives analysis for license renewal is a cost-benefit analysis, weighing a particular mitigation measure's estimated degree of risk reduction against its estimated cost of implementation; CLI-12-8, 75 NRC 393 (2012)
severe accident mitigation alternatives analysis is a Category 2 issue and SAMAs must be considered for all plants that have not considered such alternatives; LBP-12-8, 75 NRC 539 (2012)
structures and components associated only with active functions can be generically excluded from a license renewal aging management review; CLI-12-5, 75 NRC 301 (2012)
the requirement for license renewal applicants to consider severe accident mitigation alternatives stems from 10 C.F.R. 51.53(c)(3)(ii)(L); CLI-12-10, 75 NRC 479 (2012)
transformers perform their intended function through a change in state similar to switchgear, power supplies, battery chargers, and power inverters, which have been excluded from an aging management review; CLI-12-5, 75 NRC 301 (2012)

SUBJECT INDEX

OPERATING LICENSE RENEWAL PROCEEDINGS
a proximity presumption, respecting standing for an individual who resides within a 50-mile radius of a nuclear power plant, is recognized; LBP-12-10, 75 NRC 633 (2012)
adjudicatory proceedings are not environmental impact statement editing sessions; CLI-12-6, 75 NRC 352 (2012)
any person whose interests may be affected by the license renewal proceeding, and who wishes to participate as a party, must file a petition for leave to intervene within 60 days of the notice of hearing in accordance with 10 C.F.R. 2.309; LBP-12-8, 75 NRC 539 (2012)
any rule or policy changes NRC may make as a result of its post-Fukushima review may be made irrespective of whether a license renewal application is pending, or whether final action on an application has been taken; CLI-12-6, 75 NRC 352 (2012)
assertion by applicant that its aging management plan is consistent with the GALL Report does not immunize it against a challenge to the AMP; CLI-12-5, 75 NRC 301 (2012)
boards are required to consider alternatives as they exist and are likely to exist; CLI-12-5, 75 NRC 301 (2012)
challenge that applicant's environmental report omits material that petitioner alleges is required to be there is within the scope of the proceeding; LBP-12-8, 75 NRC 539 (2012)
contention asserting that the NRC's environmental review of the license renewal application has not met the requirements of the Endangered Species Act and the Magnuson-Stevens Fishery Conservation and Management Act fails to satisfy the requirements for reopening the record; LBP-12-10, 75 NRC 633 (2012)
contention based on applicant's failure to consider alleged new and significant information arising from NRC's Fukushima Task Force Report was rejected; LBP-12-8, 75 NRC 539 (2012)
contention challenging applicant's consideration of new and significant information regarding cleanup costs is inadmissible; LBP-12-8, 75 NRC 539 (2012)
contention was inadmissible because petitioner offered nothing to link the outcome of the Fukushima events to either the nuclear power plant or the license renewal application and thus failed to show any dispute with the application; CLI-12-13, 75 NRC 681 (2012)
contentions concerning release of radiological, chemical, and herbicidal materials and storage of spent fuel are Category 1 issues and thus inadmissible; LBP-12-8, 75 NRC 539 (2012)
contentions could show a genuine dispute with respect to a technology that, 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; CLI-12-5, 75 NRC 301 (2012)
geographic proximity to a facility (i.e., living or working within 50 miles) is presumptively sufficient to meet traditional standing requirements; LBP-12-8, 75 NRC 539 (2012)
groundwater quality degradation for cooling ponds in salt marshes is a Category 1 issue; LBP-12-8, 75 NRC 539 (2012)
license renewal safety review and any associated license renewal adjudicatory proceeding focus on the detrimental effects of aging posed by long-term reactor operation; CLI-12-5, 75 NRC 301 (2012)
NRC's ongoing regulatory and oversight processes provide reasonable assurance that each facility complies with its current licensing basis, which can be adjusted by future Commission order or by modification to the facility's operating license outside the renewal proceeding (perhaps even in parallel with the ongoing license renewal review); CLI-12-8, 75 NRC 393 (2012)
petitioner has provided adequate support for its claim that there are numerous new severe accident mitigation alternatives candidates that should be evaluated for their significance; LBP-12-8, 75 NRC 539 (2012)
petitioner must challenge the environmental report, which acts as a surrogate for the environmental impact statement during the early stages of a relicensing proceeding; LBP-12-8, 75 NRC 539 (2012)
petitioner's challenge to applicant's use of Three Mile Island data constitutes a genuine dispute on a material issue and is within the scope of the proceeding because it challenges the adequacy of the environmental report; LBP-12-8, 75 NRC 539 (2012)
proximity-based standing is allowed because license renewal allows operation of a reactor over an additional period of time during which the reactor could be subject to the same equipment failures and personnel errors as during operations over the original period of the license; LBP-12-8, 75 NRC 539 (2012)

severe accident mitigation alternatives are listed as Category 2 issues, and NRC must treat them as such; LBP-12-8, 75 NRC 539 (2012)
site-specific environmental issues are Category 2 issues and thus admissible; LBP-12-8, 75 NRC 539 (2012)
sufficiency of an aging management program that meets the GALL Report's recommendations can be challenged if the contention admissibility requirements are otherwise met; CLI-12-10, 75 NRC 479 (2012)
there is no legal requirement that an applicant consider population projections to the end of the license term, but petitioner could succeed in raising such a contention if it demonstrated that considering such data would be material to the proceeding; LBP-12-8, 75 NRC 539 (2012)
to challenge an energy alternatives analysis, 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 a commercially viable alternative technology (or combination of technologies) is available now, or will become so in the near future, to supply baseload power; CLI-12-8, 75 NRC 393 (2012)
to demonstrate the admissibility of a NEPA contention that an applicant failed to consider a viable alternative to its proposed action, petitioner must show that its contention presents a genuine dispute; CLI-12-5, 75 NRC 301 (2012)
under the proximity presumption, an individual who resides within a 50-mile radius of a nuclear power plant is not required to specifically plead injury, causation, and redressability to establish his or her standing to intervene; LBP-12-10, 75 NRC 633 (2012)
untimely motion to reopen the proceeding and admit a new contention concerning licensee's impacts on the roseate tern, a federally listed endangered species, is denied; LBP-12-11, 75 NRC 731 (2012)
OPPORTUNITY TO COMMENT
although NRC must respond to the significant views of other agencies, particularly if they are critical of NRC's analysis, that duty applies at the final environmental impact statement stage after the draft EIS has been circulated to interested federal and state agencies for their review and comment; LBP-12-12, 75 NRC 742 (2012)
ORAL ARGUMENT
at its discretion, the Commission may allow oral argument upon the request of a party made in a petition for review; CLI-12-12, 75 NRC 603 (2012)
the Commission generally declines to hold oral argument on appeals, absent a specific showing that oral argument will assist it in reaching a decision; CLI-12-12, 75 NRC 603 (2012)
PARTIAL INITIAL DECISIONS
decisions will be reviewed as a matter of discretion if petitions raise a substantial question in regard to any of the paragraphs of 10 C.F.R. 2.341(b)(4); CLI-12-1, 75 NRC 39 (2012)
petitions for review of PIDs and any answer shall conform to the requirements of 10 C.F.R. 2.341(b)(2)-(3); LBP-12-5, 75 NRC 227 (2012)
the decision constitutes a final decision of the Commission 40 days from the date of issuance or the first agency business day following that date if it is a Saturday, Sunday, or federal holiday unless a petition for review is filed in accordance with section 2.1212; LBP-12-5, 75 NRC 227 (2012)
where a board's decision rests on a weighing of extensive fact-specific evidence presented by technical experts, the Commission generally will defer to the board's factual findings, unless there appears to be a clearly erroneous factual finding or related oversight; CLI-12-1, 75 NRC 39 (2012)
PARTIES
rulemaking petitioner may request that NRC suspend all or any part of any licensing proceeding to which petitioner is a party pending disposition of the petition for rulemaking; CLI-12-6, 75 NRC 352 (2012)
PERMITS
combined license applicants must obtain permits from the U.S. Army Corps of Engineers in order to complete construction activities that may potentially affect wetlands; CLI-12-9, 75 NRC 421 (2012)
intervenors' challenge concerning the DEIS's alleged failure to discuss the Great Lakes Compact's process for regional review of its application for a consumptive water use permit is inadmissible; LBP-12-12, 75 NRC 742 (2012)
NRC Staff's draft environmental impact statement is required to list required federal permits and approvals and the current status of compliance with those requirements; LBP-12-12, 75 NRC 742 (2012)

SUBJECT INDEX

NRC Staff's environmental review was conducted in cooperation with the U.S. Army Corps of Engineers, with NRC acting as lead agency and ACE as cooperating agency under a memorandum of understanding because applicants also needed permits from ACE to complete construction activities that may affect wetlands; CLI-12-9, 75 NRC 421 (2012)

See also Early Site Permits

PLEADINGS

boards are not expected to search the pleadings for information that would satisfy reopening requirements; CLI-12-3, 75 NRC 132 (2012)

boards must afford latitude to pro se petitioners in considering their pleadings; LBP-12-3, 75 NRC 164 (2012)

boards should not have to hunt for information that the agency's procedural rules require be explicitly identified and fully explained; LBP-12-10, 75 NRC 633 (2012)

POPULATION DENSITY

there is no legal requirement that an applicant consider population projections to the end of the license term, but petitioner could succeed in raising such a contention if it demonstrated that considering such data would be material to the proceeding; LBP-12-8, 75 NRC 539 (2012)

POWER

"baseload power" generates energy intended to continuously produce electricity at or near full capacity, with high availability; CLI-12-5, 75 NRC 301 (2012)

because a single wind turbine cannot provide continuous production of electricity at or near full capacity, it does not constitute a source of baseload power; CLI-12-5, 75 NRC 301 (2012)

See also Offsite Power

PRECEDENTIAL EFFECT

unreviewed board rulings have no precedential value; CLI-12-13, 75 NRC 681 (2012)

PRECONSTRUCTION ACTIVITIES

construction of a transmission line is defined as a preconstruction activity; LBP-12-12, 75 NRC 742 (2012)

even if the transmission corridor is a preconstruction activity and outside the NRC's regulatory jurisdiction, the construction and maintenance of the transmission corridor likely qualifies as a connected action under governing NRC and Council on Environmental Quality regulations, and therefore must be analyzed in the FEIS; LBP-12-12, 75 NRC 742 (2012)

NRC limits the scope of environmental analysis of preconstruction activities to activities falling within the scope of its regulatory authority; CLI-12-9, 75 NRC 421 (2012)

PREJUDICE

there was no prejudice to intervenor where the board considered licensee's supplement to the application, which contained the updated aging management plan, because intervenor could have sought to amend its contention to respond to the supplement; CLI-12-10, 75 NRC 479 (2012)

PRESIDING OFFICER, AUTHORITY

exceptionally grave issues may be considered in the discretion of the presiding officer even if untimely presented; CLI-12-10, 75 NRC 479 (2012); LBP-12-1, 75 NRC 1 (2012)

PRIVILEGED INFORMATION

claims and identification of privileged materials must occur within the time provided for disclosing withheld materials; LBP-12-3, 75 NRC 164 (2012)

PRO SE LITIGANTS

boards must afford latitude to pro se petitioners in considering their pleadings; LBP-12-3, 75 NRC 164 (2012)

PROBABILISTIC RISK ASSESSMENT

unlike plume modeling for an actual severe accident, the severe accident mitigation alternatives analysis is not focused on predicting the precise trajectory of a real-time plume but rather is a probabilistic analysis involving statistical averaging over many hundreds of randomly selected hourly weather sequences obtained from a year of hourly weather data; CLI-12-8, 75 NRC 393 (2012)

PROCEDURE COMPLIANCE

even if licensee chooses to satisfy a license condition by incorporating the condition into its inservice testing program, it still must comply with 10 C.F.R. 50.55a(f)(4) throughout the life of the plant; CLI-12-9, 75 NRC 421 (2012)

SUBJECT INDEX

PROOF
See Burden of Proof; Standard of Proof
PROXIMITY PRESUMPTION
for reactor operating license renewal proceedings, standing is presumed for an individual who resides within a 50-mile radius of a nuclear power plant, is recognized; LBP-12-10, 75 NRC 633 (2012)
geographic proximity to a facility (i.e., living or working within 50 miles) is presumptively sufficient to meet traditional standing requirements in certain types of proceedings, including operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012)
Google Maps and Mapquest searches of distance from petitioners address may be used to establish proximity to a proposed facility; LBP-12-3, 75 NRC 164 (2012)
if proximity-based standing cannot be not demonstrated, then standing must be established according to traditional principles of redressability, injury, and causation; LBP-12-3, 75 NRC 164 (2012)
in lieu of the injury and causation showings for standing, petitioner has been able to establish promixity-plus by showing that the proposed licensing action involves a significant source of radiation that has an obvious potential for offsite consequences; LBP-12-3, 75 NRC 164 (2012)
intervenors have standing based upon their proximity to the proposed facility; LBP-12-12, 75 NRC 742 (2012)
NRC could consider adopting, at least for the initial construction/operation authorization of in situ recovery facilities, a standing regime by which persons living or having substantial contacts within a 50-mile radius of the facility are afforded standing; LBP-12-3, 75 NRC 164 (2012)
proximity-based standing is allowed because license renewal allows operation of a reactor over an additional period of time during which the reactor could be subject to the same equipment failures and personnel errors as during operations over the original period of the license; LBP-12-8, 75 NRC 539 (2012)
under the proximity presumption, an individual who resides within a 50-mile radius of a nuclear power plant is not required to specifically plead injury, causation, and redressability to establish his or her standing to intervene; LBP-12-10, 75 NRC 633 (2012)
PSYCHOLOGICAL EFFECTS
psychological fears or stigma effects are not cognizable NEPA claims; CLI-12-5, 75 NRC 301 (2012)
PUBLIC INTEREST
exemption from decommissioning funding requirements to allow applicant to act as a self-guarantor without satisfying the financial test for self-guarantors must be in the public interest or otherwise satisfy the requirements of 10 C.F.R. 40.14; LBP-12-6, 75 NRC 256 (2012)
QUALIFICATIONS
combined license applicant's status as a current power reactor licensee generally provides the necessary support for NRC Staff's finding that applicant is technically qualified for a new license; CLI-12-2, 75 NRC 63 (2012)
evidence in affidavits supporting a motion to reopen must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012)
RADIATION CONTROL PROGRAM
COL applications must include kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in 10 C.F.R. Part 20; LBP-12-4, 75 NRC 213 (2012)
RADIATION PROTECTION PROGRAM
combined license applications contain information pertaining to how applicant intends, through its design, operational organization, and procedures, to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20 including, but not limited to, LLRW handling and storage; LBP-12-4, 75 NRC 213 (2012)
combined license applications include operational procedures to minimize contamination of the facility and environment, facilitate eventual decommissioning, and minimize generation of radioactive waste; CLI-12-2, 75 NRC 63 (2012)

SUBJECT INDEX

RADIATION PROTECTION STANDARDS
radiation protection requirements with which licensees must comply, such as procedures and controls to reduce occupational doses and doses to members of the public to levels that are as low as reasonably achievable, are outlined in 10 C.F.R. 20.1101(b); LBP-12-4, 75 NRC 213 (2012)
RADIOACTIVE EFFLUENTS
COL applications must include kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in 10 C.F.R. Part 20; LBP-12-4, 75 NRC 213 (2012)
even with the additional conservatisms, concentrations at potential receptor locations resulting from bounding accidental effluent release scenarios remain within applicable regulatory limits; CLI-12-9, 75 NRC 421 (2012)
RADIOACTIVE RELEASES
contentions concerning release of radiological, chemical, and herbicidal materials and storage of spent fuel are Category 1 issues and thus inadmissible in operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012)
to the extent that intervenors challenge all radiological releases from nuclear power plants, the contention presents an impermissible challenge to the NRC's regulations; LBP-12-12, 75 NRC 742 (2012)
RADIOACTIVE WASTE, LOW-LEVEL
absent a licensed low-level radioactive waste disposal facility that will accept waste from a combined license applicant's facility, it is reasonably foreseeable that LLRW generated by normal operations will be stored at the site for a longer term than is currently envisioned in that COL application; LBP-12-4, 75 NRC 213 (2012)
applicant's FSAR must identify particular plans pertaining to design, operational organization, and procedures that demonstrate how it intends to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20 including, but not limited to, LLRW handling and storage; LBP-12-4, 75 NRC 213 (2012)
because petitioner fails to show that the possibility of site inundation is based on new and materially different information added to the environmental report as part of applicant's revised low-level radioactive waste management plan or identify any new and materially different information on which its site-inundation argument is based, its argument is not timely; LBP-12-7, 75 NRC 503 (2012)
level of LLRW storage information required by 10 C.F.R. 52.79(a)(3) is tied to the combined license applicant's particular plans for compliance through design, operational organization, and procedures; LBP-12-4, 75 NRC 213 (2012)
LLRW is defined as radioactive material that is not high-level radioactive waste, spent nuclear fuel, or byproduct material and that NRC classifies as LLRW; LBP-12-4, 75 NRC 213 (2012)
NRC divides LLRW into three classes, A, B, and C, based on the concentration and types of long-lived and short-lived radionuclides; LBP-12-4, 75 NRC 213 (2012); LBP-12-7, 75 NRC 503 (2012)
questions of safety impacts of onsite low-level waste storage are largely site- and design-specific, and appropriately decided in an individual licensing proceeding; LBP-12-4, 75 NRC 213 (2012)
scope and specificity of information required under section 52.79(a)(3) is a fact-bound determination that is tied to applicant's particular plans for compliance through, but not necessarily the details of, design, operational organization, and procedures associated with any contingent long-term LLRW facility; LBP-12-4, 75 NRC 213 (2012)
section 52.79(a)(3) specifies no quantity or time restrictions relative to onsite storage of LLRW; LBP-12-4, 75 NRC 213 (2012)
there is a longstanding agency recognition of the availability of the mechanisms under 10 C.F.R. 50.59 or 50.90 for obtaining authorization to construct additional onsite LLRW storage facilities; LBP-12-4, 75 NRC 213 (2012)
whether offsite LLRW storage and disposal facilities will ultimately be available is not material to summary disposition because applicant's FSAR provides an adequate contingency plan for long-term onsite storage of LLRW in the event that offsite storage and disposal facilities are not available; LBP-12-4, 75 NRC 213 (2012)
RADIOACTIVE WASTE MANAGEMENT
applicant's FSAR must identify particular plans pertaining to design, operational organization, and procedures that demonstrate how it intends to comply with relevant substantive radiation protection

requirements in 10 C.F.R. Part 20 including, but not limited to, LLRW handling and storage; LBP-12-4, 75 NRC 213 (2012)
because petitioner fails to show that the possibility of site inundation is based on new and materially different information added to the environmental report as part of applicant's revised low-level radioactive waste management plan or identify any new and materially different information on which its site-inundation argument is based, this argument is nontimely; LBP-12-7, 75 NRC 503 (2012)
combined license applications include operational procedures to minimize contamination of the facility and environment, facilitate eventual decommissioning, and minimize generation of radioactive waste; CLI-12-2, 75 NRC 63 (2012)
RADIOACTIVE WASTE STORAGE
absent a licensed low-level radioactive waste disposal facility that will accept waste from a combined license applicant's facility, it is reasonably foreseeable that LLRW generated by normal operations will be stored at the site for a longer term than is currently envisioned in that COL application; LBP-12-4, 75 NRC 213 (2012)
combined license applications contain information pertaining to how applicant intends, through its design, operational organization, and procedures, to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20 including, but not limited to, LLRW handling and storage; LBP-12-4, 75 NRC 213 (2012)
level of low-level radioactive waste storage information required by 10 C.F.R. 52.79(a)(3) is tied to the combined license applicant's particular plans for compliance through design, operational organization, and procedures; LBP-12-4, 75 NRC 213 (2012)
questions of safety impacts of onsite low-level waste storage are largely site- and design-specific, and appropriately decided in an individual licensing proceeding; LBP-12-4, 75 NRC 213 (2012)
scope and specificity of information required under section 52.79(a)(3) is a fact-bound determination that is tied to applicant's particular plans for compliance through, but not necessarily the details of, design, operational organization, and procedures associated with any contingent long-term LLRW facility; LBP-12-4, 75 NRC 213 (2012)
section 52.79(a)(3) specifies no quantity or time restrictions relative to onsite storage of LLRW; LBP-12-4, 75 NRC 213 (2012)
there is a longstanding agency recognition of the availability of the mechanisms under 10 C.F.R. 50.59 or 50.90 for obtaining authorization to construct additional onsite LLRW storage facilities; LBP-12-4, 75 NRC 213 (2012)
whether offsite low-level radioactive waste storage and disposal facilities will ultimately be available is not material to summary disposition because applicant's FSAR provides an adequate contingency plan for long-term onsite storage of LLRW in the event that offsite storage and disposal facilities are not available; LBP-12-4, 75 NRC 213 (2012)
RADIOLOGICAL CONTAMINATION
petitioner fails to demonstrate that the issue of radiation dispersal due to site inundation is material to the findings the NRC must make to support approving a combined license application; LBP-12-7, 75 NRC 503 (2012)
RADIOLOGICAL EXPOSURE
COL applications must include kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in 10 C.F.R. Part 20; LBP-12-4, 75 NRC 213 (2012)
REACTOR DESIGN
combined license applicant may reference an as-yet-uncertified design at its own risk; CLI-12-9, 75 NRC 421 (2012)
General Design Criteria require that the reactor exhibit a negative void coefficient in the power operating range; LBP-12-12, 75 NRC 742 (2012)
See also Design Certification
REACTOR TRIP
root-cause determination following Virginia earthquake is described; DD-12-1, 75 NRC 573 (2012)

SUBJECT INDEX

REASONABLE ASSURANCE
basis of NRC Staff's reasonable assurance finding on combined license applicant's squib valve inspection program for which the current version of the ASME code is insufficient is explained; CLI-12-2, 75 NRC 63 (2012)
if NRC concludes that an aging management program is consistent with the GALL Report, then it accepts applicant's commitment to implement that AMP, finding the commitment itself to be an adequate demonstration of reasonable assurance under section 54.29(a); CLI-12-5, 75 NRC 301 (2012); CLI-12-10, 75 NRC 479 (2012)
suspension of license renewal proceedings in light of the Fukushima accident is unnecessary because current regulatory and oversight processes provide reasonable assurance that each plant continues to comply with its current licensing basis, which can be adjusted by future Commission order or by modification to the facility's operating license outside the renewal proceeding; CLI-12-5, 75 NRC 301 (2012); CLI-12-6, 75 NRC 352 (2012); CLI-12-8, 75 NRC 393 (2012)
to authorize issuance of combined licenses, NRC must determine that applicable regulations have been met, there is reasonable assurance that the new reactors will be constructed and will operate in conformity with NRC regulations, and issuance of the licenses will not be inimical to the public health and safety; CLI-12-2, 75 NRC 63 (2012)
to reach a finding of reasonable assurance that the public health and safety will be protected, the Commission imposed a license condition relating to testing program for squib valves; CLI-12-9, 75 NRC 421 (2012)
RECORD OF DECISION
adjudicatory records and board decisions and any Commission appellate decisions become, in effect, part of final environmental impact statements; CLI-12-1, 75 NRC 39 (2012); LBP-12-5, 75 NRC 227 (2012)
REDRESSABILITY
petitioner's averment that proffered environmental contentions will better position NRC to fully review the possible impacts of the proposed project and, based on petitioners and their experts' information, may address concerns and mitigate impacts to water, land, and other resources is sufficient to fulfill the redressability element of the standing requirement; CLI-12-12, 75 NRC 603 (2012); LBP-12-3, 75 NRC 164 (2012)
REFERRAL OF MOTION
the Secretary of the Commission refers motions to reopen to the Atomic Safety and Licensing Board Panel pursuant to her authority; CLI-12-14, 75 NRC 692 (2012)
REFERRAL OF RULING
boards are encouraged to refer rulings that raise significant and novel legal or policy issues, the resolution of which would materially advance the orderly disposition of the proceeding; CLI-12-13, 75 NRC 681 (2012)
REFERRED RULINGS
Commission decision to decline review of a referred question does not constitute an endorsement of the board's views on the question of an applicant's duty to supplement its environmental report; CLI-12-13, 75 NRC 681 (2012)
REGULATIONS
contentions calling for requirements in excess of those imposed by regulations will be rejected as a collateral attack on regulations; CLI-12-5, 75 NRC 301 (2012)
demonstration that application of a regulation is not necessary to achieve its underlying purpose is listed as a special circumstance warranting an exemption; CLI-12-9, 75 NRC 421 (2012)
NEPA regulations do not apply to any environmental effects that NRC's domestic licensing and related regulatory functions may have upon the environment of foreign nations; LBP-12-12, 75 NRC 742 (2012)
NRC is not bound by guidance documents, which do not carry the force of regulations and do not impose legal requirements on licensees; CLI-12-5, 75 NRC 301 (2012)
NRC regulations incorporate Council on Environmental Quality regulations that define the scope of an environmental impact statement to include cumulative impacts; LBP-12-3, 75 NRC 164 (2012)
NRC regulations may not be challenged in an adjudicatory proceeding absent a request for a waiver under section 2.335(b); CLI-12-6, 75 NRC 352 (2012); LBP-12-8, 75 NRC 539 (2012); LBP-12-12, 75 NRC 742 (2012)

the ASME Code for Operation and Maintenance of Nuclear Power Plants is incorporated by reference; CLI-12-9, 75 NRC 421 (2012)
the COL application included a request for a departure from the wet-bulb noncoincident temperature, which is considered Tier 1 information and part of the certified design, and thus a regulatory exemption is required; CLI-12-9, 75 NRC 421 (2012)
there is no enumeration of the required contents of a draft environmental impact statement regarding endangered or threatened species; LBP-12-12, 75 NRC 742 (2012)
See also Amendment of Regulations
REGULATIONS, INTERPRETATION
although disagreement over proper interpretation of NRC regulations may give rise to an admissible contention, petitioner's proposed interpretation is in direct conflict with the plain meaning of the regulation and its Statement of Considerations; LBP-12-8, 75 NRC 539 (2012)
NRC regulations do not merely establish a standard that applicant is entitled to invoke for its benefit, but that may then be disregarded whenever applicant wants to argue its case on an individual, fact-specific basis; LBP-12-6, 75 NRC 256 (2012)
section 2.318(a) does not purport to provide an exhaustive list of every situation where board jurisdiction lapses; CLI-12-14, 75 NRC 692 (2012)
section 51.52(b) does not establish limits on power or on fuel enrichment, but instead requires applicant to perform an analysis if the conditions of section 51.52(a) are not met; LBP-12-12, 75 NRC 742 (2012)
section 51.53(c)(3)(ii)(L) does not convert the Category 2 (site-specific) issue of severe accident mitigation alternatives into a Category 1 issue; LBP-12-8, 75 NRC 539 (2012)
"special circumstances" language under 10 C.F.R. 2.335 is very similar to the definition of "special circumstances" under 10 C.F.R. 50.12(a)(2)(ii); LBP-12-6, 75 NRC 256 (2012)
specific inclusion of some conditions implies the exclusion of those not mentioned; CLI-12-14, 75 NRC 692 (2012)
REMAND
a remand holds the proceeding open, but only for the limited purpose of litigating the remanded contention; CLI-12-3, 75 NRC 132 (2012)
the board, on reconsideration and after remand from Commission, reopened the record with respect to a previously disposed contention, to consider the effect of licensee's losing track of a fuel rod; CLI-12-14, 75 NRC 692 (2012)
where the proceeding remains open during the pendency of a remand, but the record remains closed, any contentions raising genuinely new issues would have to be accompanied by a motion to reopen; CLI-12-3, 75 NRC 132 (2012)
RENEWABLE ENERGY SOURCES
because a single wind turbine cannot provide continuous production of electricity at or near full capacity, it does not constitute a source of baseload power; CLI-12-5, 75 NRC 301 (2012)
REOPENING A RECORD
after a record has closed, finality attaches to the hearing process, and after that point, only timely, significant issues will be considered; CLI-12-6, 75 NRC 352 (2012)
an environmental issue is "significant" for the purposes of reopening a record if it will paint a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; LBP-12-10, 75 NRC 633 (2012)
an exception for situations where parties seek to add previously unlitigated material would effectively render the reopening regulation meaningless; CLI-12-10, 75 NRC 479 (2012)
because the previous licensing board terminated the adjudicatory proceeding that was convened to consider challenges to the operating license renewal application, challengers must satisfy the stringent requirements for reopening; LBP-12-10, 75 NRC 633 (2012)
failure to challenge the existing severe accident mitigation alternatives analysis would be insufficient to establish a material dispute for the purposes of satisfying the general contention admissibility standards, let alone the reopening standards; CLI-12-6, 75 NRC 352 (2012)
in unusual circumstances, where fairness dictates, the Commission has been willing to soften or waive its reopening requirements; CLI-12-14, 75 NRC 692 (2012)

litigants seeking to reopen a closed record necessarily face a heavy burden; CLI-12-6, 75 NRC 352 (2012)
motions to reopen the record are governed by 10 C.F.R. 2.326; CLI-12-3, 75 NRC 132 (2012)
NRC practice of closing the hearing record after resolution of the last live contention, and of holding new contentions to the higher reopening standard, has been upheld by higher courts; CLI-12-14, 75 NRC 692 (2012)
petitioner who files a new contention after the board has already closed the evidentiary record is obliged to address the reopening standards; CLI-12-6, 75 NRC 352 (2012)
purpose of the reopening rule is to make sure that petitioners have an opportunity to raise serious issues after the close of the record; CLI-12-14, 75 NRC 692 (2012)
standards expressly contemplate contentions that raise issues not previously litigated; CLI-12-6, 75 NRC 352 (2012)
standards require movant to show that the motion is timely, addresses a significant safety or environmental issue, and demonstrates that a materially different result would be or would have been likely had the newly proffered evidence been considered initially; CLI-12-10, 75 NRC 479 (2012)
the board, on reconsideration and after remand from Commission, reopened the record with respect to a previously disposed contention, to consider the effect of licensee's losing track of a fuel rod; CLI-12-14, 75 NRC 692 (2012)
the reopening standard imposes a deliberately heavy burden on parties seeking to supplement the evidentiary record at the 11th hour, after the record has closed; LBP-12-10, 75 NRC 633 (2012)
the reopening standard is intended to impose a deliberately heavy burden on parties seeking to supplement the evidentiary record at the 11th hour, after the record has closed; CLI-12-10, 75 NRC 479 (2012)
untimely issues may be considered in the discretion of the presiding officer if the issue is exceptionally grave; CLI-12-10, 75 NRC 479 (2012)
where the evidentiary record had been closed, the demanding requirements for reopening must be satisfied; LBP-12-1, 75 NRC 1 (2012)
See also Motions to Reopen
REPLY BRIEFS
a reply affidavit that did not accompany the motion to reopen will not be considered in determining whether petitioners have satisfied 10 C.F.R. 2.326(b); LBP-12-10, 75 NRC 633 (2012)
motion to reply is denied because no compelling circumstances are presented; CLI-12-6, 75 NRC 352 (2012)
motion to reply is denied because petitioner should have anticipated the arguments in NRC Staff's and applicant's answers, which were logical responses to petitioner's suspension motion; CLI-12-6, 75 NRC 352 (2012)
NRC proceedings would prove unmanageable and unfair to other parties if intervenor could freely change admitted contentions at will as litigation progresses; CLI-12-1, 75 NRC 39 (2012)
petitioner has some latitude to supplement or cure a standing showing in its reply pleading, but any additional arguments should be supported by either the declaration that accompanied the original hearing request or a supplemental affidavit; LBP-12-3, 75 NRC 164 (2012)
petitioner is generally afforded 7 days to file its reply; LBP-12-3, 75 NRC 164 (2012)
petitioner may not include new information that was not raised in either the petition or answers, but arguments that respond to the petition or answers, whether they are offered in rebuttal or in support, are not precluded; LBP-12-8, 75 NRC 539 (2012)
petitioner may not remediate deficient contentions by introducing, in the reply, documents that were available to it during the time frame for initially filing contentions; LBP-12-7, 75 NRC 503 (2012)
petitioner may not use its reply to introduce new arguments to reinvigorate thinly supported contentions; CLI-12-5, 75 NRC 301 (2012)
petitioners have a right to reply to petitions for review subject to 10 C.F.R. 2.341; CLI-12-6, 75 NRC 352 (2012)
replies to appeals filed pursuant to 10 C.F.R. 2.311 are not permitted; CLI-12-6, 75 NRC 352 (2012)
using reply briefs to provide, for the first time, the necessary threshold support for contentions would effectively bypass and eviscerate NRC rules governing timely filing, contention amendment, and submission of late-filed contentions; LBP-12-7, 75 NRC 503 (2012)

SUBJECT INDEX

REPORTING REQUIREMENTS
licensee assessed the structural integrity and radiation shielding capability of both the TN-32 cask and NUHOMS-HD dry cask storage systems for an earthquake and reviewed the event for reportability; DD-12-1, 75 NRC 573 (2012)
REQUEST FOR ACTION
if intervenor is of the view that its members face imminent harm from ongoing site operations, then it may, at any time, file a petition for enforcement action; CLI-12-4, 75 NRC 154 (2012)
motions and petitions related to the Fukushima events are denied as premature; CLI-12-7, 75 NRC 379 (2012)
once a proceeding has closed, the mechanism to raise a new issue no longer would be a contention accompanied by a motion to reopen, but rather a request for action under 10 C.F.R. 2.206 or a petition for rulemaking under 10 C.F.R. 2.802; CLI-12-3, 75 NRC 132 (2012)
REQUEST FOR ADDITIONAL INFORMATION
if applicant was required to update its environmental report every time NRC issued an RAI, there would need to be dozens, if not hundreds, of such updates; LBP-12-13, 75 NRC 784 (2012)
mere general references to NRC Staff's RAIs do not provide the requisite reasonable specificity to support admission of a contention; CLI-12-5, 75 NRC 301 (2012)
NRC Staff's responsibilities, parallel to the adjudicatory process, include seeking additional information from applicant after docketing of a pending license application; LBP-12-9, 75 NRC 615 (2012)
RESTART
before restart, licensee is required to demonstrate to NRC that no functional damage from seismic events has occurred to those features necessary for continued operation without undue risk to the health and safety of the public; DD-12-1, 75 NRC 573 (2012)
REVERSAL OF RULING
if motions for stay of effectiveness demonstrate neither irreparable injury nor that reversal of the licensing board is a virtual certainty, then the remaining factors need not be considered; CLI-12-11, 75 NRC 523 (2012)
without a showing of irreparable injury, petitioners seeking a stay of effectiveness must demonstrate that reversal of the licensing board is a virtual certainty; CLI-12-11, 75 NRC 523 (2012)
REVIEW
See Appellate Review; Environmental Review; NRC Staff Review; Safety Review; Standard of Review
REVIEW, DISCRETIONARY
discretionary grant of a petition for review gives due weight to the existence of a substantial question with respect to one or more of the considerations under 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012); CLI-12-7, 75 NRC 379 (2012); CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)
partial initial decisions by presiding officers will be reviewed as a matter of discretion if petitions raise a substantial question in regard to any of the paragraphs of 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-12-1, 75 NRC 39 (2012)
the Commission exercises its discretion to review a board decision that raises a potentially recurring procedural issue of some importance; CLI-12-14, 75 NRC 692 (2012)
RISK ASSESSMENT
risk from groundwater releases at ocean sites would be a small fraction of that from atmospheric releases; CLI-12-15, 75 NRC 704 (2012)
See also Probabilistic Risk Assessment
RISKS
NEPA is not intended to encompass every possible impact, and does not encompass potential losses due to individuals' perception of a risk; CLI-12-15, 75 NRC 704 (2012)
RULE OF REASON
NEPA's "hard look" is tempered by a rule of reason; LBP-12-5, 75 NRC 227 (2012)
the concept of alternatives under NEPA must be bounded by some notion of feasibility; CLI-12-15, 75 NRC 704 (2012)
the extent of the no-action discussion is governed by a rule of reason, and discussion in the environmental documents need not be exhaustive or inordinately detailed; LBP-12-8, 75 NRC 539 (2012)

the rule of reason is inherent in the National Environmental Policy Act and its implementing regulations; LBP-12-5, 75 NRC 227 (2012)
RULEMAKING
any rule or policy changes NRC may make as a result of its post-Fukushima review may be made irrespective of whether a license renewal application is pending, or whether final action on an application has been taken; CLI-12-6, 75 NRC 352 (2012)
concerns that apply generically to all spent fuel pools at all reactors are more appropriately addressed via rulemaking or other appropriate generic activity; CLI-12-6, 75 NRC 352 (2012)
generically applicable concerns are not appropriate for resolution in an adjudicatory proceeding, a rulemaking petition being the appropriate mechanism for raising those concerns; CLI-12-6, 75 NRC 352 (2012)
it makes more sense for NRC to study whether, as a technical matter, the agency should modify its requirements relating to spent fuel storage for all plants than to litigate the issue in particular adjudications; CLI-12-6, 75 NRC 352 (2012)
once a proceeding has closed, the mechanism to raise a new issue no longer would be a contention accompanied by a motion to reopen, but rather a request for action under 10 C.F.R. 2.206 or a petition for rulemaking under 10 C.F.R. 2.802; CLI-12-3, 75 NRC 132 (2012)
petitioner may request that NRC suspend all or any part of any licensing proceeding to which petitioner is a party pending disposition of the petition for rulemaking; CLI-12-6, 75 NRC 352 (2012)
the board properly rejected state's contention that raised concerns similar to those in its rulemaking petition as an impermissible challenge to NRC regulations; CLI-12-6, 75 NRC 352 (2012)
RULES OF PRACTICE
a contention's proponent, not the licensing board, is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement its admission; CLI-12-5, 75 NRC 301 (2012)
a minimal showing that material facts are in dispute is sufficient to render a proposed contention admissible; LBP-12-8, 75 NRC 539 (2012)
a reply affidavit that did not accompany the motion to reopen will not be considered in determining whether petitioners have satisfied 10 C.F.R. 2.326(b); LBP-12-10, 75 NRC 633 (2012)
absent good cause, there must be a compelling showing on the remaining late-filing factors; CLI-12-10, 75 NRC 479 (2012)
affidavits setting forth factual and/or technical bases for the reopening criteria must address each criterion separately and provide a specific explanation of why it has been met; CLI-12-10, 75 NRC 479 (2012)
all contentions, regardless of when they are filed, must also satisfy the admissibility requirements; LBP-12-1, 75 NRC 1 (2012)
all proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-12-3, 75 NRC 164 (2012)
all properly formulated contentions must focus on the license application in question, challenging either specific portions of or alleged omissions from the application so as to establish that a genuine dispute exists with the applicant on a material issue of law or fact; LBP-12-3, 75 NRC 164 (2012)
although intervenors may use discovery to develop a case once contentions are admitted, contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by some alleged fact(s) demonstrating a genuine material dispute with the applicant; CLI-12-5, 75 NRC 301 (2012)
amended contentions filed after the initial filing period has expired may be admitted only with leave of the licensing board if they satisfy the three criteria of 10 C.F.R. 2.309(f)(2)(i)-(iii); LBP-12-9, 75 NRC 615 (2012)
amended contentions must satisfy general contention admissibility criteria and either the timeliness standards of section 2.309(f)(2) or the balancing test in section 2.309(c) for nontimely contentions; LBP-12-9, 75 NRC 615 (2012)
amendment of contentions and submission of new contentions are allowed when good cause is shown; CLI-12-1, 75 NRC 39 (2012)
an exception for situations where parties seek to add previously unlitigated material would effectively render the reopening regulation meaningless; CLI-12-10, 75 NRC 479 (2012)

SUBJECT INDEX

any contention filed within 30 days of the date when new and material information on which it is based first became available is regarded as timely; LBP-12-9, 75 NRC 615 (2012)
appeal as of right on the question of whether an initial intervention petition should have been wholly denied or, alternatively, was granted improperly are governed by 10 C.F.R. 2.311; CLI-12-7, 75 NRC 379 (2012); CLI-12-12, 75 NRC 603 (2012)
appeals of board rulings on hearing requests, petitions to intervene, and access to certain nonpublic information are governed by 10 C.F.R. 2.311(a); CLI-12-6, 75 NRC 352 (2012)
appellate review of the majority of presiding officer decisions is governed by 10 C.F.R. 2.341(a)(1); CLI-12-6, 75 NRC 352 (2012)
applicant may file an interlocutory appeal of board orders admitting contentions, but only if the appeal challenges the admissibility of all admitted contentions; CLI-12-12, 75 NRC 603 (2012)
appropriate mechanism to challenge individual contention admissibility determinations following a ruling on an initial petition is a request for interlocutory review; CLI-12-12, 75 NRC 603 (2012)
argument that applying heightened late-filing standards to contentions triggered by the NRC Staff's review documents violates a petitioner's AEA hearing rights has been considered and rejected; CLI-12-14, 75 NRC 692 (2012)
as a consequence of the Commission ruling that the board should have terminated the proceeding once it resolved all contentions, all of the board's earlier interlocutory orders become ripe for appellate review; CLI-12-14, 75 NRC 692 (2012)
because petitioner' claim of likelihood of success on the merits is conclusory, with no attempt to show how they would be likely to prevail, the motion to reopen falls far short of meeting the requirements of section 2.326(a)(3); LBP-12-10, 75 NRC 633 (2012)
because the motion to reopen and contention are based on information that is neither new nor materially different from information that was previously available, the motion and contention are untimely; LBP-12-11, 75 NRC 731 (2012)
boards cannot grant summary disposition unless movant discharges its burden of demonstrating that it is entitled to a decision as a matter of law; LBP-12-4, 75 NRC 213 (2012)
boards in individual licensing proceedings are expected to assess contentions against applicable procedural standards; CLI-12-7, 75 NRC 379 (2012)
boards may appropriately view petitioner's supporting information in a light favorable to petitioner, but failure to provide such information requires that the contention be rejected; LBP-12-3, 75 NRC 164 (2012)
challenges to board rulings on late-filed contentions normally fall under NRC rules for interlocutory review; CLI-12-7, 75 NRC 379 (2012)
contemporaneous judicial concepts of standing are applied in NRC proceedings; LBP-12-8, 75 NRC 539 (2012)
contention admissibility rules require that a proposed contention be supported by alleged fact or expert opinion; CLI-12-7, 75 NRC 379 (2012)
contention claims must be set forth with particularity; CLI-12-1, 75 NRC 39 (2012)
contention must provide sufficient information to show that a genuine dispute exists on a material issue of law or fact; LBP-12-13, 75 NRC 784 (2012)
contention rules are intended to prevent admission of ill-defined contentions where petitioners at the outset have not set forth particularized concerns; CLI-12-5, 75 NRC 301 (2012)
contentions calling for requirements in excess of those imposed by regulations will be rejected as a collateral attack on regulations; CLI-12-5, 75 NRC 301 (2012)
contentions filed after the deadline for initial intervention petitions also must satisfy the standards for late-filed contentions; CLI-12-15, 75 NRC 704 (2012)
contentions filed after the initial petition are not subject to appeal pursuant to 10 C.F.R. 2.311; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012); CLI-12-7, 75 NRC 379 (2012)
contentions for adjudicatory hearings must raise a genuine dispute with the applicant/licensee on a material issue of law or fact; CLI-12-10, 75 NRC 479 (2012)
contentions must demonstrate that the issue raised is material to the findings NRC must make for the licensing action at issue; CLI-12-15, 75 NRC 704 (2012)
contentions must meet all six pleading requirements of 10 C.F.R. 2.309(f)(1)(i)-(vi); LBP-12-8, 75 NRC 539 (2012)

contentions must raise a genuine dispute with the license application and must have underlying factual or legal support; CLI-12-15, 75 NRC 704 (2012)
contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by some alleged fact or facts demonstrating a genuine material dispute with the applicant; LBP-12-8, 75 NRC 539 (2012)
contentions submitted after the deadline for initial intervention petitions must satisfy the standards for late-filed contentions; CLI-12-10, 75 NRC 479 (2012)
contentions that fail to satisfy timeliness standards in section 2.309(f)(2) may still be admitted pursuant to a balancing test governing nontimely filings that weighs the factors set forth in 10 C.F.R. 2.309(c); LBP-12-7, 75 NRC 503 (2012); LBP-12-9, 75 NRC 615 (2012)
discretionary grant of a petition for review gives due weight to the existence of a substantial question with respect to one or more of the considerations under 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-12-6, 75 NRC 352 (2012)
each of the criteria for reopening a record must be separately addressed in an affidavit, with a specific explanation of why it has been met; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012)
entity seeking representational standing must show it has an individual member who can fulfill all the necessary standing elements and who has authorized the organization to represent his or her interests; LBP-12-3, 75 NRC 164 (2012)
evidence contained in affidavits supporting a motion to reopen must meet the admissibility standards of 10 C.F.R. 2.337; CLI-12-6, 75 NRC 352 (2012)
exceptionally grave issues may be considered in the discretion of the presiding officer even if untimely presented; LBP-12-1, 75 NRC 1 (2012)
failure to comply with any of the admissibility criteria in section 2.309(f)(1) warrants rejection of a contention; LBP-12-3, 75 NRC 164 (2012); LBP-12-7, 75 NRC 503 (2012); LBP-12-9, 75 NRC 615 (2012)
failure to demonstrate good cause for a late-filed contention requires a compelling showing on the remaining factors; CLI-12-15, 75 NRC 704 (2012)
for a contention to be admissible, petitioner must, among other things, provide a concise statement of the alleged facts or expert opinions that support its position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents that support its position; CLI-12-5, 75 NRC 301 (2012)
for a motion to reopen to be granted and a 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 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; LBP-12-11, 75 NRC 731 (2012)
for any contention to be admissible, regardless of when it is filed, it must satisfy each of the six criteria of 10 C.F.R. 2.309(f)(1); LBP-12-10, 75 NRC 633 (2012)
for reactor operating license renewal proceedings, a proximity presumption, respecting standing for an individual who resides within a 50-mile radius of a nuclear power plant, is recognized; LBP-12-10, 75 NRC 633 (2012)
four-factor test for grant of a rule waiver is presented; CLI-12-6, 75 NRC 352 (2012)
general environmental and policy interests are insufficient for organizational standing; LBP-12-3, 75 NRC 164 (2012)
geographic proximity to a facility (i.e., living or working within 50 miles) is presumptively sufficient to meet traditional standing requirements in certain types of proceedings, including operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012)
good cause is the most important of the late-filing factors and is given the most weight; CLI-12-10, 75 NRC 479 (2012); LBP-12-7, 75 NRC 503 (2012)
good cause is the most important of the late-filing factors under section 2.309(c)(1), and absent good cause, a compelling showing must be made with regard to the other seven factors; LBP-12-10, 75 NRC 633 (2012); LBP-12-12, 75 NRC 742 (2012)
Google Maps and Mapquest searches of distance from petitioners address may be used to establish proximity to a proposed facility; LBP-12-3, 75 NRC 164 (2012)
hearing requests or intervention petitions must set forth with particularity the contentions sought to be raised, meeting six pleading standards; CLI-12-5, 75 NRC 301 (2012)

SUBJECT INDEX

if a new or amended contention is deemed untimely under section 2.309(f)(2)(iii), it will be evaluated under 10 C.F.R. 2.309(c)(1), which requires a balancing of eight factors to determine whether it is admissible; LBP-12-12, 75 NRC 742 (2012)
if opponent of summary disposition declines to oppose the moving party's prima facie showing of undisputed material facts, NRC regulations provide that those facts will be considered admitted; LBP-12-4, 75 NRC 213 (2012)
in 1989, NRC revised its rules to prevent the admission of poorly defined or supported contentions or those based on little more than speculation; CLI-12-8, 75 NRC 393 (2012)
in addition to satisfying the timeliness standards in 10 C.F.R. 2.309(f)(2) or the balancing test in 10 C.F.R. 2.309(c), a newly proffered contention must satisfy the admissibility criteria of 10 C.F.R. 2.309(f)(1); LBP-12-7, 75 NRC 503 (2012)
in affidavits supporting motions to reopen, each of the criteria must be separately addressed, with a specific explanation of why it has been met; LBP-12-10, 75 NRC 633 (2012)
in deciding motions seeking a stay of agency action pending judicial review, the Commission looks to the same four-part test that governs stays of licensing board decisions pending Commission review; CLI-12-11, 75 NRC 523 (2012)
in unusual circumstances, where fairness dictates, the Commission has been willing to soften or waive its reopening requirements; CLI-12-14, 75 NRC 692 (2012)
interlocutory review is allowed where the ruling threatens petitioner with immediate and serious irreparable harm, or has a pervasive and unusual effect on the basic structure of the proceeding; CLI-12-12, 75 NRC 603 (2012)
interlocutory review of a board's dismissal of a new contention is granted only upon a showing of extraordinary circumstances; CLI-12-13, 75 NRC 681 (2012)
intervenor normally is not allowed to challenge a board's rejection of contentions where the board has granted a hearing on any contention; CLI-12-12, 75 NRC 603 (2012)
intervenors seeking a new hearing on a new contention after the board has closed the evidentiary record must move to reopen the evidentiary record and meet a deliberately higher threshold standard than that for an ordinary late-filed contention; CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)
intervention petitioner must demonstrate that it has suffered a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute and that the injury can fairly be traced to the challenged action and is likely to be redressed by a favorable decision; LBP-12-8, 75 NRC 539 (2012)
intervention petitions must include petitioner's name, address, and telephone contact information, nature of petitioner's right under the AEA to be made a party, interest in the proceeding, and possible effect of any decision or order that might be issued on their interest; LBP-12-3, 75 NRC 164 (2012)
irreparable injury is the most important of the stay criteria; CLI-12-11, 75 NRC 523 (2012)
late-filed contentions must show that the information upon which the new contention is based was not previously available and is materially different than information previously available; CLI-12-10, 75 NRC 479 (2012)
level of support required to sustain a motion to reopen is greater than that required for a contention under the general admissibility requirements of 10 C.F.R. 2.309(f)(1); CLI-12-6, 75 NRC 352 (2012)
licensing board, construing the petition in favor of petitioners, based its standing finding on potential harm from traffic-generated dust and light pollution; CLI-12-12, 75 NRC 603 (2012)
litigants seeking to reopen a record must comply fully with section 2.326(b); LBP-12-10, 75 NRC 633 (2012)
mere notice pleading is insufficient in NRC proceedings; LBP-12-8, 75 NRC 539 (2012)
motion to reply is denied because no compelling circumstances are presented; CLI-12-6, 75 NRC 352 (2012)
motions for 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 dispute as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-12-4, 75 NRC 213 (2012)
motions to reopen could be rejected solely on the basis of the appellants' failure to address the reopening standards in the supporting affidavit; LBP-12-10, 75 NRC 633 (2012)
motions to reopen must be accompanied by a supporting affidavit; CLI-12-14, 75 NRC 692 (2012)

motions to reopen must be accompanied by affidavits that set forth the factual and/or technical bases for the movant's claim that the three criteria for reopening have been satisfied; CLI-12-3, 75 NRC 132 (2012); LBP-12-10, 75 NRC 633 (2012)
motions to reopen must be supported by an affidavit written by an individual with knowledge of the facts alleged, and the affidavit must explain why each of the criteria has been met; CLI-12-15, 75 NRC 704 (2012)
motions to reopen must be timely, address a significant safety or environmental issue, and show that a materially different result would be or would have been likely had the newly proffered evidence been considered initially; CLI-12-6, 75 NRC 352 (2012); CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012); LBP-12-1, 75 NRC 1 (2012)
motions to reopen on issues not previously litigated must satisfy the balancing test of 10 C.F.R. 2.309(c) in addition to the reopening standards; CLI-12-3, 75 NRC 132 (2012); LBP-12-1, 75 NRC 1 (2012); LBP-12-10, 75 NRC 633 (2012)
motions to reopen the record are governed by 10 C.F.R. 2.326; CLI-12-3, 75 NRC 132 (2012)
movant has the burden to present information in a manner that complies with section 2.326(b); LBP-12-10, 75 NRC 633 (2012)
new contentions are timely when filed within 30 days of the date that asserted foundational information became available; LBP-12-1, 75 NRC 1 (2012)
new or amended contentions filed after the initial filing period has expired may be admitted as timely only with leave of the licensing board if they meet the timeliness standards of 10 C.F.R. 2.309(f)(2); LBP-12-7, 75 NRC 503 (2012); LBP-12-12, 75 NRC 742 (2012)
no defense to an insufficient showing by summary disposition proponent is required; LBP-12-4, 75 NRC 213 (2012)
NRC deliberately raised contention admissibility standards to relieve the hearing delays that poorly defined or supported contentions had caused in the past; CLI-12-5, 75 NRC 301 (2012); CLI-12-8, 75 NRC 393 (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-12-10, 75 NRC 479 (2012)
NRC regulations may not be challenged in an adjudicatory proceeding absent a request for a waiver under section 2.335(b); LBP-12-8, 75 NRC 539 (2012); LBP-12-12, 75 NRC 742 (2012)
NRC revised its rules in 1989 to prevent admission of contentions based on little more than speculation; CLI-12-5, 75 NRC 301 (2012)
NRC rules are 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 in a hearing; CLI-12-15, 75 NRC 704 (2012)
NRC rules contain ample provisions through which litigants may seek admission of new or amended contentions; CLI-12-13, 75 NRC 681 (2012)
NRC rules provide for an automatic right to appeal a licensing board decision deciding standing and contention admissibility, on the question whether a petition to intervene and request for hearing should have been granted, or denied in its entirety; CLI-12-8, 75 NRC 393 (2012)
opponent of a summary disposition motion cannot rest on the allegations or denials of a pleading, but instead must go beyond the pleadings and by its own affidavits, or the depositions, answers to interrogatories, and admissions on file, designate specific facts showing that there is a genuine issue for trial; LBP-12-4, 75 NRC 213 (2012)
organization asserting standing in its own right must establish a discrete institutional injury to the organization's interests, which must be based on something more than a general environmental or policy interest in the subject matter of the proceeding; LBP-12-3, 75 NRC 164 (2012)
organizations may base standing on either immediate or threatened injury to its organizational interests, or to the interests of identified members; LBP-12-8, 75 NRC 539 (2012); LBP-12-10, 75 NRC 633 (2012)
partial initial decision constitutes a final decision of the Commission 40 days from the date of issuance or the first agency business day following that date if it is a Saturday, Sunday, or federal holiday unless a petition for review is filed in accordance with section 2.1212; LBP-12-5, 75 NRC 227 (2012)

parties seeking a rule waiver must attach an affidavit that, among other things, states with particularity the special circumstances claimed to justify the waiver or exception requested; CLI-12-6, 75 NRC 352 (2012)
parties to an adjudication may petition for a waiver of a rule or regulation upon a showing that special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation (or a provision of it) would not serve the purposes for which it was adopted; CLI-12-6, 75 NRC 352 (2012)
petition that attempts to proffer a nontimely contention without addressing the balancing factors in section 2.309(c) may be summarily rejected; LBP-12-7, 75 NRC 503 (2012)
petitioner is generally afforded 7 days to file its reply; LBP-12-3, 75 NRC 164 (2012)
petitioner is required to make reference to specific sources and documents on which it intends to rely; LBP-12-8, 75 NRC 539 (2012)
petitioner is required to provide a concise statement of the alleged facts or expert opinions that support its position; LBP-12-3, 75 NRC 164 (2012); LBP-12-8, 75 NRC 539 (2012)
petitioner must demonstrate that the issue raised in a contention is within the scope of the proceeding and material to the findings NRC must make to support the action involved in the proceeding; LBP-12-3, 75 NRC 164 (2012); LBP-12-13, 75 NRC 784 (2012)
petitioner need not prove its contentions at the admissibility stage; LBP-12-8, 75 NRC 539 (2012)
petitions for interlocutory review must show that the issue to be reviewed threatens the party adversely affected by it with immediate and serious irreparable impact which, as a practical matter, could not be alleviated through a petition for review of the presiding officer's final decision or affects the basic structure of the proceeding in a pervasive or unusual manner; CLI-12-13, 75 NRC 681 (2012)
petitions for review of partial initial decision and any answer shall conform to the requirements of 10 C.F.R. 2.341(b)(4)(i)-(v); LBP-12-5, 75 NRC 227 (2012)
petitions 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-12-3, 75 NRC 132 (2012)
prior to NRC's 1989 rule revision, intervenors were able to trigger hearings after merely copying a contention from another proceeding, even though these admitted intervenors often had negligible knowledge of the issues and no direct case to present; CLI-12-5, 75 NRC 301 (2012); CLI-12-8, 75 NRC 393 (2012)
proponent of a motion to reopen must show that the motion is timely, addresses a significant safety or environmental issue, and a materially different result would be or would have been likely had the newly proffered evidence been considered initially; CLI-12-3, 75 NRC 132 (2012)
proposed new or amended contentions shall be deemed timely if filed within 60 days of the date when the document containing the new and material information first becomes available; LBP-12-12, 75 NRC 742 (2012)
purpose of the reopening rule is to make sure that petitioners have an opportunity to raise serious issues after the close of the record; CLI-12-14, 75 NRC 692 (2012)
reach of a contention necessarily hinges upon its terms coupled with its stated bases; CLI-12-5, 75 NRC 301 (2012)
reopening standards expressly contemplate contentions that raise issues not previously litigated; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012)
reopening will only be allowed where proponent presents material, probative evidence that either could not have been discovered before or could have been discovered but is so grave that, in the judgment of the presiding officer, it must be considered anyway; CLI-12-10, 75 NRC 479 (2012)
reply briefs may not be used to introduce new arguments to reinvigorate thinly supported contentions; CLI-12-5, 75 NRC 301 (2012)
reply briefs may not contain new information that was not raised in either the petition or answers, but arguments that respond to the petition or answers, whether they are offered in rebuttal or in support, are not precluded; LBP-12-8, 75 NRC 539 (2012)
representational standing claims must have supporting declarations from members identifying themselves, outlining their interests, and authorizing petitioners to represent them; LBP-12-3, 75 NRC 164 (2012)

request for hearing and/or petition for leave to intervene will be granted if the board determines that requestor/petitioner has standing and has proposed at least one admissible contention; LBP-12-8, 75 NRC 539 (2012)
requests for hearing and petitions for leave to intervene must set forth with particularity the contentions sought to be raised and must satisfy all six requirements of 10 C.F.R. 2.309(f)(1); CLI-12-8, 75 NRC 393 (2012)
requests for stays of licensing board decisions are considered under 10 C.F.R. 2.342; CLI-12-11, 75 NRC 523 (2012)
requirements for an admissible contention are specified; LBP-12-3, 75 NRC 164 (2012)
routine contention admissibility determinations generally are not appropriate for interlocutory review; CLI-12-12, 75 NRC 603 (2012)
section 2.318(a) does not purport to provide an exhaustive list of every situation where board jurisdiction lapses; CLI-12-14, 75 NRC 692 (2012)
section 2.341 applies to appeals of rulings on new contentions filed after initial intervention petitions; CLI-12-7, 75 NRC 379 (2012)
section 2.342 does not apply to requests for stays of Commission decisions pending judicial review; CLI-12-11, 75 NRC 523 (2012)
standard for review of contention admissibility determinations is the same, whether an appeal lies under section 2.311 or 2.341, and the Commission will disturb a licensing board's contention admissibility ruling only if there has been an error of law or an abuse of discretion; CLI-12-7, 75 NRC 379 (2012)
standards for reopening the case record require movant to show that the motion is timely, addresses a significant safety or environmental issue, and demonstrates that a materially different result would be or would have been likely had the newly proffered evidence been considered initially; CLI-12-10, 75 NRC 479 (2012)
standards governing contention admissibility are strict by design; LBP-12-7, 75 NRC 503 (2012)
Subpart L hearing procedures provide that motions for summary disposition must be in writing and must include a written explanation of the basis of the motion and affidavits to support statements of fact; LBP-12-4, 75 NRC 213 (2012)
Subpart L provides for motions for summary disposition, and such motions are governed by the same standards as those in Subpart G proceedings; LBP-12-2, 75 NRC 159 (2012); LBP-12-4, 75 NRC 213 (2012)
summary disposition may be entered with respect to all or any part of the matters involved in the proceeding if the motion, along with any appropriate supporting materials, shows that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-12-2, 75 NRC 159 (2012)
summary disposition movant bears the initial burden of showing the absence of a genuine issue of material fact; LBP-12-4, 75 NRC 213 (2012)
support required for a motion to reopen is greater than that required for a contention under the general admissibility requirements of 10 C.F.R. 2.309(f)(1); CLI-12-3, 75 NRC 132 (2012)
that a summary disposition opponent declines to oppose the motion does not mean that movant is entitled to a favorable judgment; LBP-12-4, 75 NRC 213 (2012)
the "materially different result" requirement of section 2.326(a)(3) is analyzed using the Commission's test of whether it has been shown that a motion for summary disposition could be defeated; LBP-12-1, 75 NRC 1 (2012)
the board properly rejected state's contention that raised concerns similar to those in its rulemaking petition as an impermissible challenge to NRC regulations; CLI-12-6, 75 NRC 352 (2012)
the board suspended mandatory disclosure obligations until further notice; CLI-12-14, 75 NRC 692 (2012)
the Commission discourages piecemeal appeals; CLI-12-12, 75 NRC 603 (2012)
the Commission may grant a petition for review at its discretion, giving due weight to whether there exists a substantial question regarding the considerations in 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-12-7, 75 NRC 379 (2012); CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)
the late-filing factor given the most weight is whether there is good cause for the failure to file on time; CLI-12-15, 75 NRC 704 (2012)
the proper inquiry under 10 C.F.R. 2.326(a)(3) goes to the likelihood that a different result will be reached if the information is considered; CLI-12-10, 75 NRC 479 (2012)

the reopening standard is intended to impose a deliberately heavy burden on parties seeking to supplement the evidentiary record at the 11th hour, after the record has closed; CLI-12-10, 75 NRC 479 (2012)
the standard for admission of new or amended contentions involves a balancing of eight factors; CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)
the standard for admitting a new contention after the record is closed is higher than for an ordinary late-filed contention; CLI-12-10, 75 NRC 479 (2012)
to be accepted for hearing, contentions must meet strict admission standards; CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)
to derive standing from a member, an organization must demonstrate that the individual member has standing to participate and has authorized the organization to represent his or her interests; LBP-12-8, 75 NRC 539 (2012)
to establish organizational standing, petitioner must show that its interests will be harmed by the licensing action, while an organization seeking representational standing must demonstrate that the interests of at least one of its members will be harmed; LBP-12-10, 75 NRC 633 (2012)
to establish representational standing, organizations must show that at least one of its members may be harmed by the licensing action and would have standing to sue in his or her own right, identify that member by name and address, show that the organization is authorized to request a hearing on behalf of that member, and show that the interests that the representative organization seeks to protect are germane to its own interests; LBP-12-10, 75 NRC 633 (2012)
to have a new contention admitted after the contested proceeding has terminated, petitioner must meet three criteria; CLI-12-14, 75 NRC 692 (2012)
trigger point for the timely submission of new or amended contentions is when new information becomes available, and intervenor has the obligation to raise new contentions based on such information; CLI-12-13, 75 NRC 681 (2012)
under 10 C.F.R. 2.311, appeal of a ruling on contentions is allowed only if the order wholly denies an intervention petition or a party other than the petitioner alleges that a petition for leave to intervene or a request for hearing should have been wholly denied; CLI-12-7, 75 NRC 379 (2012)
under current rules, intervenors may use discovery to develop a case once contentions are admitted, but contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by some alleged fact or facts demonstrating a genuine material dispute with the applicant; CLI-12-8, 75 NRC 393 (2012)
under the proximity presumption, an individual who resides within a 50-mile radius of a nuclear power plant is not required to specifically plead injury, causation, and redressability to establish his or her standing to intervene; LBP-12-10, 75 NRC 633 (2012)
untimely issues may be considered in the discretion of the presiding officer if the issue is exceptionally grave; CLI-12-10, 75 NRC 479 (2012)
using reply briefs to provide, for the first time, the necessary threshold support for contentions would effectively bypass and eviscerate NRC rules governing timely filing, contention amendment, and submission of late-filed contentions; LBP-12-7, 75 NRC 503 (2012)
when a petition for review is filed with the Commission at the same time as a motion for reconsideration is filed with the board, the Commission will delay considering the petition for review until after the board has ruled; CLI-12-5, 75 NRC 301 (2012)
where a nonmoving party declines to oppose a motion for summary disposition, the board shall accept as admitted the moving party's prima facie showing of material facts; LBP-12-4, 75 NRC 213 (2012)
where admission of a late-filed contention would cause a material delay in the proceeding weighed against admission of the contention; CLI-12-15, 75 NRC 704 (2012)
where petitioner fails to establish good cause for late filing, its demonstration on the other factors must be particularly strong; LBP-12-7, 75 NRC 503 (2012)
where the evidentiary record had been closed, the demanding requirements for reopening must be satisfied; LBP-12-1, 75 NRC 1 (2012)
RULES OF PROCEDURE
federal courts leave to an agency's discretion the manner in which the agency determines whether information is new or significant to warrant supplementation of an environmental impact statement, including the application of its procedural rules; CLI-12-6, 75 NRC 352 (2012)

licensing boards applied existing procedural rules to new contentions and motions to reopen filed in response to the Three Mile Island accident and the September 11, 2001, terrorist attacks; CLI-12-13, 75 NRC 681 (2012)
raising new issues related to the Fukushima events does not warrant new procedures or a separate timetable; CLI-12-6, 75 NRC 352 (2012); CLI-12-13, 75 NRC 681 (2012)
SAFETY ANALYSIS
petitioners' request for a safety analysis relative to Fukushima-related concerns was granted to the extent that the requested analyses had already been undertaken; CLI-12-9, 75 NRC 421 (2012)
See also Final Safety Analysis Report; Final Safety Evaluation Report
SAFETY EVALUATION REPORT
a licensing hearing does not embrace *anything* new revealed in the SER or the NEPA documents; CLI-12-14, 75 NRC 692 (2012)
SAFETY ISSUES
license applicants have the burden of establishing entitlement to the applied-for license by a preponderance of the evidence; LBP-12-5, 75 NRC 227 (2012)
questions of safety impacts of onsite low-level waste storage are largely site- and design-specific, and appropriately decided in an individual licensing proceeding; LBP-12-4, 75 NRC 213 (2012)
there is no imminent safety reason to halt new reactor licensing, because there is sufficient time to implement new Fukushima-related requirements before operation; CLI-12-2, 75 NRC 63 (2012)
when NRC imposes new regulatory requirements that are important safety enhancements but not deemed necessary to ensure adequate protection of public health and safety, NRC often does not require existing licensees to implement them based on considerations such as whether they are cost-beneficial; CLI-12-2, 75 NRC 63 (2012)
SAFETY REVIEW
a variety of electrical and instrumentation and control components are excluded from an aging management review for license renewal; CLI-12-5, 75 NRC 301 (2012)
an illustrative list of structures and components that are subject to an aging management review is provided in 10 C.F.R. 54.21(a)(1)(i); CLI-12-5, 75 NRC 301 (2012)
existing regulatory programs can be expected to directly detect the effects of aging on active functions; CLI-12-5, 75 NRC 301 (2012)
focus of license renewal safety review is described in 10 C.F.R. 54.4(a); CLI-12-5, 75 NRC 301 (2012)
for license renewal safety review, it is not clear at this point whether any enhancements or changes considered by the Fukushima Task Force will bear on license renewal regulations, which are focused more narrowly on the proper management of aging; CLI-12-10, 75 NRC 479 (2012)
in response to the Fukushima accident in Japan, NRC is conducting a comprehensive safety review of the requirements and guidance associated with accident mitigation measures; CLI-12-1, 75 NRC 39 (2012)
license renewal applicants must conduct aging management reviews of any structure, system, or component that performs one of these intended functions if the SSC is passive (performs its intended function(s) without moving parts or without a change in configuration or properties); CLI-12-5, 75 NRC 301 (2012)
license renewal safety review and any associated license renewal adjudicatory proceeding focus on the detrimental effects of aging posed by long-term reactor operation; CLI-12-5, 75 NRC 301 (2012)
limited scope of the intended functions of structures, systems, and components subject to aging management review is described in 10 C.F.R. 54.4(b); CLI-12-5, 75 NRC 301 (2012)
structures and components associated only with active functions can be generically excluded from a license renewal aging management review; CLI-12-5, 75 NRC 301 (2012)
the Commission examines whether NRC Staff's safety review of the combined license application under 10 C.F.R. 52.97(a)(1)(i)-(v) has been adequate to support its findings; CLI-12-9, 75 NRC 421 (2012)
transformers perform their intended function through a change in state similar to switchgear, power supplies, battery chargers, and power inverters, which have been excluded from an aging management review; CLI-12-5, 75 NRC 301 (2012)
SCHEDULE, BRIEFING
failure of counsel to review the scheduling order does not constitute good cause for failure to meet a filing deadline; LBP-12-12, 75 NRC 742 (2012)

schedule for Subpart L proceedings, including the closing of the record, is described; CLI-12-3, 75 NRC 132 (2012)
SCHEDULING
boards are to consider NRC Staff's projected schedule for completion of its safety and environmental evaluations in developing the hearing schedule; LBP-12-3, 75 NRC 164 (2012)
raising new issues related to the Fukushima events does not warrant new procedures or a separate timetable; CLI-12-6, 75 NRC 352 (2012)
SECRETARY OF THE COMMISSION
the Secretary refers motions to reopen to the Atomic Safety and Licensing Board Panel pursuant to her authority; CLI-12-14, 75 NRC 692 (2012)
SECURITY PLANS
cyber security plans must be submitted for NRC approval; CLI-12-2, 75 NRC 63 (2012)
cyber security plans must take into account site-specific conditions; CLI-12-2, 75 NRC 63 (2012)
written policies, implementing procedures, site-specific analysis, and other supporting technical information developed to implement cyber security plans are subject to periodic inspection by NRC Staff; CLI-12-2, 75 NRC 63 (2012)
SEGMENTATION
separate actions are connected if, among other things, they cannot or will not proceed unless other actions are taken previously or simultaneously, or they are interdependent parts of a larger action and depend on the larger action for their justification; LBP-12-12, 75 NRC 742 (2012)
when an action is divided into component parts, each involves action with less significant environmental effects; LBP-12-12, 75 NRC 742 (2012)
SEISMIC ANALYSIS
design bases for earthquakes are to be determined through evaluation of the geologic and seismic history of the site and surrounding region; DD-12-1, 75 NRC 573 (2012)
SEVERE ACCIDENT MITIGATION ALTERNATIVES
assertion that other SAMAs might become cost-effective if implemented, without indication of any particular positive or negative environmental impact from any such implementation, fails to present an exceptionally grave issue; LBP-12-1, 75 NRC 1 (2012)
it is applicant's responsibility to include information in the environmental report that NRC Staff needs to prepare the draft environmental impact statement, including information on alternatives available for reducing or avoiding adverse environmental effects; LBP-12-12, 75 NRC 742 (2012)
SAMAs are listed as Category 2 issues, and NRC must treat them as such; LBP-12-8, 75 NRC 539 (2012)
section 51.53(c)(3)(ii)(L) does not convert the Category 2 (site-specific) issue of SAMAs into a Category 1 issue; LBP-12-8, 75 NRC 539 (2012)
SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS
a NEPA SAMA analysis need not reflect the most conservative, or worst-case, analysis; CLI-12-10, 75 NRC 479 (2012)
although petitioners are not required to run their own computer models at the contention admissibility stage, a contention challenging a SAMA analysis nonetheless must be tethered to the computer modeling and mathematical aspects of the analysis; CLI-12-15, 75 NRC 704 (2012)
although potential SAMAs must be considered for license renewal, no site-specific severe accident impacts analysis needs to be done; CLI-12-15, 75 NRC 704 (2012)
applicant is to provide in its environmental report an analysis that considers and balances the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects; LBP-12-8, 75 NRC 539 (2012)
boards should not have to guess what aspects of the SAMA analysis the petitioner is challenging; LBP-12-1, 75 NRC 1 (2012)
challenge to the inputs and methodology in the SAMA analysis is impermissibly late; CLI-12-10, 75 NRC 479 (2012)
contentions proposing alternative inputs or methodologies for the SAMA analysis must present some factual or expert basis for why the proposed changes in the analysis are warranted; CLI-12-8, 75 NRC 393 (2012)

failure to challenge the existing SAMA analysis would be insufficient to establish a material dispute for the purposes of satisfying the general contention admissibility standards, let alone the reopening standards; CLI-12-6, 75 NRC 352 (2012)
for license renewal, a SAMA analysis is a cost-benefit analysis, weighing a particular mitigation measure's estimated degree of risk reduction against its estimated cost of implementation; CLI-12-8, 75 NRC 393 (2012)
license renewal applicants must provide a SAMA analysis if NRC Staff has not yet previously considered SAMAs for the applicant's plant in an environmental impact statement or related supplement, or in an environmental assessment; CLI-12-5, 75 NRC 301 (2012); LBP-12-8, 75 NRC 539 (2012)
mitigation measures assessed in the SAMA analysis under the National Environmental Policy Act are supplemental to those already required under NRC safety regulations for reasonable assurance of safe operation and likewise to those NRC may order or require under ongoing regulatory oversight over reactor safety, pursuant to the Atomic Energy Act; CLI-12-15, 75 NRC 704 (2012)
NEPA neither requires nor authorizes NRC to order implementation of mitigation measures analyzed in an environmental analysis; CLI-12-10, 75 NRC 479 (2012)
NEPA requires that NRC take a hard look at alternatives, including SAMAs, and to provide a rational basis for rejecting alternatives that are cost-effective; LBP-12-8, 75 NRC 539 (2012)
petitioner does not demonstrate, with the level of support required under section 2.326(b), that a materially different result would have been likely had the possibility of recriticality over a period longer than 24 hours, or even 4 days, been considered in the SAMA analysis initially; CLI-12-3, 75 NRC 132 (2012)
petitioner has provided adequate support for its claim that there are numerous new SAMA candidates that should be evaluated for their significance; LBP-12-8, 75 NRC 539 (2012)
SAMAs must be considered for all plants that have not considered such alternatives because they are a Category 2 issue; LBP-12-8, 75 NRC 539 (2012)
speculation that NRC would consider other SAMAs than have been previously considered does not demonstrate that the issue raised is material to NRC's decision; LBP-12-1, 75 NRC 1 (2012)
the requirement for license renewal applicants to consider severe accident mitigation alternatives stems from 10 C.F.R. 51.53(c)(3)(ii)(L); CLI-12-10, 75 NRC 479 (2012)
this probability-weighted analysis is carried out for the limited purpose of identifying mitigation alternatives that meet a defined benefit-cost criterion; CLI-12-15, 75 NRC 704 (2012)
to demonstrate that a revised SAMA analysis would produce a materially different result, intervenor should indicate how much the mean consequences of the severe accident scenarios could reasonably be expected to change as well as cost of implementing other SAMAs it believes might become cost-effective; LBP-12-1, 75 NRC 1 (2012)
unless it looks genuinely plausible that inclusion of an additional factor or use of other assumptions and models may change the cost-benefit conclusions for the severe accident mitigation alternative candidates evaluated, no purpose would be served to further refine the SAMA analysis; CLI-12-5, 75 NRC 301 (2012)
unless 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 with the application; CLI-12-8, 75 NRC 393 (2012)
unlike plume modeling for an actual severe accident, the SAMA analysis is not focused on predicting the precise trajectory of a real-time plume but rather is a probabilistic analysis involving statistical averaging over many hundreds of randomly selected hourly weather sequences obtained from a year of hourly weather data; CLI-12-8, 75 NRC 393 (2012)
whether a SAMA is worthy of more detailed analysis in an environmental report or supplemental environmental impact statement hinges on whether it may be cost-beneficial to implement; CLI-12-3, 75 NRC 132 (2012)
SEVERE ACCIDENT MITIGATION DESIGN ALTERNATIVES ANALYSIS
appellate review of board decision rejecting a challenge to the SAMA analysis is denied; CLI-12-1, 75 NRC 39 (2012)
careful consideration of SAMDAs is required under NEPA, and NRC's failure to consider them is a violation of NEPA; LBP-12-8, 75 NRC 539 (2012)

NRC-endorsed guidance on SAMA analysis methodology specifies use of the mean annual offsite dose and economic impact; CLI-12-1, 75 NRC 39 (2012)
SAMA analysis is a probability-weighted assessment of the benefits and costs of mitigation alternatives that can be used to reduce the risks of potential severe accidents at nuclear power plants; CLI-12-1, 75 NRC 39 (2012)
SAMA analysis is neither a worst-case nor a best-case impacts analysis; CLI-12-1, 75 NRC 39 (2012)
to require worst-case analyses can easily lead to limitless NEPA analyses because it is always possible to introduce yet another additional variable to a hypothetical scenario to conjure up a worse worst case; CLI-12-1, 75 NRC 39 (2012)
SHUTDOWN
when an earthquake results in ground accelerations greater than those assumed in the design of the nuclear power plant, the plant is required to be shut down and to 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-12-1, 75 NRC 573 (2012)
SITE CHARACTERIZATION
design bases for earthquakes are to be determined through evaluation of the geologic and seismic history of the site and surrounding region; DD-12-1, 75 NRC 573 (2012)
SITE SELECTION
for siting alternatives, an agency's duty under NEPA is to study all alternatives that appear reasonable and appropriate for study at the time of drafting the environmental impact statement; CLI-12-5, 75 NRC 301 (2012)
SITE SUITABILITY
NRC Staff's steps in the geographic and demographic review in the final safety evaluation report to determine whether the COL applicant has proposed an acceptable site, including acceptable site boundaries, with appropriate consideration of nearby populations and natural and manmade features, are described; CLI-12-9, 75 NRC 421 (2012)
SOURCE MATERIALS LICENSES
grounds for license denial exist if, prior to issuance of a license to possess and use source and byproduct materials for uranium milling, there is commencement of construction by an applicant; LBP-12-3, 75 NRC 164 (2012)
SPECIAL CIRCUMSTANCES
circumstances must be unusual if not unique, and the Commission must not have previously considered such circumstances, either explicitly or by necessary implication, when it promulgated the relevant regulation in the first place; LBP-12-6, 75 NRC 256 (2012)
definition in 10 C.F.R. 2.335 employs language very similar to the definition under 10 C.F.R. 50.12(a)(2)(ii); LBP-12-6, 75 NRC 256 (2012)
exemption may be appropriate where there is present any circumstance that was not considered by NRC when it promulgated the pertinent regulation in the first place; LBP-12-6, 75 NRC 256 (2012)
exemption should be granted if special circumstances exist, such as when compliance is not necessary to satisfy the purpose of the regulations from which an exemption is sought; LBP-12-6, 75 NRC 256 (2012)
SPENT FUEL COOLING SYSTEM
licensees must develop and implement guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities to address loss of large areas from fires or explosions that arise from a beyond-design-basis event; CLI-12-2, 75 NRC 63 (2012)
the Commission imposed a license condition requiring licensees to develop and implement strategies to maintain or restore core cooling, containment and spent fuel pool cooling capabilities following a beyond-design-basis external event, including a simultaneous loss of all AC power and loss of normal access to the normal heat sink; CLI-12-9, 75 NRC 421 (2012)
SPENT FUEL POOLS
any evaluation of the Fukushima events will include consideration of lessons learned that may apply to spent fuel pools; LBP-12-1, 75 NRC 1 (2012)
concerns that apply generically to all spent fuel pools at all reactors are more appropriately addressed via rulemaking or other appropriate generic activity; CLI-12-6, 75 NRC 352 (2012)

the Commission administratively exempted from the backfit rule, an order to the combined license holder to address spent fuel pool instrumentation requirements not specified in the certified design as enhanced protective measures that represent a substantial increase in the protection of public health and safety; CLI-12-9, 75 NRC 421 (2012)

SPENT FUEL STORAGE

contentions concerning release of radiological, chemical, and herbicidal materials and storage of spent fuel are Category 1 issues and thus inadmissible in operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012)

it makes more sense for NRC to study whether, as a technical matter, the agency should modify its requirements relating to spent fuel storage for all plants than to litigate the issue in particular adjudications; CLI-12-6, 75 NRC 352 (2012)

SPENT FUEL STORAGE CASKS

licensee assessed the structural integrity and radiation shielding capability of both the TN-32 cask and NUHOMS-HD dry cask storage systems following an earthquake and reviewed the event for reportability; DD-12-1, 75 NRC 573 (2012)

STANDARD OF PROOF

on safety issues, license applicants have the burden of establishing entitlement to the applied-for license by a preponderance of the evidence; LBP-12-5, 75 NRC 227 (2012)

once it made a determination of plausible injury from the proposed project, the board was not required to weigh the evidence to determine whether the harm to petitioners was beyond doubt; CLI-12-12, 75 NRC 603 (2012)

STANDARD OF REVIEW

absent error of law or abuse of discretion, the Commission generally defers to board rulings on contention admissibility; CLI-12-3, 75 NRC 132 (2012); CLI-12-5, 75 NRC 301 (2012); CLI-12-6, 75 NRC 352 (2012); CLI-12-8, 75 NRC 393 (2012); CLI-12-10, 75 NRC 479 (2012); CLI-12-15, 75 NRC 704 (2012)

Commission addresses the sufficiency of NRC Staff's review of a combined license application rather than making a de novo review; CLI-12-2, 75 NRC 63 (2012)

for threshold issues such as contention admissibility, the Commission gives substantial deference to a board's determinations; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012)

interlocutory review is allowed where the ruling threatens petitioner with immediate and serious irreparable harm, or has a pervasive and unusual effect on the basic structure of the proceeding; CLI-12-12, 75 NRC 603 (2012)

review of contention admissibility determinations is the same, whether an appeal lies under section 2.311 or 2.341, and the Commission will disturb a licensing board's contention admissibility ruling only if there has been an error of law or an abuse of discretion; CLI-12-7, 75 NRC 379 (2012)

the Commission does not review the combined license application de novo, but rather, considers the sufficiency of NRC Staff's review of that application; CLI-12-9, 75 NRC 421 (2012)

the Commission may grant a petition for review of a board decision at its discretion, giving due weight to whether there is a substantial question regarding the considerations in 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-12-15, 75 NRC 704 (2012)

the Commission must determine whether NRC Staff review of a combined license application has been adequate to support the findings listed in 10 C.F.R. 52.97 and 51.107(a) for each of the licenses to be issued and in 10 C.F.R. 50.10 and 51.107(d) with respect to the limited work authorizations; CLI-12-2, 75 NRC 63 (2012)

the Commission will defer to board rulings on standing absent an error of law or abuse of discretion; CLI-12-12, 75 NRC 603 (2012)

where a board's decision rests on a weighing of extensive fact-specific evidence presented by technical experts, the Commission generally will defer to the board's factual findings, unless there appears to be a clearly erroneous factual finding or related oversight; CLI-12-1, 75 NRC 39 (2012)

STANDARD REVIEW PLANS

the GALL Report and the SRP are guidance documents, and therefore not binding, but they do carry special weight; CLI-12-5, 75 NRC 301 (2012)

SUBJECT INDEX

STANDING TO INTERVENE
a more subjective appraisal of declining property values might be permissible in the context of a licensing action associated with an applicant or facility shown to have engaged in a continuous and pervasive course of illegal conduct; LBP-12-3, 75 NRC 164 (2012)
aesthetic harms may amount to an injury in fact sufficient for standing; CLI-12-12, 75 NRC 603 (2012)
although it might be fatal for standing purposes if an Indian tribe were seeking to have intervenors represent their interests in the proceeding, intervenors' lack of authority to represent them is not a bar to intervenors raising the tribe's contention; LBP-12-12, 75 NRC 742 (2012)
as distance increases from the in situ recovery facility, petitioner with an upgradient water source must expect to provide the board with some analysis as to how any contamination will affect any wells alleged to be impacted by the facility; LBP-12-3, 75 NRC 164 (2012)
by reason of their own standing in a proceeding, intervenors may assert any violation of law that would lead to a redress of their injuries, including their interests in seeing that the NEPA process is properly carried out or in preventing or delaying issuance of the requested combined license; LBP-12-12, 75 NRC 742 (2012)
claims based on economic impacts are only cognizable in NRC proceedings with regard to NEPA-based concerns; LBP-12-3, 75 NRC 164 (2012)
contemporaneous judicial concepts of standing are applied in NRC proceedings; LBP-12-8, 75 NRC 539 (2012)
for petitioners claiming to be using water from the same aquifer as for the uranium ore source, regardless of distance from the facility in question, licensing boards have found that a plausible pathway connecting the proposed mining operation to their water source has been shown so as to establish petitioners' standing; LBP-12-3, 75 NRC 164 (2012)
fugitive dust generated onsite at a facility, particularly during construction, can be a concern in the vicinity of a facility; LBP-12-3, 75 NRC 164 (2012)
generic, unsubstantiated claims regarding health, safety, and property devaluation impacts are insufficient to establish standing; LBP-12-3, 75 NRC 164 (2012)
geographic proximity to a facility (i.e., living or working within 50 miles) is presumptively sufficient to meet traditional standing requirements in certain types of proceedings, including operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012); LBP-12-10, 75 NRC 633 (2012)
Google Maps and Mapquest searches of distance from petitioners address may be used to establish proximity to a proposed facility; LBP-12-3, 75 NRC 164 (2012)
health-impact potential of facility traffic-associated dust, if properly pleaded, could provide a basis for standing; LBP-12-3, 75 NRC 164 (2012)
if petitioner's factual claims in support of its standing are contested, untenable, conjectural, or conclusory, a board need not uncritically accept such assertions, but may weigh those informational claims and exercise its judgment about whether standing has been satisfied; LBP-12-3, 75 NRC 164 (2012)
if proximity-based standing cannot be not demonstrated, then standing must be established according to traditional principles of redressability, injury, and causation; LBP-12-3, 75 NRC 164 (2012)
in assessing whether petitioner has demonstrated its standing, licensing boards are to construe petitions in favor of petitioners; LBP-12-3, 75 NRC 164 (2012)
in lieu of the injury and causation showings for standing, petitioner has been able to establish promixity-plus by showing that the proposed licensing action involves a significant source of radiation that has an obvious potential for offsite consequences; LBP-12-3, 75 NRC 164 (2012)
intervenors have standing based upon their proximity to the proposed facility; LBP-12-12, 75 NRC 742 (2012)
intervention petitioner must demonstrate that it has suffered a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute and that the injury can fairly be traced to the challenged action and is likely to be redressed by a favorable decision; LBP-12-8, 75 NRC 539 (2012)
licensing board, construing the petition in favor of petitioners, based its standing finding on potential harm from traffic-generated dust and light pollution; CLI-12-12, 75 NRC 603 (2012)
light pollution is a matter of concern as a proposed nuclear materials facility undergoes agency licensing review; LBP-12-3, 75 NRC 164 (2012)

nonspeculative showing that increased traffic accidents could be another impact of increased road usage might establish standing; LBP-12-3, 75 NRC 164 (2012)
NRC could consider adopting, at least for the initial construction/operation authorization of in situ recovery facilities, a standing regime by which persons living or having substantial contacts within a 50-mile radius of the facility are afforded standing; LBP-12-3, 75 NRC 164 (2012)
NRC generally applies contemporaneous judicial standing concepts in section 189a adjudicatory proceedings; LBP-12-3, 75 NRC 164 (2012)
NRC has latitude to define who is an "affected person" within the meaning of Atomic Energy Act § 189a, 42 U.S.C. § 2239(a); LBP-12-3, 75 NRC 164 (2012)
petitioner bears the burden to provide facts sufficient to establish standing; LBP-12-3, 75 NRC 164 (2012)
petitioner has some latitude to supplement or cure a standing showing in its reply pleading, but any additional arguments should be supported by either the declaration that accompanied the original hearing request or a supplemental affidavit; LBP-12-3, 75 NRC 164 (2012)
petitioner may act to vindicate its own rights, but it has no standing to assert the rights of others; CLI-12-6, 75 NRC 352 (2012)
petitioner whose property is upgradient but nonetheless located in close proximity to a proposed in situ recovery facility may be able to establish its plausible pathway with a less particularized showing; LBP-12-3, 75 NRC 164 (2012)
petitioner's averment that proffered environmental contentions will better position NRC to fully review the possible impacts of the proposed project and, based on petitioners and their experts' information, may address concerns and mitigate impacts to water, land, and other resources is sufficient to fulfill the redressability element of the standing requirement; CLI-12-12, 75 NRC 603 (2012); LBP-12-3, 75 NRC 164 (2012)
petitioners considerably upgradient of a mining area must provide scientific or technical support for how contaminated material from an in situ recovery site might plausibly enter their drinking water to fulfill the causation element necessary to establish their standing; LBP-12-3, 75 NRC 164 (2012)
potential harm necessary to demonstrate standing in NRC proceedings need not relate to physical or bodily injury; CLI-12-12, 75 NRC 603 (2012)
proximity-based standing is allowed because license renewal allows operation of a reactor over an additional period of time during which the reactor could be subject to the same equipment failures and personnel errors as during operations over the original period of the license; LBP-12-8, 75 NRC 539 (2012)
request for hearing and/or petition for leave to intervene will be granted if the board determines that requestor/petitioner has standing and has proposed at least one admissible contention; LBP-12-8, 75 NRC 539 (2012)
standing can be based on diminishment of recreational enjoyment of wildlife area due to, among other factors, an increase in dust due to traffic on adjacent highway; CLI-12-12, 75 NRC 603 (2012)
standing was found for petitioner fishing a river 60 miles downstream from a proposed in situ recovery facility expansion alleged to allow drainage into the river from operations; LBP-12-3, 75 NRC 164 (2012)
surface water contamination has played a significant role in standing determinations in in situ recovery cases; LBP-12-3, 75 NRC 164 (2012)
there is no contention-based requirement mandating that to have standing, besides showing that a cognizable injury is associated with a proposed licensing action and that granting the relief sought will address that injury, petitioner also must establish a link between that injury and the issues it wishes to litigate in challenging an application; LBP-12-3, 75 NRC 164 (2012)
to meet its burden to establish standing, petitioner must provide plausible factual allegations that satisfy each element of standing; LBP-12-3, 75 NRC 164 (2012)
under the proximity presumption, an individual who resides within a 50-mile radius of a nuclear power plant is not required to specifically plead injury, causation, and redressability to establish his or her standing to intervene; LBP-12-10, 75 NRC 633 (2012)
when petitioners considerably upgradient of the mining area fail to explain how contaminated material from the in situ recovery site might plausibly enter their drinking water, they fail to fulfill the causation element necessary to establish their standing; LBP-12-3, 75 NRC 164 (2012)

whether petitioner could be affected by a materials licensing action must be determined on a case-by-case basis, taking into account petitioner's distance from the source, nature of the licensed activity, and significance of the radioactive source; LBP-12-3, 75 NRC 164 (2012)
STANDING TO INTERVENE, ORGANIZATIONAL
general environmental and policy interests are insufficient for organizational standing; LBP-12-3, 75 NRC 164 (2012)
organizations may base standing on either immediate or threatened injury to its organizational interests, or to the interests of identified members; LBP-12-8, 75 NRC 539 (2012); LBP-12-10, 75 NRC 633 (2012)
petitioner asserting standing in its own right must establish a discrete institutional injury to the organization's interests, which must be based on something more than a general environmental or policy interest in the subject matter of the proceeding; LBP-12-3, 75 NRC 164 (2012)
petitioner must show that its interests will be harmed by the licensing action, while an organization seeking representational standing must demonstrate that the interests of at least one of its members will be harmed; LBP-12-10, 75 NRC 633 (2012)
STANDING TO INTERVENE, REPRESENTATIONAL
entity seeking representational standing must show it has an individual member who can fulfill all the necessary standing elements and who has authorized the organization to represent his or her interests; LBP-12-3, 75 NRC 164 (2012); LBP-12-8, 75 NRC 539 (2012); LBP-12-10, 75 NRC 633 (2012)
organizations may base standing on either immediate or threatened injury to its organizational interests, or to the interests of identified members; LBP-12-8, 75 NRC 539 (2012); LBP-12-10, 75 NRC 633 (2012)
organizations must show that at least one of its members may be harmed by the licensing action and would have standing to sue in his or her own right, identify that member by name and address, show that the organization is authorized to request a hearing on behalf of that member, and show that the interests that the representative organization seeks to protect are germane to its own interests; LBP-12-10, 75 NRC 633 (2012)
petitioner's claims must have supporting declarations from members identifying themselves, outlining their interests, and authorizing petitioners to represent them; LBP-12-3, 75 NRC 164 (2012)
STATE REGULATORY REQUIREMENTS
Great Lakes Compact Agreement binds and imposes certain obligations on its member states, not on other governmental agencies or on utility companies; LBP-12-12, 75 NRC 742 (2012)
STATION BLACKOUT
for purposes of the license renewal rule, NRC Staff has determined that the plant system portion of the offsite power system that is used to connect the plant to the offsite power source should be included within the scope of the station blackout rule; CLI-12-5, 75 NRC 301 (2012)
the Commission imposed a license condition requiring licensees to develop and implement strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event, including a simultaneous loss of all AC power and loss of normal access to the normal heat sink; CLI-12-9, 75 NRC 421 (2012)
STATUTORY CONSTRUCTION
specific inclusion of some conditions implies the exclusion of those not mentioned; CLI-12-14, 75 NRC 692 (2012)
STAY
a brief stay of the close of a licensing proceeding was ordered to allow a state the opportunity to request status as an interested governmental entity; CLI-12-6, 75 NRC 352 (2012)
rulemaking petitioner who is not a party to a licensing proceeding has no right under NRC rules to request a stay of that proceeding; CLI-12-6, 75 NRC 352 (2012)
STAY OF EFFECTIVENESS
although NRC has no specific rule governing stays of agency action pending judicial review, federal law requires parties seeking such stays in court to come to the agency first; CLI-12-11, 75 NRC 523 (2012)
if motions for stay of effectiveness demonstrate neither irreparable injury nor that reversal of the licensing board is a virtual certainty, then the remaining factors need not be considered; CLI-12-11, 75 NRC 523 (2012)
if NRC Staff grants a renewed license before a hearing takes place, intervenor may seek a stay of Staff's action; CLI-12-4, 75 NRC 154 (2012)

in deciding motions seeking a stay of agency action pending judicial review, the Commission looks to the same four-part test that governs stays of licensing board decisions pending Commission review; CLI-12-11, 75 NRC 523 (2012)
irreparable injury is the most important of the stay criteria; CLI-12-11, 75 NRC 523 (2012)
parties seeking a stay must show that they face imminent, irreparable harm that is both certain and great; CLI-12-11, 75 NRC 523 (2012)
requests for stays of licensing board decisions are considered under 10 C.F.R. 2.342; CLI-12-11, 75 NRC 523 (2012)
requests to stay effectiveness of future licensing action pending judicial appeal are more appropriately styled motions to reconsider and motions to hold in abeyance; CLI-12-11, 75 NRC 523 (2012)
section 2.342 does not apply to requests for stays of Commission decisions pending judicial review; CLI-12-11, 75 NRC 523 (2012)
to qualify as irreparable harm justifying a stay, the asserted harm must be related to the underlying claim; CLI-12-11, 75 NRC 523 (2012)
without a showing of irreparable injury, petitioners seeking a stay of effectiveness must demonstrate that reversal of the licensing board is a virtual certainty; CLI-12-11, 75 NRC 523 (2012)
without a showing of irreparable injury, petitioners seeking a stay of effectiveness must make an overwhelming showing of likely success on the merits; CLI-12-11, 75 NRC 523 (2012)
SUBPART G PROCEDURES
Subpart L provides for motions for summary disposition, and such motions are governed by the same standards as those in Subpart G proceedings; LBP-12-2, 75 NRC 159 (2012)
SUBPART L PROCEDURES
motions for summary disposition must be in writing and must include a written explanation of the basis of the motion and affidavits to support statements of fact; LBP-12-4, 75 NRC 213 (2012)
taking of evidence for the record in a Subpart L hearing is described; CLI-12-3, 75 NRC 132 (2012)
SUBPART L PROCEEDINGS
summary disposition motions in Subpart L proceedings are to be evaluated pursuant to the same standards for summary disposition set forth in Part 2, Subpart G; LBP-12-2, 75 NRC 159 (2012); LBP-12-4, 75 NRC 213 (2012)
SUBPOENA PROCEEDINGS
schedule for Subpart L proceedings, including the closing of the record, is described; CLI-12-3, 75 NRC 132 (2012)
SUMMARY DISPOSITION
boards cannot grant summary disposition unless movant discharges its burden of demonstrating that it is entitled to a decision as a matter of law; LBP-12-4, 75 NRC 213 (2012)
courts may treat motions to dismiss for failure to state a claim upon which relief can be granted and motions for judgment on the pleadings as motions for summary judgment under Rule 56 if matters outside the pleadings are presented to and not excluded by the court; LBP-12-2, 75 NRC 159 (2012)
if opponent of summary disposition declines to oppose the moving party's prima facie showing of undisputed material facts, NRC regulations provide that those facts will be considered admitted; LBP-12-4, 75 NRC 213 (2012)
motions in Subpart L proceedings are to be evaluated pursuant to the same standards for summary disposition set forth in Part 2, Subpart G; LBP-12-4, 75 NRC 213 (2012)
motions 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 dispute as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-12-4, 75 NRC 213 (2012)
movant bears the initial burden of showing the absence of a genuine issue of material fact; LBP-12-4, 75 NRC 213 (2012)
no defense to an insufficient showing by summary disposition proponent is required; LBP-12-4, 75 NRC 213 (2012)
NRC applies the same standards to motions for summary disposition that federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; LBP-12-2, 75 NRC 159 (2012); LBP-12-4, 75 NRC 213 (2012)

opponent cannot rest on the allegations or denials of a pleading, but instead must go beyond the pleadings and by its own affidavits, or the depositions, answers to interrogatories, and admissions on file, designate specific facts showing that there is a genuine issue for trial; LBP-12-4, 75 NRC 213 (2012)
opponent has 20 days from proponent's filing of its motion to oppose that motion; LBP-12-7, 75 NRC 503 (2012)
Subpart L hearing procedures provide that motions for summary disposition must be in writing and must include a written explanation of the basis of the motion and affidavits to support statements of fact; LBP-12-4, 75 NRC 213 (2012)
Subpart L provides for motions for summary disposition, and such motions are governed by the same standards as those in Subpart G proceedings; LBP-12-2, 75 NRC 159 (2012)
summary disposition may be entered with respect to all or any part of the matters involved in the proceeding if the motion, along with any appropriate supporting materials, shows that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-12-2, 75 NRC 159 (2012)
that a summary disposition opponent declines to oppose the motion does not mean that movant is entitled to a favorable judgment; LBP-12-4, 75 NRC 213 (2012)
the "materially different result" requirement of section 2.326(a)(3) is analyzed using the Commission's test of whether it has been shown that a motion for summary disposition could be defeated; LBP-12-1, 75 NRC 1 (2012)
where a nonmoving party declines to oppose a motion for summary disposition, the board shall accept as admitted the moving party's prima facie showing of material facts; LBP-12-4, 75 NRC 213 (2012)
whether offsite low-level radioactive waste storage and disposal facilities will ultimately be available is not material to summary disposition because applicant's FSAR provides an adequate contingency plan for long-term onsite storage of LLRW in the event that offsite storage and disposal facilities are not available; LBP-12-4, 75 NRC 213 (2012)
SUMMARY JUDGMENT
courts may treat motions to dismiss for failure to state a claim upon which relief can be granted and motions for judgment on the pleadings as motions for summary judgment under Rule 56 if matters outside the pleadings are presented to and not excluded by the court; LBP-12-2, 75 NRC 159 (2012)
movant has the burden to show that he is entitled to judgment under established principles, and if he does not discharge that burden, then he is not entitled to judgment; LBP-12-4, 75 NRC 213 (2012)
NRC applies the same standards to motions for summary disposition that federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; LBP-12-2, 75 NRC 159 (2012); LBP-12-4, 75 NRC 213 (2012)
SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT
a final environmental impact statement may be supplemented if, before a proposed action is taken, new and significant information comes to light that bears on the proposed action or its impacts; CLI-12-6, 75 NRC 352 (2012)
agencies have discretion on the manner in which they determine whether information is new or significant to warrant supplementation of an environmental impact statement, including the application of its procedural rules; CLI-12-3, 75 NRC 132 (2012)
agencies need not supplement an EIS every time new information comes to light after the EIS is finalized; CLI-12-7, 75 NRC 379 (2012)
duty to supplement the final environmental impact statement is mandatory, is not avoidable through findings of compliance with the agency's safety regulations, and is waivable only where the consequences are remote and highly improbable; CLI-12-11, 75 NRC 523 (2012)
endangered/threatened species is a Category 2 issue that requires site-specific analysis in the supplemental environmental impact statement; LBP-12-10, 75 NRC 633 (2012)
federal courts leave to an agency's discretion the manner in which the agency determines whether information is new or significant to warrant supplementation of an environmental impact statement, including the application of its procedural rules; CLI-12-6, 75 NRC 352 (2012)
for each license renewal application, NRC Staff must prepare a plant-specific supplement to the generic environmental impact statement that adopts applicable generic impact findings from the GEIS and analyzes site-specific impacts; LBP-12-8, 75 NRC 539 (2012); LBP-12-10, 75 NRC 633 (2012)

for new information to be sufficiently significant to merit the preparation of a SFEIS, the information must paint a seriously different picture of the environmental landscape; CLI-12-11, 75 NRC 523 (2012)
license renewal applicants must submit an environmental report to aid the Staff in its preparation of a supplemental environmental impact statement; CLI-12-13, 75 NRC 681 (2012)
NEPA imposes a continuing obligation on federal agencies to supplement an existing environmental impact statement if the proposed action has not been taken, in response to significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; CLI-12-7, 75 NRC 379 (2012)
new contentions must paint a seriously different picture of the environmental landscape that would require supplementation of an environmental impact statement; LBP-12-10, 75 NRC 633 (2012)
new information that may be assessed for its relevance to an ongoing licensing matter may be derived in a wide variety of ways and is assessed for significance regardless of whether it has been acted upon in some way by the Commission or by NRC Staff; CLI-12-7, 75 NRC 379 (2012)
NRC is not required to wait until inchoate information matures into something that later might affect its environmental review; CLI-12-6, 75 NRC 352 (2012)
NRC need not supplement an environmental impact statement with information in an area of research that is still developing; CLI-12-6, 75 NRC 352 (2012)
NRC rules enable it to supplement an EIS if, before a proposed action is taken, new and significant information comes to light that bears on the proposed action or its impacts; CLI-12-7, 75 NRC 379 (2012)
NRC will supplement an EIS if there are substantial changes in the proposed action relevant to environmental concerns or new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; CLI-12-7, 75 NRC 379 (2012)
the time for challenging the environmental report passes when NRC Staff releases its draft supplemental environmental impact statement, but contentions challenging the ER can be filed with the initial petition and prior to the time Staff's environmental review documents are completed; LBP-12-11, 75 NRC 731 (2012)
to constitute a basis for supplementing an EIS, the new information must present a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; CLI-12-7, 75 NRC 379 (2012)
when an environmental impact statement is prepared at the early site permit stage, NRC Staff must prepare a supplemental EIS for the combined license focusing on issues related to the impacts of construction and operation for which new and significant information has been identified; CLI-12-2, 75 NRC 63 (2012)
whether a severe accident mitigation alternative is worthy of more detailed analysis in an environmental report or supplemental environmental impact statement hinges on whether it may be cost-beneficial to implement; CLI-12-3, 75 NRC 132 (2012)
SURVEILLANCE PROGRAMS
licensing board imposes a license condition directing implementation of a surveillance program for explosively actuated valves prior to fuel load; CLI-12-2, 75 NRC 63 (2012)
SUSPENSION OF PROCEEDING
agencies must set and complete proceedings on license applications with due regard for the rights and privileges of all the interested parties or adversely affected persons and within a reasonable time; CLI-12-6, 75 NRC 352 (2012)
Fukushima events do not present a sufficiently grave threat to public safety that reactor licensing proceedings should be suspended; CLI-12-11, 75 NRC 523 (2012); CLI-12-14, 75 NRC 692 (2012); LBP-12-1, 75 NRC 1 (2012)
rulemaking petitioner may request that NRC suspend all or any part of any licensing proceeding to which petitioner is a party pending disposition of the petition for rulemaking; CLI-12-6, 75 NRC 352 (2012)
suspension is a drastic action that is not warranted absent compelling circumstances; CLI-12-6, 75 NRC 352 (2012)
suspension of license renewal proceedings in light of the Fukushima accident is unnecessary because current regulatory and oversight processes provide reasonable assurance that each plant continues to comply with its current licensing basis, which can be adjusted by future Commission order or by

modification to the facility's operating license outside the renewal proceeding; CLI-12-6, 75 NRC 352 (2012)
the Commission declined to suspend any adjudications or final licensing decisions, finding no imminent risk to public health and safety or to common defense and security because of the Fukushima accident; CLI-12-2, 75 NRC 63 (2012); CLI-12-5, 75 NRC 301 (2012); CLI-12-9, 75 NRC 421 (2012)
three criteria are used to determine whether to suspend an adjudication; CLI-12-6, 75 NRC 352 (2012)
TAILINGS
section 11e(2) byproduct material is tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content; LBP-12-3, 75 NRC 164 (2012)
the byproduct material category was created in 1978 by the Uranium Mill Tailings and Reclamation Act to afford NRC regulatory jurisdiction over mill tailings at active and inactive uranium milling sites; LBP-12-3, 75 NRC 164 (2012)
TECHNICAL SUPPORT CENTER
NRC Staff found acceptable combined license applicant's plan to use a single technical support center for existing and proposed units, to be colocated in the basement of the new nuclear operations building, between the protected areas of the three units, which is a departure from the AP1000 DCD; CLI-12-9, 75 NRC 421 (2012)
relocation of a technical support center requires separate NRC approval; CLI-12-9, 75 NRC 421 (2012)
TEMPERATURE LIMITS
the COL application included a request for a departure from the wet-bulb noncoincident temperature, which is considered Tier 1 information and part of the certified design and thus a regulatory exemption is required; CLI-12-9, 75 NRC 421 (2012)
TERMINATION OF PROCEEDING
as a consequence of the Commission ruling that the board should have terminated the proceeding once it resolved all contentions, all of the board's earlier interlocutory orders become ripe for appellate review; CLI-12-14, 75 NRC 692 (2012)
because the previous licensing board terminated the adjudicatory proceeding that was convened to consider challenges to the operating license renewal application, challengers must satisfy the stringent requirements for reopening; LBP-12-10, 75 NRC 633 (2012)
NRC practice of closing the hearing record after resolution of the last live contention, and of holding new contentions to the higher reopening standard, has been upheld by higher courts; CLI-12-14, 75 NRC 692 (2012)
once all contentions have been decided, the contested proceeding is terminated; CLI-12-14, 75 NRC 692 (2012)
TERRORISM
licensing boards applied existing procedural rules to new contentions and motions to reopen filed in response to the September 11, 2001, terrorist attacks; CLI-12-13, 75 NRC 681 (2012)
TESTING
even if licensee chooses to satisfy a license condition by incorporating the condition into its inservice testing program, it still must comply with 10 C.F.R. 50.55a(f)(4) throughout the life of the plant; CLI-12-9, 75 NRC 421 (2012)
NRC could require modifications to the inservice testing program pursuant to compliance backfit provisions; CLI-12-2, 75 NRC 63 (2012)
to reach a finding of reasonable assurance that the public health and safety will be protected, the Commission imposed a license condition relating to a testing program for squib valves; CLI-12-9, 75 NRC 421 (2012)
THREE MILE ISLAND ACCIDENT
licensing boards applied existing procedural rules to new contentions and motions to reopen filed in response to the TMI accident; CLI-12-13, 75 NRC 681 (2012)
petitioner's challenge to applicant's use of TMI data constitutes a genuine dispute on a material issue and is within the scope of the license renewal proceeding because it challenges the adequacy of the environmental report; LBP-12-8, 75 NRC 539 (2012)

SUBJECT INDEX

TRANSBOUNDARY IMPACTS
First Nations in Canada must receive invitations to participate in the environmental impact statement scoping process when there are transboundary environmental impacts from a project; LBP-12-12, 75 NRC 742 (2012)
NEPA regulations do not apply to any environmental effects that NRC's domestic licensing and related regulatory functions may have upon the environment of foreign nations; LBP-12-12, 75 NRC 742 (2012)
TRANSPORTATION OF RADIOACTIVE MATERIALS
every environmental report prepared for the construction permit stage, the early site permit stage, or the combined license stage of a light-water-cooled nuclear power reactor must contain a statement concerning transportation of fuel and radioactive wastes to and from the reactor; LBP-12-12, 75 NRC 742 (2012)
section 51.52(b) does not establish limits on power or on fuel enrichment, but instead requires applicant to perform an analysis if the conditions of section 51.52(a) are not met; LBP-12-12, 75 NRC 742 (2012)
URANIUM MINING AND MILLING
as distance increases from the in situ recovery facility, petitioner with an upgradient water source must expect to provide the board with some analysis as to how any contamination will affect any wells alleged to be impacted by the facility; LBP-12-3, 75 NRC 164 (2012)
for petitioners claiming to be using water from the same aquifer as for the uranium ore source, regardless of distance from the facility in question, licensing boards have found that a plausible pathway connecting the proposed mining operation to their water source has been shown so as to establish petitioners' standing; LBP-12-3, 75 NRC 164 (2012)
grounds for license denial exist if, prior to issuance of a license to possess and use source and byproduct materials for uranium milling, there is commencement of construction by an applicant; LBP-12-3, 75 NRC 164 (2012)
NRC could consider adopting, at least for the initial construction/operation authorization of in situ recovery facilities, a standing regime by which persons living or having substantial contacts within a 50-mile radius of the facility are afforded standing; LBP-12-3, 75 NRC 164 (2012)
petitioner whose property is upgradient but nonetheless located in close proximity to a proposed in situ recovery facility may be able to establish its plausible pathway with a less particularized showing; LBP-12-3, 75 NRC 164 (2012)
petitioners considerably upgradient of a mining area must provide scientific or technical support for how contaminated material from an in situ recovery site might plausibly enter their drinking water to fulfill the causation element necessary to establish their standing; LBP-12-3, 75 NRC 164 (2012)
standing was found for petitioner fishing a river 60 miles downstream from a proposed in situ recovery facility expansion alleged to allow drainage into the river from operations; LBP-12-3, 75 NRC 164 (2012)
surface water contamination has played a significant role in standing determinations in in situ recovery cases; LBP-12-3, 75 NRC 164 (2012)
the in situ recovery process, which is also referred to as the in situ leach process, is described; LBP-12-3, 75 NRC 164 (2012)
when an ore zone and petitioner's water source exist in separate aquifers, the injury/causation question is whether there is an interconnection between those aquifers; LBP-12-3, 75 NRC 164 (2012)
when petitioners considerably upgradient of the mining area fail to explain how contaminated material from the in situ recovery site might plausibly enter their drinking water, they fail to demonstrate the causation element necessary to establish their standing; LBP-12-3, 75 NRC 164 (2012)
U.S. ARMY CORPS OF ENGINEERS
NRC Staff's environmental review was conducted in cooperation with aCE, with NRC acting as lead agency and ACE as cooperating agency under a memorandum of understanding because applicants also needed permits from ACE to complete construction activities that may affect wetlands; CLI-12-9, 75 NRC 421 (2012)

SUBJECT INDEX

VALVES
basis of NRC Staff's reasonable assurance finding on combined license applicant's squib valve inspection program for which the current version of the ASME code is insufficient is explained; CLI-12-2, 75 NRC 63 (2012)
licensing board imposes a license condition directing implementation of a surveillance program for explosively actuated valves prior to fuel load; CLI-12-2, 75 NRC 63 (2012)
to reach a finding of reasonable assurance that the public health and safety will be protected, the Commission imposed a license condition relating to testing program for squib valves; CLI-12-9, 75 NRC 421 (2012)
VIOLATIONS
past violations of NRC regulations would indicate a deficiency in an application only if they are directly germane to the licensing action, rather than being of simply historical interest; CLI-12-2, 75 NRC 63 (2012)
WAIVER OF RULE
four-factor test for grant of a waiver is presented; CLI-12-6, 75 NRC 352 (2012)
parties seeking a rule waiver must attach an affidavit that, among other things, states with particularity the special circumstances claimed to justify the waiver or exception requested; CLI-12-6, 75 NRC 352 (2012)
parties to an adjudication may petition for a waiver of a rule or regulation upon a showing that special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation (or a provision of it) would not serve the purposes for which it was adopted; CLI-12-6, 75 NRC 352 (2012)
WASTE
See Radioactive Waste
WATER POLLUTION
for petitioners claiming to be using water from the same aquifer as for the uranium ore source, regardless of distance from the facility in question, licensing boards have found that a plausible pathway connecting the proposed mining operation to their water source has been shown so as to establish petitioners' standing; LBP-12-3, 75 NRC 164 (2012)
standing was found for petitioner fishing a river 60 miles downstream from a proposed in situ recovery facility expansion alleged to allow drainage into the river from operations; LBP-12-3, 75 NRC 164 (2012)
surface water contamination has played a significant role in standing determinations in in situ recovery cases; LBP-12-3, 75 NRC 164 (2012)
when an ore zone and petitioner's water source exist in separate aquifers, the injury/causation question is whether there is an interconnection between these aquifers; LBP-12-3, 75 NRC 164 (2012)
when petitioners considerably upgradient of the mining area fail to explain how contaminated material from the in situ recovery site might plausibly enter their drinking water, they fail to demonstrate the causation element necessary to establish their standing; LBP-12-3, 75 NRC 164 (2012)
See also Groundwater Contamination
WATER QUALITY
claim that application fails to adequately present the true extent of historical exploration drilling, borehole abandonment details, R&D testing, changes to groundwater water quality, and interconnections of geologic strata contains no alleged facts to support this opinion and thus does not raise a genuine dispute; LBP-12-3, 75 NRC 164 (2012)
concern about computer modeling methodology used to calculate groundwater quantity impacts is inadmissible as lacking sufficient factual or expert support and as failing to establish a material factual or legal dispute; LBP-12-3, 75 NRC 164 (2012)
groundwater quality degradation for cooling ponds in salt marshes is a Category 1 issue and thus inadmissible in operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012)
WATER USE
intervenors' challenge concerning the DEIS's alleged failure to discuss the Great Lakes Compact's process for regional review of its application for a consumptive water use permit is inadmissible; LBP-12-12, 75 NRC 742 (2012)

SUBJECT INDEX

WETLANDS
combined license applicants must obtain permits from the U.S. Army Corps of Engineers in order to complete construction activities that may potentially affect wetlands; CLI-12-9, 75 NRC 421 (2012)
groundwater quality degradation for cooling ponds in salt marshes is a Category 1 issue and thus inadmissible in operating license renewal proceedings; LBP-12-8, 75 NRC 539 (2012)
intervenors fail to show that, with respect to terrestrial and wetland mitigation plans, there are data or conclusions in the draft environmental impact statement that differ significantly from the data or conclusions in the applicant's documents; LBP-12-12, 75 NRC 742 (2012)
NRC Staff's environmental review was conducted in cooperation with the U.S. Army Corps of Engineers, with NRC acting as lead agency and ACE as cooperating agency under a memorandum of understanding, because applicants also needed permits from ACE to complete construction activities that may affect wetlands; CLI-12-9, 75 NRC 421 (2012)
WITNESSES, EXPERT
bare assertions and speculation, even by an expert, are insufficient to trigger a full adjudicatory proceeding; CLI-12-15, 75 NRC 704 (2012)
evidence in affidavits supporting a motion to reopen must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised; CLI-12-3, 75 NRC 132 (2012); CLI-12-6, 75 NRC 352 (2012)
expert opinion that merely states a conclusion, e.g., the application is "deficient," "inadequate," or "wrong" without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the board of the ability to make the necessary, reflective assessment of the opinion; CLI-12-5, 75 NRC 301 (2012)
motions to reopen must be supported by an affidavit written by an individual with knowledge of the facts alleged, and the affidavit must explain why each of the criteria has been met; CLI-12-15, 75 NRC 704 (2012)
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; LBP-12-3, 75 NRC 164 (2012)

FACILITY INDEX

COLUMBIA GENERATING STATION; Docket No. 50-397-LR
LICENSE RENEWAL; March 16, 2012; MEMORANDUM AND ORDER; CLI-12-7, 75 NRC 379 (2012)
COMANCHE PEAK NUCLEAR POWER PLANT, Units 3 and 4; Docket Nos. 52-034-COL, 52-035-COL
COMBINED LICENSE; March 16, 2012; MEMORANDUM AND ORDER; CLI-12-7, 75 NRC 379 (2012)
DAVIS-BESSE NUCLEAR POWER STATION, Unit 1; Docket No. 50-346-LR
LICENSE RENEWAL; March 27, 2012; MEMORANDUM AND ORDER; CLI-12-8, 75 NRC 393 (2012)
DIABLO CANYON NUCLEAR POWER PLANT, Units 1 and 2; Docket Nos. 50-275-LR, 50-323-LR
LICENSE RENEWAL; June 7, 2012; MEMORANDUM AND ORDER; CLI-12-13, 75 NRC 681 (2012)
FERMI NUCLEAR POWER PLANT, Unit 3; Docket No. 52-033-COL
COMBINED LICENSE; June 21, 2012; MEMORANDUM AND ORDER (Ruling on Motion for Leave to Late-File Amended and New Contentions and Motion to Admit New Contentions); LBP-12-12, 75 NRC 742 (2012)
IN SITU LEACH FACILITY, Crawford, Nebraska; Docket No. 40-8943
MATERIALS LICENSE RENEWAL; February 22, 2012; MEMORANDUM AND ORDER; CLI-12-4, 75 NRC 154 (2012)
LIMERICK GENERATING STATION, Units 1 and 2; Docket Nos. 50-352-LR, 50-353-LR
LICENSE RENEWAL; April 4, 2012; MEMORANDUM AND ORDER (Ruling on Petition to Intervene and Request for Hearing); LBP-12-8, 75 NRC 539 (2012)
METROPOLIS WORKS URANIUM CONVERSION FACILITY
MATERIALS LICENSE AMENDMENT; February 29, 2012; INITIAL DECISION; LBP-12-6, 75 NRC 256 (2012)
MIXED OXIDE FUEL FABRICATION FACILITY; Docket No. 70-3098-MLA
MATERIALS LICENSE AMENDMENT; February 9, 2012 (January 7, 2013, abridged adaptation for publication); MEMORANDUM AND ORDER (Dismissing Contention 4); LBP-12-2, 75 NRC 159 (2012)
NORTH ANNA POWER STATION, Unit 3; Docket No. 52-017-COL
COMBINED LICENSE; June 7, 2012; MEMORANDUM AND ORDER; CLI-12-14, 75 NRC 692 (2012)
NORTH ANNA POWER STATION, Units 1 and 2; Docket Nos. 50-338, 50-339
REQUEST FOR ACTION; April 26, 2012; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; DD-12-1, 75 NRC 573 (2012)
PILGRIM NUCLEAR POWER STATION; Docket No. 50-293-LR
LICENSE RENEWAL; January 11, 2012; MEMORANDUM AND ORDER (Denying Pilgrim Watch's Request for Hearing on a New Contention Relating to Fukushima Accident); LBP-12-1, 75 NRC 1 (2012)
LICENSE RENEWAL; February 9, 2012; MEMORANDUM AND ORDER; CLI-12-1, 75 NRC 39 (2012)
LICENSE RENEWAL; February 22, 2012; MEMORANDUM AND ORDER; CLI-12-3, 75 NRC 132 (2012)
LICENSE RENEWAL; March 8, 2012; MEMORANDUM AND ORDER; CLI-12-6, 75 NRC 352 (2012)

FACILITY INDEX

LICENSE RENEWAL; March 30, 2012; MEMORANDUM AND ORDER; CLI-12-10, 75 NRC 479 (2012)
LICENSE RENEWAL; May 24, 2012; MEMORANDUM AND ORDER (Denying Petition for Intervention and Request to Reopen the Proceeding and Admit New Contention); LBP-12-10, 75 NRC 633 (2012)
LICENSE RENEWAL; June 7, 2012; MEMORANDUM AND ORDER; CLI-12-15, 75 NRC 704 (2012)
LICENSE RENEWAL; June 18, 2012; MEMORANDUM AND ORDER (Denying Petition for Intervention and Request to Reopen Proceeding and Admit New Contention); LBP-12-11, 75 NRC 731 (2012)

SEABROOK STATION, Unit 1; Docket 50-443-LR
LICENSE RENEWAL; March 8, 2012; MEMORANDUM AND ORDER; CLI-12-5, 75 NRC 301 (2012)

SOUTH TEXAS PROJECT, Units 3 and 4; Docket Nos. 52-12-COL, 52-13-COL
COMBINED LICENSE; February 29, 2012; SECOND PARTIAL INITIAL DECISION (Contention DEIS-1-G); LBP-12-5, 75 NRC 227 (2012)

TURKEY POINT NUCLEAR GENERATING PLANT, Units 6 and 7; Docket Nos. 52-040-COL, 52-041-COL
COMBINED LICENSE; February 28, 2012; MEMORANDUM AND ORDER (Granting FPL Motion for Summary Disposition of CASE Contention 7); LBP-12-4, 75 NRC 213 (2012)
COMBINED LICENSE; March 29, 2012; MEMORANDUM AND ORDER (Denying CASE's Motions to Admit Newly Proffered Contentions 9 and 10, and Dismissing CASE from This Proceeding); LBP-12-7, 75 NRC 503 (2012)
COMBINED LICENSE; May 2, 2012; MEMORANDUM AND ORDER (Granting, in Part, Joint Intervenors' Motion to Admit Amended Contention NEPA 2.1); LBP-12-9, 75 NRC 615 (2012)

VIRGIL C. SUMMER NUCLEAR STATION, Units 2 and 3; Docket Nos. 52-027-COL, 52-028-COL
COMBINED LICENSE; March 30, 2012; MEMORANDUM AND ORDER; CLI-12-9, 75 NRC 421 (2012)

VOGTLE ELECTRIC GENERATING PLANT, Units 3 and 4; Docket Nos. 52-025-COL, 52-026-COL
COMBINED LICENSE; February 9, 2012; MEMORANDUM AND ORDER; CLI-12-2, 75 NRC 63 (2012)
COMBINED LICENSE; March 16, 2012; MEMORANDUM AND ORDER; CLI-12-7, 75 NRC 379 (2012)
COMBINED LICENSE; April 16, 2012; MEMORANDUM AND ORDER; CLI-12-11, 75 NRC 523 (2012)

WILLIAM STATES LEE III NUCLEAR STATION, Units 1 and 2; Docket Nos. 52-018-COL, 52-019-COL
COMBINED LICENSE; March 16, 2012; MEMORANDUM AND ORDER; CLI-12-7, 75 NRC 379 (2012)